

Gun Hill Square

DRAFT SCOPE OF WORK FOR AN ENVIRONMENTAL IMPACT STATEMENT

CEQR NO. 14DME010X
ULURP NOS. PENDING

July 2, 2014

A. INTRODUCTION

This scope of work outlines the technical areas to be analyzed in the preparation of an Environmental Impact Statement (EIS) for Gun Hill Square in the Baychester neighborhood of the northern Bronx. The applicant, Gun Hill Square LLC, is seeking a number of discretionary public approvals (the “proposed actions”) to enable the development of a new pedestrian-oriented open-air urban shopping center and a single residential building containing senior housing, on an approximately 12.6-acre site located to the northwest of the interchange of the New England Thruway (I-95) and the Hutchinson River Parkway in Bronx Community District 12 (“the proposed project”). The proposed actions include the disposition of City-owned property and the approval of the business terms of sale for the disposition, a zoning map amendment, a zoning special permit pursuant to the New York City (NYC) Zoning Resolution (ZR) Section 74-74, and potentially a NYC Board of Standards and Appeals (BSA) special permit pursuant to ZR Section 73-36. Prior to the proposed disposition of City-owned property to the applicant, approval is also required from the Metropolitan Transportation Authority’s (MTA’s) Board for surrender of its leasehold interest in the subject property. In addition, the provision of public financing may be sought by the applicant for the senior housing component of the project to provide affordable housing units. Dependent on the public funding source for the affordable senior housing component of the project, review under the State Environmental Quality Review Act (SEQRA) or the National Environmental Policy Act (NEPA) may be required. Also, a New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) general permit would be required for stormwater discharges during construction.

As shown in Figure 1, the project site is a large irregular-shaped parcel comprising approximately 12.6 acres (Block 4804, part of Lot 100), which is bound by East Gun Hill Road to the southwest and Edson Avenue to the northeast and south. The MTA’s regional Gun Hill (Bus) Depot at 1910 Bartow Avenue and three little league ball fields border the project site to the north. The project site is owned by the City of New York and leased to the NYC Transit Authority (NYCTA). The project site does not support any active uses. Formerly, the project site had accommodated a privately-operated recreation center with a golf driving range, miniature golf course, batting cage, surface accessory parking, and restaurant/lounge that closed in early 2010.

The proposed pedestrian-oriented open-air urban shopping center (“the shopping center”) would include up to approximately 390,400 gross square feet (gsf) of local and destination retail and restaurants, a fitness center of up to approximately 40,000 gsf, possibly office space, and approximately one acre of publicly accessible open space, as well as at-grade accessory parking and



GUN HILL SQUARE **FIGURE 1**
AERIAL VIEW OF PROJECT SITE

an accessory parking garage (totaling approximately 1,147 accessory parking spaces).¹ The shopping center would have three points of entry for pedestrians and vehicles, including a signalized intersection on East Gun Hill Road and two additional entrances from Edson Avenue. The proposed development would also include senior housing; up to 100 units of senior housing would be provided in an approximately 11-story building located at the northwestern corner of the project site. The senior housing building would have frontage along East Gun Hill Road and approximately 23 accessory parking spaces would be provided. A separate vehicular entrance would be provided for the senior housing component of the project on East Gun Hill Road, which would also serve as the vehicular exit for the senior housing and as an exit from the accessory parking garage for the shopping center. The proposed development would be designed to achieve Leadership in Energy and Environmental Design (LEED) Certification (if possible, LEED Silver certification) by the U.S. Green Building Council (USGBC). Construction of the proposed project would commence in 2016 and full occupancy and operation of the proposed development is expected by 2018.

This document provides a description of the proposed project and required discretionary land use actions, and includes task categories for all technical areas to be analyzed in the EIS.

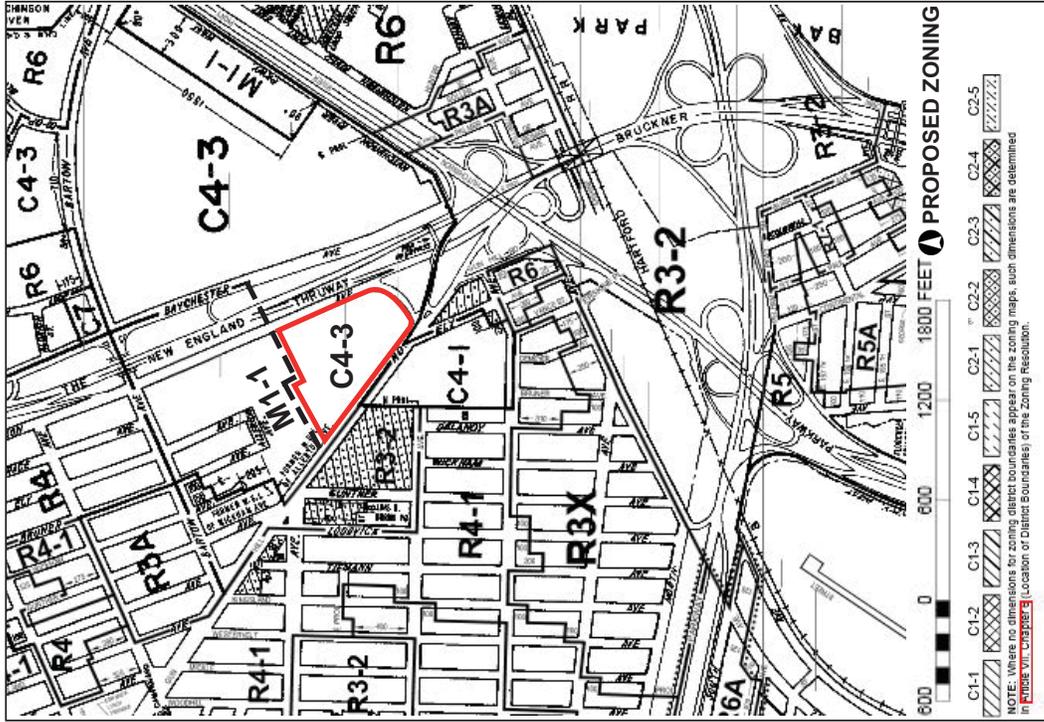
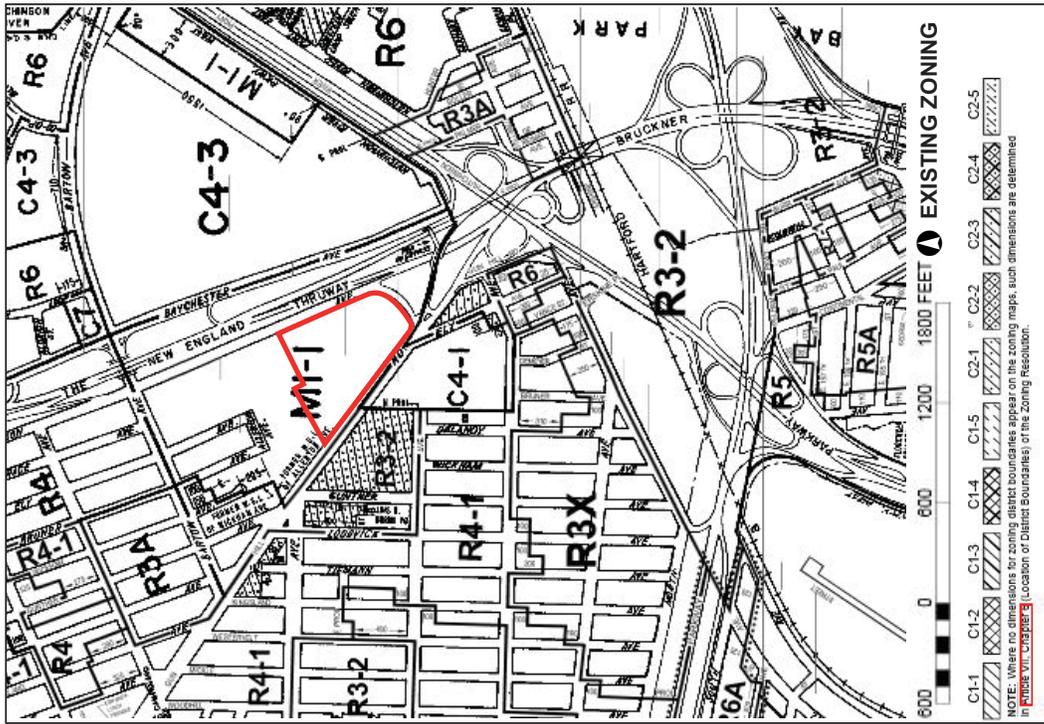
B. REQUIRED PUBLIC APPROVALS AND REVIEW PROCEDURES

PROPOSED ACTIONS

The proposed project would require several City approvals. It is anticipated that the following discretionary public actions would be required to facilitate the proposed project:

- Disposition of the project site (comprising the southern 550,185 square foot (sf) portion of Lot 100 on Block 4804) by the City of New York for private development, with approval through ULURP under New York City Charter Section 197(c) and separate approval of the business terms of the sale of the disposition by the Bronx Borough Board and the Mayor pursuant to Section 384(b)(4) of the New York City Charter;
- A zoning map amendment (Zoning Sectional Map 4a) approval by the NYC City Planning Commission (CPC) to change the zoning on the project site (Block 4804, part of Lot 100) from the existing M1-1 zoning district to a C4-3 zoning district (see Figure 2);
- A zoning special permit from the CPC pursuant to ZR Section 74-74 for a Large-Scale General Development (LSGD) applicable to the project site to allow the following modifications in order to achieve a superior site plan:
 - Waiver of exterior signage regulations;
 - Waiver of side and rear yard regulations;
 - Waiver of height and setback regulations;
 - Waiver of minimum distance between buildings; and
 - Waiver of use of required residential open space for parking.
- A BSA special permit pursuant to ZR Section 73-36 to permit a physical culture or health

¹As there is no concrete plan to provide office space at the project site, for environmental review purposes the proposed commercial uses would consist of a 390,400 gsf shopping center that would include up to an approximately 40,000 gsf fitness center.



- Project Site
 - Existing Zoning
 - Proposed Zoning Boundary

GUN HILL SQUARE

FIGURE 2

EXISTING AND PROPOSED ZONING

establishment (fitness center) in the proposed C4-3 zoning district.

Prior to the proposed disposition of City-owned property to the applicant, approval is required from the MTA Board authorizing the surrender of the MTA's leasehold interest in the project site (which is anticipated to occur once City Environmental Quality Review (CEQR) and Uniform Land Use Review Procedure (ULURP) procedures are completed). In addition, public financing may be sought by the applicant for the senior housing component of the proposed project in order to provide affordable senior housing units. Dependent on the public funding source for the affordable senior housing component of the project, review under the State Environmental Quality Review Act (SEQRA) or the National Environmental Policy Act (NEPA) may be required. Also, a State Pollutant Discharge Elimination System (SPDES) permit from NYSDEC would be required to permit the discharge of stormwater during construction.

CITY ENVIRONMENTAL QUALITY REVIEW (CEQR) AND SCOPING

The proposed project is subject to ULURP and requires environmental review pursuant to CEQR procedures. An Environmental Assessment Statement (EAS) was completed on July 2, 2014. The Office of the Deputy Mayor for Housing and Economic Development (ODMHED), as lead agency, has determined that the proposed project may potentially result in significant adverse environmental impacts and directs that an Environmental Impact Statement (EIS) be prepared. The MTA, the NYC Department of City Planning (NYCDCP), and the BSA will be involved agencies in this environmental review process.

The CEQR scoping process is intended to focus the EIS on those issues that are most pertinent to the proposed project. The process at the same time allows other agencies and the public a voice in framing the scope of the EIS. This scoping document sets forth the analyses and methodologies that will be utilized to prepare the EIS. During the period for scoping, those interested in reviewing the draft scope may do so and give their comments to the lead agency. The public, interested agencies, Bronx Community Board 12, and elected officials, are invited to comment on the draft scope, either in writing or orally, at a public scoping meeting to be held on Wednesday, August 13, 2014 at 6:00 PM at the Bronx Community Board 12 Office, 4101 White Plains Road, Bronx, NY 10466. Comments received during the draft scope's public hearing, and written comments received up to 10 days after the hearing (until 5:00 PM on Monday, August 25, 2014), will be considered and incorporated as appropriate into a final scope of work. The lead agency will oversee preparation of a Final Scope of Work, which incorporates relevant comments made on the draft scope and revises the extent or methodologies of the studies, as appropriate, in response to comments made during scoping. The draft EIS (DEIS) will be prepared in accordance with the Final Scope of Work for an EIS.

Once the lead agency is satisfied that the DEIS is complete, the document will be made available for public review and comment. The DEIS will accompany the ULURP application through the public hearings at Bronx Community Board 12, the Bronx Borough President, and the CPC. Publication of the DEIS and issuance of the Notice of Completion signal the start of the public review period. During this time the public may review and comment on the DEIS, either in writing and/or at a public hearing that is convened for the purpose of receiving such comments. A public hearing will be held on the DEIS in conjunction with the CPC hearing on the ULURP application to afford all interested parties the opportunity to submit oral and written comments. The record will remain open for 10 days after the public hearing to allow additional written comments on the DEIS. At the close of the public review period, a Final EIS (FEIS) will be prepared that will incorporate all substantive

comments made on the DEIS, along with any revisions to the technical analysis necessary to respond to those comments. The FEIS will then be used by the decision makers to evaluate project impacts and proposed mitigation measures before deciding whether to approve the requested discretionary actions.

C. DESCRIPTION OF THE PROPOSED PROJECT

EXISTING CONDITIONS

PROJECT SITE

The project site is located at the southeastern tip of Bronx Community District 12 to the west of I-95. As shown in Figure 1, the project site is generally bounded by East Gun Hill Road to the southwest and Edson Avenue to the northeast and south. The project site is City-owned and is under the control of the NYCTA via a long-term lease. The irregular-shaped project site comprises approximately 12.6 acres (approximately 550,185 sf), and consists of the southern portion of Lot 100 on Block 4804, which is an expansive 32-acre, U-shaped property.

The project site is not publicly accessible and is enclosed by fencing. It is primarily unimproved, and does not support any active uses. Most recently a small portion of the project site (approximately 20,000 sf) had served as vehicle storage, which has vacated the site. The project site formerly accommodated a now-closed privately-operated recreational center (“Bronx Golf Center”- closed in 2010) with a golf driving range, miniature golf course, batting cage, surface accessory parking, and a restaurant/lounge that had been accessible from East Gun Hill Road from three curb cuts. The three existing low-rise vacant buildings on-site previously functioned as a club house and storage shed for the golf range, and a restaurant/lounge. These existing buildings are relatively small and contain a total of approximately 12,740 gsf with a combined floor area ratio (FAR) of approximately 0.02.

The project site is located within NYC’s Coastal Zone Boundary (CZB) and is zoned M1-1, which permits low-density, high-performance light industrial and manufacturing uses as well as commercial uses up to a maximum 1.0 FAR. A special permit is required for certain retail establishments in excess of 10,000 sf of floor area within M1 zoning districts. Certain community facility uses are allowed up to a maximum 2.4 FAR in M1-1 districts, and residential uses are not allowed.

SURROUNDING AREA AND CONTEXT

The remainder of Lot 100 on Block 4804 comprises more than 19 acres, and is under the control of the NYCTA and occupied by the MTA’s Gun Hill (Bus) Depot at 1910 Bartow Avenue, a regional facility that serves and provides vehicle storage for 16 NYCTA and MTA bus routes, as well as three little league ball fields. The MTA’s facility comprises the northeastern portion of Lot 100 and has frontage on the west side of Edson Avenue, south side of Bartow Avenue, east side of Ely Avenue, and south side of Allerton Avenue. The MTA facility is enclosed by fencing and consists of a large double height single-story rectangular-shaped garage that includes approximately 292,000 gsf. Accessory parking lots for the MTA are located to the north, south, and southwest of the garage. The southernmost parking lot typically serves as vehicle storage area for buses. The MTA facility is accessible from two gate-controlled entrances on Ely Avenue and another gated entrance on Edson Avenue just north of

the ramp entrance to I-95 south. A small rectangular-shaped private passive open space for the NYCTA and MTA workers is located at the southeast corner of Bartow and Ely Avenues.

Three little league ball fields comprise the northwestern portion of Lot 100 and are located northwest of the project site. As shown in Figure 1, the ball fields extend along the west side of Bruner Avenue with frontage on Wickham Avenue and East Gun Hill Road as well. The three ball fields are enclosed by fencing and are accessible from gated entrances on East Gun Hill Road and at the intersection of Bruner and Allerton Avenues. The block bounded by Bartow, Ely, Allerton, and Bruner Avenues to the north of the project site, in between the bus depot and ball fields, is occupied by a commercial self-storage warehouse and its associated at-grade accessory parking.

The interchange for I-95 and the Hutchinson River Parkway is located southeast of the project site. The south side of East Gun Hill Road in the vicinity of the project site is lined with a mix of national and local retail stores, restaurants, and services. Directly across the street from the project site is the 1750-1780 East Gun Hill Road Shopping Center, which includes approximately 77,300 gross leasable area (GLA) of retail and about 460 accessory parking spaces. The shopping center's tenants include a TGI Friday's, an ALDI Food Market, a discount goods store, and a Dunkin Donuts, as well as a few other small local retailers and services. Also across the street from the project site is an approximately 132,000 sf Home Depot and a Chuck E. Cheese's located at 1806 East Gun Hill Road, which have approximately 570 accessory parking spaces. Further to the south of the project site are the Pelham Bay Diner and a motel. To the northeast of the project site along East Gun Hill Road are automotive service uses and J.H.S. 144 Michelangelo, a public middle school. Further to the north and southwest of the project site the area is predominantly residential.

The Bay Plaza shopping center at 2100 Bartow Avenue is located east of I-95 and adjacent to and south of Co-op City. One of the City's largest shopping centers, Bay Plaza includes a number of national and regional retail establishments, including department stores, a multiplex movie theater, restaurants, a fitness center, and some office space. The Mall at Bay Plaza is a major expansion project of Bay Plaza Shopping Center, which is currently under construction directly to the south of Bay Plaza to the north of the interchange for I-95 and the Hutchinson River Parkway. The approximately 780,000 gsf expansion will be an enclosed suburban-style shopping mall that is anticipated to be anchored by Macy's and J.C. Penny's, and will contain more than 100 specialty stores as well as a food court. The mall will also include a 1,800 space accessory parking garage and is anticipated to open in summer 2014.

PURPOSE AND NEED FOR PROPOSED ACTIONS

The proposed actions would facilitate the redevelopment of an underutilized approximately 12.6-acre project site in the Baychester neighborhood of the Bronx by replacing a large vacant parcel with an active mix of local and destination retail, restaurants, a fitness center, residential uses, and possibly office space in an area that has excellent highway access. Redevelopment of the project site would complement the existing and ongoing development in the area, and further contribute to the vitality of the streetscape and predominantly commercial retail environment.

The proposed actions would change the allowable development potential of the project site and permit the development of a commercial shopping center that is expected to include Use Group 6, 9 and 10 retail uses, as well as allow retail establishments in excess of 10,000 square feet (sf) in floor area. The proposed shopping center would include a mix of smaller local retailers, cafes, and restaurants, on the ground floor, as well as some larger destination stores on upper floors. Up to an

approximately 40,000 gsf fitness center and possibly office space would also be included in the shopping center. In addition, the proposed actions would also permit senior housing to be constructed on the project site. The proposed project would also add approximately one acre of passive publicly accessible open space in the interior of the project site between the commercial shopping center buildings.

The proposed project would promote local economic growth, would create new employment opportunities for local residents and fiscal benefits to the City in the form of increased tax revenues, would expand shopping and dining opportunities in the area, and would provide new convenient goods, services, and amenities for area residents. The proposed shopping center would be consistent with and complement the existing concentration of commercial retail buildings and restaurants along the south side of East Gun Hill Road, and further to the east of the project site in Bay Plaza and the planned Mall at Bay Plaza currently under construction. The proposed project would also include up to 100 senior housing units a portion of which would be affordable, which would introduce a new residential population that would establish a 24 hour presence on the project site. The proposed residential uses would work towards the goals of expanding affordable housing options in the Bronx and in the City as a whole.

DESCRIPTION OF THE PROPOSED PROJECT

As noted above, the proposed development, Gun Hill Square, would include the construction of a shopping center and a senior housing building with up to 100 units, a portion of which would be affordable. The proposed shopping center would include up to approximately 390,400 gsf of new commercial space, including a mix of local and destination retail and restaurant uses, an approximately 40,000 gsf fitness center, approximately one acre of privately-owned publicly accessible open space, and at-grade accessory parking as well as an accessory parking garage (for a total of approximately 1,147 accessory parking spaces). The proposed commercial uses would vary from small local retail stores to larger destination retailers, as well as restaurants, cafes, a fitness center, and possibly office space.

As shown in the proposed site plan in Figure 3, the design of the shopping center would consist of a collection of six buildings ranging in size from approximately 42,800 gsf to approximately 68,000 gsf and in height from two-to three-stories (approximately 30 to 50 feet tall). The buildings would be oriented near the center of the project site and would be organized around a central (approximately one acre) publicly accessible, privately owned open space. The open space would provide passive recreational amenities and consist of a wide central north-south plaza with two east-west corridors that would form two central squares and would be solely accessible to pedestrians. The depth of each building is expected to optimize ground level continuous retail frontage and create approximately 4,000 linear feet of transparent retail frontage.

The shopping center would have three main points of entry for pedestrians and vehicles, including a signalized intersection on East Gun Hill Road, which the proposed shopping center would have in common with an existing shopping center at 1750-1780 East Gun Hill Road (located directly across the street from the project site) and two additional entrances on Edson Avenue. As shown in Figure 3, there would also be three points of egress from the shopping center including two on East Gun Hill Road and another on Edson Avenue.² Accessory parking for the shopping center would be provided

² Vehicles would be able to exit the shopping center from the signalized intersection on East Gun Hill Road, the unsignalized



Illustrative only subject to change.

Source: BLT Architects

GUN HILL SQUARE
FIGURE 3
PROPOSED SITE PLAN

at-grade along the periphery of the project site, as well as within an approximately 4-story garage with rooftop parking located at the northwestern corner of the project site.³

The development of the project site would also include a mid-rise residential building containing senior housing, which would be located at the northwestern corner of the project site along East Gun Hill Road. Up to 100 units of senior housing could be provided in an approximately 11-story building (rising about 110 feet tall). As shown in Figure 3, the proposed senior housing building would have a separate vehicular entrance from East Gun Hill Road, which would also serve as the vehicular exit for the senior housing and as an exit from the accessory parking garage. Approximately 23 accessory parking spaces would be provided for the senior housing component of the project.

The applicant would be required to seek LEED Certification (if possible, LEED Silver certification) by the USGBC for the proposed development. As shown in Table 1, the proposed project would consist of a total of approximately 720,900 gsf of floor area, including 390,400 gsf of commercial, 92,000 gsf of residential space, and 238,500 gsf of garage parking area (total of approximately 1,170 parking spaces⁴).

**TABLE 1
Proposed Development Program for the Project Site**

Lot Size (SF)	Number of Buildings	GSF Above Grade	GSF Below Grade	Total GSF (Incl. Parking)	Commercial GSF	Residential GSF	Number of Senior Housing Units	# of Accessory Parking Spaces	Accessory Garage Parking GSF	Building Height (feet)
550,185	8	720,900	0	720,900	390,400	92,000	100	1,170	238,500	Retail: up to 50' Residential: approx. 110'

D. ANALYSIS FRAMEWORK FOR ENVIRONMENTAL REVIEW

The proposed actions would change the regulatory controls governing land use and development on the project site. The 2014 *CEQR Technical Manual* will serve as the general guide on the methodologies and impact criteria for evaluating the proposed actions’ potential effects on the various environmental areas of analysis. The EIS assesses the reasonable worst-case impacts that may occur as a result of the proposed actions. In disclosing impacts, the EIS considers the proposed actions’ potential adverse impacts on the environmental setting.

BUILD YEAR

Development on the project site would occur in a single phase and commence as soon as all necessary public approvals are granted. Construction of the proposed project is anticipated to start in 2016 and would occur over an approximately two-year period, beginning in 2016, with all

exit from garage/senior housing component of the project on East Gun Hill Road, and from Edson Avenue.

³ The required accessory parking would be provided for the proposed shopping center and residential uses. Approximately 490 accessory parking spaces are expected to be provided at-grade and an additional approximately 680 accessory spaces would be provided in the garage.

⁴ The approximate 1,170 parking spaces would include approximately 680 spaces in a 4-story garage with rooftop parking and approximately 490 at-grade parking spaces (of which approximately 1,147 would be accessory to the shopping center and 23 would be accessory to the senior housing building).

components complete and fully operational by the year 2018. Accordingly, the proposed project will use a 2018 Build Year for analysis purposes. As the proposed project would be operational in 2018, its environmental setting is not the current environment, but the future environment. Therefore, the technical analyses and consideration of alternatives assess current conditions and forecast these conditions to the expected Build Year of 2018 for the purposes of determining potential impacts. The EIS will provide a description of “Existing Conditions” and assessments of future conditions without the proposed project (“Future without the Proposed Actions”) and with the proposed project (“Future with the Proposed Actions”).

REASONABLE WORST-CASE DEVELOPMENT SCENARIO (RWCDs)

In order to assess the possible effects of the proposed actions, a reasonable worst-case development scenario (RWCDs) for the project site was established for both Future No-Action and Future With-Action conditions. The incremental difference between the Future No-Action and Future With-Action conditions will serve as the basis of the impact category analyses in the EIS. For conservative analysis purposes, the proposed project, including the shopping center with a fitness center and the senior housing building, are assumed to be the RWCDs for the project site, and are therefore evaluated in this analysis. Dependent on the public funding source for the affordable senior housing component of the project, review under the SEQRA or the NEPA may also be required.

THE FUTURE WITHOUT THE PROPOSED PROJECT (NO-ACTION CONDITION)

The future without the proposed project—also known as the “No-Action condition”—assumes that none of the proposed actions are approved. In this case, absent the proposed actions, it is anticipated that the project site would continue to remain vacant and would not support any active uses. The project site would remain largely unimproved and continue to be occupied by three small vacant low-rise buildings that have a combined 0.02 FAR. For each technical analysis in the EIS, the No-Action condition will also incorporate approved or planned development projects within the appropriate study area that are likely to be completed by the 2018 Build Year.

THE FUTURE WITH THE PROPOSED PROJECT (WITH-ACTION CONDITION)

By 2018 under With-Action conditions, as detailed in the above section “Description of the Proposed Project” and shown in Table 1, the With-Action scenario would result in the construction of approximately 390,400 gsf of commercial space and approximately 92,000 gsf of residential space (up to 100 senior housing units), publicly accessible open space and accessory parking spaces. All existing buildings on the project site would be demolished and the project site would be improved with an approximately 390,400 gsf shopping center, consisting of a mix of local and destination retail and restaurant uses, as well as a fitness center in six two-to three-story buildings, approximately one acre of publicly accessible privately-owned open space, and at-grade accessory parking and an approximately 4-story accessory parking garage with rooftop parking (for a total of approximately 1,147 spaces accessory to commercial uses). The proposed development would also include a single approximately 11-story residential building containing up to 100 units of senior housing, a portion of which would be affordable, and would include 23 accessory parking spaces. The proposed project would result in an increase of up to 200 senior residents, and approximately 1,183 workers, compared to No-Action conditions.

In each of the technical areas of the EIS, the proposed project will be compared to the No-Action scenario.

E. PROPOSED SCOPE OF WORK FOR THE ENVIRONMENTAL IMPACT STATEMENT (EIS)

Because the proposed project would affect various areas of environmental concern and was found to have the potential for significant adverse impacts, pursuant to the EAS and Positive Declaration, an Environmental Impact Statement (EIS) will be prepared for the proposed project that will analyze all technical areas of concern.

The EIS will be prepared in conformance with all applicable laws and regulations, including SEQRA (Article 8 of the New York State Environmental Conservation Law) and its implementing regulations found at 6 NYCRR Part 617, New York City Executive Order No. 91 of 1977, as amended, and the Rules of Procedure for CEQR, found at Title 62, Chapter 5 of the Rules of the City of New York. The EIS will follow the guidance of the 2014 *CEQR Technical Manual*, and will contain:

- A description of the proposed project and its environmental setting;
- A statement of the environmental impacts of the proposed project, including its short-and long-term effects and typical associated environmental effects;
- An identification of any adverse environmental effects that cannot be avoided if the proposed project is implemented;
- A discussion of reasonable alternatives to the proposed project;
- An identification of irreversible and irretrievable commitments of resources that would be involved in the proposed project should it be implemented; and
- A description of mitigation measures proposed to eliminate or minimize any significant adverse environmental impacts.

Based on the preliminary screening assessments outlined in the *CEQR Technical Manual* and detailed in the EAS document, the following environmental areas would not require detailed analysis in the EIS: community facilities, historic and cultural resources, natural resources, and energy. The specific areas to be included in the EIS, as well as their respective tasks, are described below.

Each chapter of the EIS that requires a detailed analysis will include an analysis of the future With-Action condition compared to the future No-Action condition, as set forth in the *CEQR Technical Manual*. The technical analyses of the EIS will examine the potential impacts related to the completion of the proposed project by the 2018 Build Year.

TASK 1. PROJECT DESCRIPTION

The first chapter of the EIS introduces the reader to the proposed project, Gun Hill Square, and sets the context in which to assess impacts. The chapter contains a description of the proposed project: its location; the background and/or history of the project; a statement of the purpose and need; key planning considerations that have shaped the current proposal; a detailed description of the proposed project; and discussion of the approvals required, procedures to be followed, and the role of the EIS in the process.

This chapter is the key to understanding the proposed project and its impact, and gives the public and decision-makers a base from which to evaluate the proposed project against the future without the project. The section on approval procedures will explain the ULURP process, its timing, and hearings before the Community Board, the Bronx Borough President's office, the CPC, and the New York City Council. The role of the EIS as a full-disclosure document to aid in decision-making will be identified and its relationship to ULURP and the public hearings described.

TASK 2. LAND USE, ZONING, AND PUBLIC POLICY

The proposed actions would result in changes to land use and changes in permitted land use density on the project site. This chapter of the EIS will consider the project's compatibility with surrounding land use, zoning and development trends in the area, as well as public policy related to land use and economic development. The land use, zoning and public policy analysis will be consistent with the methodologies presented in the 2014 *CEQR Technical Manual*. In completing the following subtasks, the land use study area will consist of the project site, where the land use impacts will be straightforward and direct (reflecting the proposed project), and the neighboring areas within an approximate ¼-mile radius from the boundaries of the project site, a distance that, based on *CEQR Technical Manual* guidelines, defines the area in which the proposed project could reasonably be expected to create potential direct and indirect impacts (see Figure 4).

The land use assessment will include a description of existing conditions and evaluations of the future with and without the proposed actions in 2018. Subtasks will include the following:

- Provide a brief development history of the project site and surrounding study area.
- Provide a description of land use at the project site.
- Provide a description and map of existing land use patterns and trends in the study area, including a description of recent development activity, and identify major factors influencing land use trends.
- Provide a zoning map and describe the existing zoning, including any recent zoning actions in the study area.
- Describe any public policies that apply to the project site and the study area, including specific development projects and plans for public improvements. Public policies that apply to the study area include PlaNYC. In addition, the project site is located within the CZB. Actions subject to CEQR, such as the ones described in this proposal that are located within the designated boundaries of the coastal zone must be assessed for their consistency with the City's Waterfront Revitalization Program (WRP). The assessment provided in the EIS will evaluate, for those relevant policies identified on the project's WRP Consistency Assessment Form (provided as Appendix A to the EAS), the consistency of the proposed project with the WRP policies.
- Prepare a list of future development projects in the study area that would be expected to be constructed by the 2018 analysis year and may influence future land use trends in the future without the proposed project. Also, identify pending zoning actions (including those associated with the identified No-Build projects) or other public policy actions that could affect land use patterns and trends in the study area as they relate to the proposed project. Based on these planned projects and initiatives, assess future conditions in the land use and zoning study area in the future without the proposed project (No-Action condition).



- Describe the proposed zoning map change and zoning special permit, and the potential land use changes resulting from the proposed project.
- Assess the potential impacts of the proposed project on land use and land use trends, zoning and public policy. Discuss the proposed project's potential effects related to issues of compatibility with surrounding land use, the consistency with zoning and other public policies, and the effect of the proposed project on ongoing development trends and conditions in the study area.
- If the results of the impact analysis identify a potential for a significant adverse impact, discuss potential mitigation measures.

TASK 3. SOCIOECONOMIC CONDITIONS

Socioeconomic impacts can occur when a proposed project directly or indirectly changes economic activities in an area. The purpose of the socioeconomic assessment is to disclose changes that would be created by a proposed action(s) and identify whether they rise to a significant level. The socioeconomic chapter will examine the effects of the proposed actions on socioeconomic conditions on the project site and in the surrounding neighborhood.

The analysis will follow the guidelines of the 2014 *CEQR Technical Manual* in assessing the proposed actions' effects on socioeconomic conditions. The analysis will present sufficient information regarding the effects of the project to make a preliminary assessment either to rule out the possibility of significant impacts or to determine that more detailed analysis is required to make a determination as to impacts. According to *CEQR Technical Manual* guidelines, the five principal issues of concern with respect to socioeconomic conditions are whether a proposed action(s) would result in significant impacts due to: (1) direct residential displacement; (2) direct business and institutional displacement; (3) indirect residential displacement; (4) indirect business/institutional displacement; and (5) adverse effects on a specific industry. As detailed below, the proposed project warrants an assessment of socioeconomic conditions with respect to indirect business displacement.

As the project site does not support any active uses, the proposed project would not result in the direct displacement of any residents or businesses, and therefore, an assessment of potential socioeconomic effects due to direct residential, business, and institutional displacement is not warranted for the proposed project. In addition, the *CEQR Technical Manual* indicates that an assessment is appropriate if a project is expected to affect conditions within a specific industry. This could affect socioeconomic conditions if a substantial number of workers or residents depend on the goods or services provided by the affected businesses, or if the project would result in the loss or substantial diminishment of a particularly important product or service within the city. The existing commercial structures on the project site are currently vacant, and therefore the proposed project would not directly displace any businesses or employees. Moreover, the proposed actions are site-specific, and do not include any citywide regulatory changes that would adversely affect the economic and operational conditions of certain types of businesses or processes. Therefore, the proposed actions would not result in significant adverse effects on specific industries, and no further analysis of this issue is required in the EIS.

As the proposed project would introduce more than 200,000 sf of new commercial uses to the area, which is the *CEQR Technical Manual* threshold for "substantial" new development, a preliminary socioeconomic analysis of indirect business displacement is warranted. The proposed project would not exceed the *CEQR Technical Manual* threshold of 200 residential units, and therefore, the

proposed project is not expected to result in significant adverse impacts due to indirect residential displacement, and no further analysis of this issue is required in the EIS.

In conformance with the *CEQR Technical Manual* guidelines, the assessment of indirect business displacement will begin with a preliminary assessment to determine whether a detailed analysis is necessary. A detailed analysis will be conducted if the preliminary assessment cannot definitively rule out the potential for significant adverse impacts. The detailed assessments will be framed in the context of existing conditions and evaluations of the future No-Action and With-Action conditions in 2018, including any population and employment changes anticipated to take place by the analysis year for the proposed actions.

INDIRECT BUSINESS DISPLACEMENT DUE TO INCREASED RENTS

One concern with respect to indirect business displacement is whether a proposed action(s) could lead to increases in property values, and thus rents, making it difficult for some businesses to remain in the area. Pursuant to *CEQR Technical Manual* guidelines the analysis for indirect business displacement due to increased rents examines whether the proposed project may introduce trends that make it difficult for those businesses that provide products or services essential to the local economy or those subject to regulations or publicly adopted plans to preserve, enhance, or otherwise protect them to remain in the area. The preliminary assessment will entail the following subtasks:

- Describe existing economic activity in the study area, and identify and characterize conditions and trends in employment and businesses within the study area. This analysis will be based on field surveys, employment data from public and private sources such as the New York State Department of Labor and/or Census, ESRI, as well as discussions with real estate brokers.
- Determine whether the proposed project would introduce enough of a new economic activity to alter existing economic patterns.
- Determine whether the proposed project would add to the concentration of a particular sector of the local economy enough to alter or accelerate an ongoing trend modifying existing economic patterns.
- Determine whether the proposed project would directly displace uses of any type that directly support businesses in the area or bring people to the area that form a customer base for local businesses.
- Determine whether the proposed project would directly or indirectly displace residents, workers, or visitors who form the customer base of existing businesses in the area.

If the preliminary assessment determines that the proposed project could introduce trends that make it difficult for businesses that are essential to the local economy to remain in the area, a detailed analysis will be conducted. The detailed analysis would follow the *CEQR Technical Manual* guidelines to determine whether the proposed project would increase property values and thus increase rents for a potentially vulnerable category of business, and whether relocation opportunities exist for a potentially vulnerable category of business. If the results of the detailed analysis identify a potential for a significant adverse impact, potential mitigation measures will be discussed.

INDIRECT BUSINESS DISPLACEMENT DUE TO COMPETITION

As described in the *CEQR Technical Manual*, occasionally, development activity may create retail uses that draw substantial sales from existing businesses. While these economic pressures do not necessarily generate environmental concerns, they become an environmental concern when they have the potential to result in increased and prolonged vacancy leading to disinvestment. Such a change may affect the land use patterns and economic viability of the neighborhood. The purpose of the preliminary analysis is to determine whether the project may capture the retail sales in a particular category of goods to the extent that the market for such goods would become saturated as a result, potentially resulting in vacancies and disinvestment on neighborhood commercial streets.

The approach to analyzing the potential for indirect business displacement due to competition is based on an assessment of the demand for retail space by retail sector, comparing it to the available and future supply of retail space by retail sector, and presenting a quantitative analysis of existing versus potential expenditures. The assessment will entail the following steps:

- Determine, to the extent possible, whether categories of goods to be sold at the proposed shopping center are similar to the categories of goods sold in stores found on neighborhood retail streets within the study area.
- Identify the trade area for the largest stores in the proposed development that are expected to be the primary sources of added retail sales (i.e., “anchor” stores). The primary trade area will be based on the nature and size of potential anchor tenants that are likely to occupy the proposed retail space.
- Estimate sales volume of relevant retail stores within the trade area, based on data available from the Census of Retail Trade or other proprietary sources (e.g., online national planning data services, such as ESRI Business Analyst or Claritas, Inc.). Relevant retail stores include those establishments that would be expected to sell categories of goods similar to those sold in anchor stores in the proposed shopping center.
- Determine the expenditure potential for relevant retail goods of shoppers within the primary trade area by the 2018 future Build year, using data available from the Census and from the U.S. Department of Commerce or other proprietary sources on retail spending.
- Compare the sales generated by the proposed project’s large retailers and the expenditure profile developed for the primary trade area to determine whether the area is currently saturated with retail uses or whether there is likely to be an outflow of sales from the trade area. This assessment is based on the percentage of available sales currently derived by existing stores (the capture rate) and the residue of dollars left unspent.
- Identify changes that may be expected in the future without the proposed actions by the Build year of 2018. This includes identification of any large-scale projects within the trade area that could be expected to increase the population and expenditure potential of the trade area or any proposals for other large-scale retail developments.
- Project the sales volume for the proposed project’s anchor tenants. This would be based on the size of the store and on industry standards for sales derived from the Urban Land Institute's Dollars and Cents of Shopping Centers or another appropriate source.
- Compare the proposed project’s sales volume with the dollars available within the trade area.

According to the *CEQR Technical Manual*, if the capture rate for relevant categories of goods would exceed 100 percent, it may have the potential to saturate the market for particular retail goods and a detailed assessment is warranted. If the results of the detailed analysis identify a potential for a significant adverse impact, potential mitigation measures will be discussed.

TASK 4. OPEN SPACE

Open space is defined as publicly or privately owned land that is publicly accessible and operates, functions, or is available for leisure, play, or sport, or set aside for the protection and/or enhancement of the natural environment. An analysis of open space is conducted to determine whether or not a proposed project would have direct effects resulting from the elimination or alteration of open space, and/or indirect effects resulting from overtaxing available open space.

According to the 2014 *CEQR Technical Manual*, an assessment of a project's potential direct effects may be appropriate if the project would result in a physical loss of publicly accessible open space (by encroaching on an open space or displacing an open space); change the use of an open space so that it no longer serves the same user population (e.g., elimination of playground equipment); limit public access to an open space; or cause increased noise or air pollutant emissions, odors, or shadows on public open space that would affect its usefulness, whether on a permanent or temporary basis. The project site consists of vacant land that formerly accommodated a privately-operated recreational center ("Bronx Golf Center") that closed in 2010. The project site is enclosed by fencing and is not publicly accessible, and therefore does not meet the *CEQR Technical Manual's* definition of an open space resource. The proposed project would not have a direct physical effect on any existing open space resource; therefore, the analysis will be limited to its indirect effects on open space. The proposed project would include new privately-owned publicly-accessible open space with passive features totaling approximately one acre. As the project site is located directly south of three little league ball fields, the EIS will analyze the potential for the project to result in effects from increased shadows, noise, and/or air pollutant emissions; these assessments will be provided in the respective technical chapters (i.e., Task 5, "Shadows," Task 11, "Air Quality," and Task 13, "Noise").

An indirect effect may occur when the population generated by a project would be sufficiently large to noticeably diminish the ability of an area's open space to serve the future population. The population thresholds for a CEQR assessment of indirect effects vary, depending upon the current adequacy of open space in the project's study area. The project site is not located within an underserved or well-served open space area of the Bronx, and as such, the *CEQR Technical Manual* threshold for an open space assessment is that a project generates more than 200 residents and 500 employees. The proposed project would introduce up to 200 senior residents and approximately 1,183 employees at the project site, which would create added demands on local open space and recreational facilities. The proposed project is expected to generate more than 500 employees, the applicable *CEQR Technical Manual* threshold for a quantified analysis of open space. Therefore, a preliminary open space analysis will be conducted. If the preliminary analysis determines that further analysis is warranted, then a detailed analysis will be performed.

As recommended in the *CEQR Technical Manual*, the study area will comprise all census tracts that have 50 percent or more of their area located within $\frac{1}{4}$ mile of the project site, adjusted for census tract boundaries, which is generally defined as the reasonable walking distance that worker populations would travel to reach local open spaces. The open space analysis will consider passive open space resources, as worker populations tend to place demands on passive open space. Passive open space ratios will be assessed within the $\frac{1}{4}$ -mile radius study area.

The analysis will include the following subtasks:

- Determine characteristics of the open space user groups: residents and workers/daytime users. To determine the number of residents in the study area, 2010 Census data will be compiled for census tracts comprising the study area. The number of employees and daytime workers in the study area will also be calculated, based on reverse journey-to-work census data.
- Inventory existing open spaces within the study area. The condition and usage of existing facilities will be described based on the inventory and field visits. Acreage of these facilities will be determined and total study area acreage calculated. The percentage of active and passive open space will also be calculated. A map showing the locations of open spaces keyed to the inventory will be provided.
- Based on the inventory of facilities and study area populations, open space ratios will be calculated for the daytime population, and compared to City guidelines to assess adequacy. This is expressed as the amount of open space acreage per 1,000 user population. Open space ratios will be calculated for passive open space, as well as the ratio for the aggregate open space.
- Assess expected changes in future levels of open space supply in the 2018 analysis year based on planned development projects within the study area. Any new open space or recreational facilities that are anticipated to be operational by the analysis year will also be included. Open space ratios will be calculated for future No-Action conditions and compared with existing ratios to determine changes in future levels of adequacy.
- Assess the effects on open space supply and demand resulting from increased populations added by the proposed project. Any new publicly-accessible open space facilities planned as part of the proposed project would also be taken into account. The assessment of the proposed project's impacts will be based on a comparison of open space ratios for the future No-Action versus future With-Action conditions. In addition to the quantitative analysis, a qualitative analysis will be performed to determine if the changes resulting from the proposed project constitute a substantial change (positive or negative) or an adverse effect to open space conditions. The qualitative analysis will assess whether or not the study area is sufficiently served by open spaces, given the type (active vs. passive), capacity, condition, and distribution of open space, and the profile of the study area population.
- If the results of the impact analysis identify a potential for a significant adverse impact, discuss potential mitigation measures.

TASK 5. SHADOWS

This chapter will examine the proposed project's potential for significant and adverse shadow impacts pursuant to 2014 *CEQR Technical Manual* guidelines. Generally, the potential for shadow impacts exists if an action would result in new structures or additions to existing buildings resulting in structures greater than 50 feet in height or located adjacent to, or across the street from a sunlight-sensitive resource. Such resources include publicly accessible open spaces, important sunlight-sensitive natural features, or historic resources with sun-sensitive features. The proposed project would result in several new buildings, the tallest of which would be a senior housing building that could include up to 11-stories (approximately 110 feet tall). The shopping center and accessory parking garage would range in height from 2-to 4-stories (approximately 30 to 50 feet tall). In addition, the project site is adjacent to and south of three little league ball fields. Therefore, a shadows assessment is warranted to determine the extent, duration, and effects of any potential new shadows on this or any other sunlight-sensitive resource in the vicinity of the project site. The

shadows assessment would be coordinated with Task 4, "Open Space." The preliminary screening assessment would include the following tasks:

- Develop a base map illustrating the project site in relationship to publicly accessible open spaces, historic resources with sunlight-dependent features, and natural features in the area.
- Determine the longest possible shadow that could result from the proposed project to determine whether it could reach any sunlight-sensitive resources at any time of year.
- Perform a screening assessment to ascertain which seasons and times of day shadows from the proposed project could reach any sunlight-sensitive resources.

If the possibility of new shadows reaching sun-light sensitive resources cannot be eliminated in the preliminary screening assessment, the EIS will include a detailed analysis. This will entail the following tasks:

- Develop a three-dimensional computer model of the elements of the base map developed in the preliminary assessment. The three-dimensional computer model will include existing buildings and No-Action developments (if applicable), as well as take into account the topographic characteristics of the area.
- Develop a three-dimensional representation of the proposed development in urban context.
- Using three-dimensional computer modeling software, determine the extent and duration of new shadows that would be cast on sunlight-sensitive resources as a result of the proposed project on four representative days of the year (March 21/September 21, May 6/August 6, June 21, and December 21), as outlined by the *CEQR Technical Manual*.
- Document the analysis with graphics illustrating the incremental shadow resulting from the proposed development highlighted in a contrasting color.
- Include a summary table listing the entry and exit times and total duration of incremental shadow on each applicable representative day for each affected resource.
- Assess the significance of any shadow impacts on sunlight-sensitive resources, the amount of remaining sunlight on those sensitive resources as well as the types of vegetation and or recreational activities involved will be considered in reaching impact conclusions. If any significant adverse shadow impacts are identified, identify and assess potential mitigation strategies.

In addition, the shadows analysis will consider the effects of the proposed buildings on the approximately one acre of new publicly accessible open space that would be created as part of the proposed project. However, effects on project-generated open space are not considered significant adverse impacts, according to the *CEQR Technical Manual*.

TASK 6. URBAN DESIGN AND VISUAL RESOURCES

According to the methodologies of the 2014 *CEQR Technical Manual*, if a project requires actions that would result in physical changes to a project site beyond those allowable by existing zoning and which could be observed by a pedestrian from street level, a preliminary assessment of urban design and visual resources should be prepared. The proposed project would require a zoning map change for the project site, which would increase the allowable density of the project site. In addition, the applicant is seeking a zoning special permit for a LSGD, which would involve waivers for exterior

signage, yard requirements, height and setback regulations, minimum distance between buildings and the use of required residential open space for parking. As the proposed project would permit the modification of yard, height, setback, distance between buildings, signage and open space requirements, a pedestrian's experience of public space could be affected. Therefore, a preliminary assessment of urban design and visual resources will be conducted in the EIS in order to determine whether the proposed project could cause significant change to the pedestrian experience that could disturb the vitality, walkability, or visual character of the area. The assessment will be based on *CEQR Technical Manual* methodologies, and include the following:

- Identify a study area for the analysis of urban design and visual resources. Following the guidelines of the *CEQR Technical Manual*, the study area will be consistent with the ¼-mile study area for the analysis of land use, zoning and public policy. Based on field visits, describe the project site and the urban design and visual resources of the surrounding area, using text and photographs as appropriate. A description of visual resources in the area and view corridors, if any, will also be provided.
- In coordination with the land use task, describe the changes expected in the urban design and visual character of the study area due to planned development projects in the future without the proposed project (No-Action condition).
- Describe the potential changes that could occur in the urban design character of the study area as a result of the proposed project (With-Action Condition). Assess the changes in urban design characteristics and visual resources that are expected to result from the proposed project on the project site and in the study area and evaluate the significance of the change. Photographs and/or other graphic material will be utilized, where applicable, to assess the potential effects on urban design and visual resources, including views of/to resources of visual or historic significance (landmark structures, historic districts, parks, etc.).

A detailed analysis will be prepared if warranted based on the preliminary assessment. As described in the *CEQR Technical Manual*, examples of projects that may require a detailed analysis are those that would make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings, potentially obstruct view corridors, or compete with icons in the skyline. The detailed analysis would describe the urban design and visual resources of the project site and the surrounding area. The analysis would describe the potential changes that could occur to urban design and visual resources in the future with the proposed actions, in comparison to the No-Action condition, focusing on the changes that could negatively affect a pedestrian's experience of the area. If necessary, mitigation measures to avoid or reduce potential significant adverse impacts will be identified.

TASK 7. HAZARDOUS MATERIALS

The objective of the hazardous materials assessment is to determine whether the project site may have been adversely affected by current or historical uses at or adjacent to the site. As the proposed project would require excavation and in ground disturbance on the project site, the assessment in the EIS will be prepared pursuant to 2014 *CEQR Technical Manual* guidelines and will include a detailed description of measures that would be taken to ensure that the potential for any impacts would be avoided. The measures would also be subject to review and approval by the NYC Department of Environmental Protection (NYCDEP). This chapter of the EIS primarily will examine the potential for impacts related to subsurface contamination, including an evaluation of the existing soil and groundwater conditions in areas that would be affected by the proposed project.

Parsons Brinckerhoff Inc. prepared a Phase I Environmental Site Assessment (ESA) for the project site in April 2012, and Arcadis prepared a Phase II ESA Report in April 2013 for the site. NYCDEP has reviewed the Phase I and Phase II prepared for the project site and has requested a Remedial Action Plan (RAP) and site-specific Construction Health and Safety Plan (CHASP) be submitted for review and approval for the project. The Hazardous Materials chapter will summarize the completed Phase I and Phase II conducted for the project site, and will include any necessary recommendations for additional testing or other activities that would be required either prior to or during construction and/or operation of the project, including a discussion of the RAP and any necessary remedial or related measures. The EIS will also include a general discussion of the health and safety measures that would be implemented during project construction, including the site-specific CHASP. The appropriate remediation measures specific to the proposed use of the site, including those recommended by NYCDEP will be provided in the EIS. If necessary, mitigation measures to avoid or reduce potential significant adverse impacts will be identified and discussed in the EIS.

TASK 8. WATER AND SEWER INFRASTRUCTURE

The 2014 *CEQR Technical Manual* outlines thresholds for analysis of a project's water demand and its generation of wastewater and stormwater. As described in the EAS, an analysis of the City's water supply is not warranted as the proposed project would not result in a demand of more than one million gallons per day (gpd) and the project site is not located in an area that experiences low water pressure. The need for an analysis of a project's effects on wastewater and stormwater conveyance depends on a project's proposed density, its location, and its potential to increase impervious surfaces. A preliminary assessment of the proposed project's effects on wastewater and stormwater infrastructure is warranted as the proposed project would result in the development of more than 100,000 sf of commercial space in a separately sewered area of the Bronx that is currently zoned M1-1. In addition, the proposed project has the potential to increase the amount of impervious surface on the project site, which encompasses approximately 12.6 acres and is located in the Hutchinson River drainage area. Therefore, this chapter will analyze the proposed project's potential effects on wastewater and stormwater infrastructure. NYCDEP will be consulted during the preparation of the preliminary stormwater and wastewater infrastructure assessment.

The following describes the scope of analysis of the effects of the proposed project's incremental sanitary and stormwater flows on the capacity of the sewer infrastructure.

- The existing stormwater drainage system and surfaces (pervious or impervious) on the project site will be described, and the amount of stormwater currently generated from the site will be estimated using the NYCDEP's volume calculation worksheet.
- The existing sewer system serving the project site will be described based on records obtained from NYCDEP. Records obtained will include sewer network maps, drainage plans, and capacity information for sewer infrastructure components, as applicable. The existing flows to the Hunts Point wastewater treatment plant (WWTP) that serves the project site will be obtained for the latest 12-month period, and the average dry weather monthly flow will be presented. Existing capacity information for pump stations, regulators, etc. downstream of the affected drainage area will be presented.
- Any changes to the project site's stormwater drainage system and surface area expected in the future No-Action condition will be described for the 2018 analysis year.

- Any changes to the sewer system expected to occur in the future No-Action condition will be described based on information provided by NYCDEP; to the extent feasible, information will be gathered on large-scale developments that would affect the sewer system serving the Hunts Point WWTP.
- Assess future stormwater generation from the proposed project and its potential for impacts for the 2018 analysis year. A stormwater management plan for the project site will be described and assessed in the preliminary infrastructure assessment. The assessment will also discuss any planned sustainability elements and best management practices (BMPs) that are intended to reduce/improve stormwater runoff. Any changes to the site's surface area (pervious or impervious) will be described, and runoff coefficients and runoff for each surface type/area will be presented. Volume and peak discharge rates of stormwater will be determined based on the NYCDEP volume calculation worksheet.
- Sanitary sewage generation for the project will be estimated. The effects of the incremental demand on the system will be assessed to determine the impact on operations of the WWTP.
- Based on the assessment of future stormwater and wastewater generation, the change in flows and volumes to the sewer system and/or water bodies due to the proposed project will be determined.

If warranted, a detailed analysis will be prepared following the guidelines of the 2014 *CEQR Technical Manual*. If the results of the detailed analysis identify a potential for a significant adverse impact, potential mitigation measures will be discussed.

TASK 9. SOLID WASTE AND SANITATION SERVICES

The proposed project includes new development that would require sanitation services. This chapter will provide an estimate of the additional solid waste expected to be generated by the proposed project and assess its effects on the City's solid waste and sanitation services and its consistency with the City's Solid Waste Management Plan (SWMP) or with state policy related to the City's integrated solid waste management system. The City's solid waste system includes waste minimization at the point of generation, collection, treatment, recycling, composting, transfer, processing, energy recovery, and disposal. The analysis will include the following tasks:

- Describe existing and future New York City solid waste disposal practices, including the collection system and disposal methods.
- Estimate existing solid waste generation and solid waste generation in the future without the proposed project.
- Project solid waste generation by the proposed project based on generation rates provided in Table 14-1 of the 2014 *CEQR Technical Manual*.
- Assess the impacts of the proposed project's incremental solid waste generation on the City's collection needs and disposal capacity.
- If the results of the impact analysis identify a potential for a significant adverse impact, potential mitigation measures will be discussed in the EIS.

TASK 10. TRANSPORTATION

The primary objective of transportation (traffic, transit and pedestrian) analyses is to assess whether a project is expected to have significant impacts on the street network, parking, transit and pedestrian facilities, and to provide appropriate mitigation measures to address such impacts. The proposed project would generate new vehicular travel and parking demand, as well as generate additional pedestrian traffic and trips by subway and local bus in the study area. These new trips have the potential to affect the area's transportation systems beginning in the proposed project's analysis year of 2018. Therefore, the transportation studies for the EIS will include the following analyses, which will be conducted in conformance with the 2014 *CEQR Technical Manual*. The Transportation Planning Factors (TPF) Technical Memorandum (which was approved by the NYC Department of Transportation (NYCDOT) on June 30, 2014), included as Appendix 1, presents a preliminary travel demand forecast and trip assignments for the purposes of identifying potential locations and peak hours for analysis.

TRAFFIC

The EIS will provide a detailed traffic analysis focusing on those peak hours and intersections where the highest concentrations of project-generated demand are expected to occur. The peak hours and specific intersections to be included in the analysis will be determined based upon projected traffic assignment patterns and the *CEQR Technical Manual* analysis threshold of 50 vehicle trips per hour at an intersection. Based on the preliminary travel demand forecast provided in the TPF Technical Memorandum (Appendix 1), the proposed project would exceed the 50-trip *CEQR Technical Manual* analysis threshold, and therefore, the EIS will provide a detailed traffic analysis focusing on the weekday AM, midday, and PM, and Saturday midday peak hours.

A total of 24 intersections have been selected for the analysis of traffic conditions. These intersections, listed below, are where traffic generated by the proposed project is expected to be most concentrated based on a preliminary assignment of project-generated traffic. (Refer to TPF Technical Memorandum provided in Appendix 1).

Traffic Analysis Locations – Weekday and Saturday

1. Bartow Avenue at Edson Avenue
2. Bartow Avenue at Gunther Avenue
3. Bartow Avenue at East Gun Hill Road
4. Bartow Avenue at Baychester Avenue
5. East Gun Hill Road at Gunther Avenue
6. East Gun Hill Road at the entrance to the 1750-1780 East Gun Hill Road Shopping Center
7. East Gun Hill Road at the entrance to Home Depot at 1806 East Gun Hill Road
8. East Gun Hill Road at Bronx River Parkway Southbound On/Off-Ramp
9. East Gun Hill Road at Bronx River Parkway Northbound On/Off-Ramp
10. East Gun Hill Road at Boston Road
11. East Gun Hill Road at Burke Road
12. East Gun Hill Road at Eastchester Road
13. East Gun Hill Road at Laconia Avenue
14. East Gun Hill Road at Bronxwood Avenue
15. East Gun Hill Road at White Plains Road (northbound)
16. East Gun Hill Road at White Plains Road (southbound)

17. East Gun Hill Road at Edson Avenue
18. Allerton Avenue at Eastchester Road
19. Allerton Avenue at Laconia Avenue
20. Allerton Avenue at Bronxwood Avenue
21. Pelham Parkway at Williamsbridge Road
22. Pelham Parkway South at Williamsbridge Road
23. Pelham Parkway at Eastchester Road
24. Pelham Parkway South at Eastchester Road

The EIS traffic analysis will include the following tasks:

- Define a traffic study area to account for the principal travel corridors to/from the project site. Based on a preliminary travel demand forecast and vehicle trip assignments, it is anticipated that a total of approximately 24 intersections along East Gun Hill Road, Bartow Avenue, Allerton Avenue, and the Pelham Parkway will require detailed analysis for potential impacts during four peak periods: the weekday AM, midday and PM peak periods, and the Saturday midday period. (The locations of these intersections are provided in the TPF Technical Memorandum in Appendix 1.)
- Conduct traffic counts at traffic analysis locations via a mix of automatic traffic recorder (ATR) machine counts and manual intersection turning movement counts. ATRs will provide 24-hour traffic volumes for a minimum of nine days (including two weekends) along the principal corridors serving the project site. Traffic counts will be conducted during the weekday AM, midday and PM and Saturday midday peak periods. Where applicable, available information from current studies of the area will also be compiled.
- Conduct travel speed and delay studies and vehicle classification counts along principal corridors in the study area to provide supporting data for air quality and noise analyses. These speed-and-delay studies and vehicle classification counts will be conducted in conjunction with the traffic volume counts.
- Inventory physical and operational data as needed for capacity analysis purposes at each of the analyzed intersections. The data collected will be consistent with current *CEQR Technical Manual* guidelines and will include such information as street widths, number of traffic lanes and lane widths, pavement markings, turn prohibitions, parking regulations, and signal phasing and timing data.
- Using *2000 Highway Capacity Manual* methodologies, determine existing traffic conditions at each analyzed intersection including capacities, volume-to-capacity (v/c) ratios, average control delays per vehicle and levels of service (LOS) for each lane group and intersection approach, and for the intersection overall. Allowances will be made for any on-going construction or temporary road closures.
- Identify planned projects that would be developed in the area in the future without the proposed project (the No-Action condition) and determine the associated future No-Action travel demand generated by these projects. Included will be the planned Mall at Bay Plaza directly to the east of the project site. The future traffic volumes from No-Action projects will be estimated using published environmental assessments or forecasted based on *CEQR Technical Manual* guidelines, Census data, and/or data from other secondary sources. An annual growth rate of 0.25 percent per year will also be applied to existing traffic volumes to account for general background growth through 2018 as per *CEQR Technical Manual* guidelines. Mitigation measures accepted for No-Action projects will also be reflected in the future No-Action traffic

network as will any relevant initiatives planned by the NYCDOT and other agencies. No-Action traffic volumes will be determined, v/c ratios and levels of service will be calculated, and congested intersections will be identified.

- Based on surveys conducted at the 1750-1780 East Gun Hill Road Shopping Center (located directly across the street from the project site), available sources, U.S. Census data, standard references, and other EIS documents, the travel demand generated by the proposed shopping center, including fitness center, and senior housing will be forecasted, as will the modes of transportation expected to be used for these trips.
- Determine the volume of vehicle traffic expected to be generated by the proposed project, assign that volume of traffic in each analysis period to the approach and departure routes likely to be used, and prepare balanced traffic volume networks for the future condition with the proposed project (the With-Action condition) for each analysis period. The chapter will describe proposed shopping center's loading area(s), including location(s), number of bays and types of trucks, and expected temporal distribution of deliveries.
- Determine the resulting v/c ratios, delays, levels of service and 85th percentile queues for the future With-Action condition, and identify significant traffic impacts in accordance with *CEQR Technical Manual* criteria.
- Using the traffic simulation model Synchro and HCS models analyze the existing and projected queuing along East Gun Hill Road with special emphasis on the two signalized locations fronting the project site (i.e., the signalized entrance providing access to Home Depot at 1806 East Gun Hill Road and the signalized intersection providing access to shopping center at 1750-1780 East Gun Hill Road [which would also serve the proposed project]). The existing queues will be measured and compared with the No-Action and With-Action queues.
- Identify and evaluate traffic mitigation measures, as appropriate, for all significantly impacted locations in the study area in consultation with the lead agency and NYCDOT. Potential traffic mitigation could include both operational and physical measures such as changes to lane striping, curbside parking regulations and traffic signal timing and phasing, roadway widening, and new traffic signal installations. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

VEHICLE/PEDESTRIAN SAFETY ASSESSMENT

According to the 2014 *CEQR Technical Manual*, safety analyses will be conducted to resolve to what extent vehicular and pedestrian exposure to crashes may reasonably be expected to increase with the proposed project in place. In order to identify high-crash locations and make recommendations for needed safety measures, the EIS safety analyses will include the following tasks:

- Quantify the total number of reportable crashes (involving fatality, injury, or more than \$1,000 in property damage), fatalities, and injuries for the most recent available three-year period based on crash data obtained from NYCDOT in the vicinity of the project site.
- Summarize the crash data and provide a yearly breakdown of pedestrian- and bicycle-related crashes at each location. Determine if any of the intersections are classified as a high-crash location based on *CEQR Technical Manual* criteria. If any high crash locations are identified, discuss possible mitigation/improvement measures to alleviate the safety impacts.
- Determine whether the proposed project has the potential to adversely affect vehicular, bicycle, or pedestrian safety at the analysis locations. If such locations are identified, feasible mitigation

or improvement measures will be explored in coordination with NYCDOT and NYCTA to alleviate potential safety concerns.

The resulting findings will be incorporated into the Pedestrian Analysis.

PARKING

As detailed in the TPF Technical Memorandum (Appendix 1), parking demand generated by the proposed project is expected to be fully accommodated on-site. Therefore, the parking analysis will focus on parking demand and supply at the project site. Parking demand generated by the proposed shopping center and senior housing would be estimated and temporal arrival and departure patterns established using standard professional references and/or previously approved factors. Weekday and Saturday parking accumulation profiles will be developed for the project site. If necessary, parking mitigation measures will be identified.

TRANSIT

Transit analyses typically focus on the weekday AM and PM commuter peak hours, as it is during these periods that overall demand on the subway and bus systems is usually highest. The subway stations selected for analysis are determined based upon projected subway trip assignment patterns and the *CEQR Technical Manual* analysis threshold of 200 incremental trips per hour at any one station. An analysis of MTA and NYCTA bus routes is similarly considered warranted based on *CEQR Technical Manual* analysis thresholds of 200 total local bus trips in any one peak hour, and 50 incremental trips per direction per hour on any one bus route.

Based on the results of the preliminary travel demand estimates provided in the TPF Technical Memorandum in Appendix 1, screening analyses will be prepared for transit use. Given that the proposed uses are more conducive to generating vehicular trips, transit trips associated with the proposed project are expected to be below *CEQR Technical Manual* thresholds to warrant the need for any detailed transit analysis (refer to TPF Technical Memorandum in Appendix 1). A detailed analysis will be prepared if the proposed project generates 200 or more peak hour trips at a subway station, or 200 local bus trips in any one peak hour, and 50 incremental trips per direction per hour on any one bus route- the *CEQR Technical Manual* thresholds for undertaking a quantitative transit analysis. If necessary, transit mitigation measures will be identified.

PEDESTRIANS

Many project-generated trips would include a walk component using local sidewalks, street corners, and crosswalks, to access the project site. Based on a preliminary travel demand forecast (see TPF Technical Memorandum in Appendix 1), the proposed project would result in a net increase of more than the 200-trip *CEQR Technical Manual* analysis threshold to sidewalks, corner areas, and crosswalks in the immediate vicinity of the project site during the weekday midday and PM, and Saturday midday peak hours. These trips would include walk-only trips as well as pedestrian trips en route to and from area transit facilities (bus stops).

A total of two pedestrian facilities have been selected for the analysis of pedestrian conditions during the weekday midday and PM, and Saturday midday peak hours. These locations, listed below, are where pedestrian trips are expected to be most concentrated, including sidewalks, corner areas, and

crosswalks providing access to entrances, and along corridors leading to nearby bus stops.

Pedestrian Analysis Locations – Weekday and Saturday

1. Gun Hill Square entrance on East Gun Hill Road (1 crosswalk, 2 corners)
2. East Gun Hill Road between the Gun Hill Square entrance and Allerton Avenue (east and west sidewalks)

The analyses of pedestrian conditions will include the following tasks:

- Conduct pedestrian counts and analyze existing conditions during the weekday midday and PM, and Saturday midday peak hours at key locations in the vicinity of the project site where project-generated pedestrian demand is expected to be most concentrated.
- Assess peak hour conditions at analyzed pedestrian facilities in the 2018 analysis year (future No-Action condition) incorporating an annual background growth rate of 0.25 percent per year and anticipated demand from known developments in the vicinity of the study area.
- Assess peak hour pedestrian conditions at analyzed facilities in the future with the proposed project, incorporating project-generated demand and reflecting proposed access/egress points to the proposed shopping center and senior housing and any other project-related changes to the study area pedestrian network. Identify significant adverse impacts based on *CEQR Technical Manual* criteria.
- Research and document traffic crashes involving pedestrians and bicycles at key study area intersections in the vicinity of the project site, identify high crash locations and assess any potential pedestrian and bicycle safety issues resulting from the proposed project.
- Identify and evaluate pedestrian possible mitigation and improvement measures, as appropriate, for all significantly impacted locations in the study area, where practicable. Development of these measures will be coordinated with NYCDOT and other agencies as necessary. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

TASK 11. AIR QUALITY

2014 *CEQR Technical Manual* criteria require an air quality assessment for actions that can result in either significant mobile source or stationary source air quality impacts. Mobile source impacts could arise when an action increases or causes a redistribution of traffic, creates any other mobile sources of pollutants, or adds new uses near existing mobile sources. Stationary source impacts could occur with actions that create new stationary sources or pollutants, such as emission stacks for industrial plants, hospitals, or other large institutional uses, or a building's boilers, that can affect surrounding uses; when they add uses near existing or planned future emissions stacks, and the new uses might be affected by the emissions from the stacks, or when they add structures near such stacks and those structures can change the dispersion of emissions from the stacks so that they begin to affect surrounding uses.

MOBILE SOURCE ANALYSIS

Carbon monoxide (CO) and particulate matter (PM) are the primary pollutants of concern for microscale mobile source air quality analyses, including assessments of roadway intersections and parking lots/ garages.

The number of project-generated vehicle trips on the weekday and weekend are expected to exceed the *CEQR Technical Manual* carbon monoxide (CO) analysis screening threshold of 170 vehicles in the peak hour at a number of locations within the study area. In addition, the projected number of heavy-duty trucks or equivalent vehicles may exceed the applicable fine particulate matter (PM_{2.5}) screening thresholds in the *CEQR Technical Manual*. Therefore, a microscale analysis of CO and PM_{2.5} mobile source emissions analysis is proposed at up to two (2) of the affected intersections.

The mobile source analysis methodology entails selecting appropriate analysis sites, calculating vehicular emissions, calculating the effect of vehicle emissions on ambient pollutant concentrations at discrete receptors using dispersion models, incorporating background concentrations, and assessing the project impact in relation to the National Ambient Air Quality Standards (NAAQS) and/or *CEQR Technical Manual de minimis* criteria. The methodologies used for this analysis would be consistent with the *CEQR Technical Manual*. The specific work program for the mobile source air quality study will include the following tasks:

CARBON MONOXIDE (CO) INTERSECTION ANALYSIS

Two (2) worst-case intersections will be selected for CO analysis based on consideration of the incremental traffic increase due to the proposed project, total traffic volumes, and congestion. Worst-case peak hour traffic data for the selected intersections will be used in the analysis. Emission factors will be determined using the latest EPA-approved emissions model at the time the analysis is initiated (currently MOVES2010b, although the release of a new version, MOVES2014 is anticipated shortly). Dispersion modeling will be accomplished with CAL3QHC, using worst-case meteorological inputs for a screening-level analysis and receptor placement consistent with the *CEQR Technical Manual*. The modeled 1-hour average CO concentrations will be combined with background concentrations to determine total concentrations for the No-Action and With-Action conditions. The 8-hour average CO concentration will be derived from the 1-hour concentration with a persistence factor. The results will be compared to the NAAQS and the *CEQR de minimis* criteria.

PARTICULATE MATTER (PM) INTERSECTION ANALYSIS

Two (2) worst-case intersections will be selected for PM_{2.5} analysis based on consideration of traffic volumes (especially heavy duty diesel vehicle volumes, which have substantially higher PM emission rates than gasoline autos) and congestion. Similar to the CO analysis described above, emissions modeling for PM_{2.5} will be accomplished with the latest EPA-approved emissions model (currently MOVES2010b). However, unlike CO analysis which is focused on a single worst-case hour, PM_{2.5} analysis requires accounting for the variations in emissions that occur throughout the day and seasonally throughout the year (accounting for effects such as changes in temperature and humidity). This is accounted for by modeling the 24-hour day by using four representative time periods—AM peak, midday, PM peak, and overnight. Each of these time periods is modeled for each of the four seasons, consistent with EPA's 2013 "Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas."

The emissions factors from MOVES will then be used as inputs into CAL3QHCR, a refined version of CAL3QHC that requires actual meteorological data. Five years of surface meteorological data will be used from LaGuardia Airport and upper air data will be from Brookhaven, New York. The resulting PM_{2.5} concentration increments will be compared to the *CEQR Technical Manual de minimis* criteria, including special receptor placement to account for the requirements of neighborhood scale analysis for the annual average PM_{2.5} standard. Background concentrations are a factor in determining the *de minimis* criteria for PM_{2.5} 24-hour average concentrations and these will be obtained from the latest list published by NYCDEP.

PARKING LOT AND GARAGE ANALYSIS

The *CEQR Technical Manual* requires analysis of both CO and PM for parking facilities. For both pollutants, emissions modeling will be accomplished with the latest EPA-approved version of MOVES. In MOVES, vehicle start emissions from parking facilities are explicitly accounted for using “off-network” links.⁵ Cold start emissions are particularly important component of total CO emissions from vehicle activity and are accounted for in MOVES through the input of a “soak time distribution” that estimates how long each vehicle has been in the garage or parking lot since it was last started. While off-network links will be modeled to reflect start activity, MOVES “roadway” links within the parking facilities will be modeled to reflect running emissions at low speeds (including time idling). This modeling will be based on the hourly vehicle entrance/exits data and 2/3rds of the distance between the facility entrance and the most distant parking space.

Given that parking garages are not typical line sources that can be modeled with CAL3QHC or CAL3QHR, the most appropriate dispersion model for the parking facilities for the proposed project is AERMOD. AERMOD is required for analysis of “area sources” such as parking lots under EPA’s Quantitative PM hot-spot analysis guidance. Similar to the PM intersection analysis, the parking facility analysis will use five years of surface meteorological data from LaGuardia Airport and upper air data will be from Brookhaven, New York. Modeled CO contributions from the parking facilities will be combined with background concentrations and contributions from nearby roadways and compared with the NAAQS. CO concentrations will also be compared to the CO incremental *de minimis* criteria. PM_{2.5} 24-hour and annual average concentrations (incorporating roadway contributions) will be compared to the incremental CEQR *de minimis* criteria.

PARTICULATE MATTER ANALYSIS OF OTHER MOBILE SOURCES

As diesel buses are a substantial source of PM_{2.5} emissions, any potential for air quality effects on the proposed senior housing resulting from emissions from the nearby MTA Gun Hill (Bus) Depot will be assessed and described. Information on the operations of the bus depot (such as the percentage of diesel buses, total bus population, and departures and arrivals by hour of the day) will be used to model emissions in MOVES. The impact analysis will also consider major roadways within 1,000 feet of the project site that may not be adequately reflected in background concentrations, such as the I-95 and the Hutchinson River Parkway. The emissions of these roadways will be modeled in MOVES and CAL3QHCR based on publicly available traffic data. Total PM_{2.5} concentrations incorporating the effect of the proposed project and other sources will be compared to the New York City *de minimis* criteria to assess significance, considering both existing receptors and receptors created by the

⁵ See the MOVES User Guide: <http://www.epa.gov/otaq/models/moves/420b09041.pdf> and the Quantitative PM hot-spot guidance: <http://www.epa.gov/oms/stateresources/transconf/policy/420b13053-sec.pdf>

proposed project. If necessary, mitigation measures will be considered.

STATIONARY SOURCE ANALYSIS

The stationary air quality analysis will examine potential stationary source impacts from the proposed project's HVAC systems on surrounding land uses and the impacts of nearby industrial sources on sensitive uses associated with the project development.

HVAC SCREENING

A screening analysis will be performed to determine whether emissions from any on-site fuel fired heating ventilation and air conditioning systems (HVAC) are significant. The screening analysis will use the procedures outlined in the *CEQR Technical Manual*. The procedure involves determining the distance (from the exhaust point) within which potential significant impacts may occur, on elevated receptors (such as operable windows) that are of an equal or greater height when compared to the height of the proposed project's HVAC exhaust. The distance within which a significant impact may occur is dependent on a number of factors, including the height of the discharge, type(s) of fuel burned, and development size. If warranted, based on the screening analysis, analyze the project's potential impacts on existing and planned developments and analyze project-on-project impacts from individual buildings using the AERMOD model and five years of meteorological data from LaGuardia Airport. Relevant pollutants would include NO_x for natural-gas fired boilers and PM₁₀, PM_{2.5}, and SO₂ for boilers using fuel oil. Additionally, if warranted, analyze the potential combined impacts from clusters of HVAC emissions (i.e., HVAC emissions from buildings resulting from the proposed actions of approximately the same height that are located in close proximity to one another) to significantly impact existing land uses and other buildings resulting from the proposed project. Clusters will be selected based on the sizes of the buildings that comprise the cluster, proximity of the cluster buildings to each other, and the difference in stack heights no more than 10 to 15 feet with no city street in between.

INDUSTRIAL SOURCE SCREENING

As currently contemplated, the project would include up to 100 units of senior housing; therefore, an industrial source air quality analysis, as detailed in the *CEQR Technical Manual*, would be required. A survey of land uses surrounding the project site will be conducted to determine the potential for impacts from industrial emissions. The survey will determine if there are any processing or manufacturing facilities within 400 feet of the project site. A copy of the air permits for each of these facilities (if any) will be requested from the NYCDEP Bureau of Environmental Compliance. A review of NYSDEC Title V permits and the EPA Envirofacts database will also be performed to identify any federal or state-permitted facilities within 1,000 feet of the proposed project. If permit information on any emissions from processing or manufacturing facilities are identified, potential impacts on the proposed senior housing will be determined.

If the results of any of the above air quality analyses identify a potential for a significant adverse impact, potential mitigation measures will be discussed in the EIS.

TASK 12. GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

The proposed project would exceed the 2014 *CEQR Technical Manual* threshold of 350,000 sf of development, and therefore, a Greenhouse Gas (GHG) emissions consistency assessment will be included as a separate chapter in the EIS. In accordance with the *CEQR Technical Manual*, an assessment of the consistency with the City's established GHG reduction goal will be performed.

- Sources of GHG from the proposed project will be identified. The pollutants for analysis will be discussed, as well as the various city, state, and federal goals, policy, regulations, standards and benchmarks for GHG emissions.
- Fuel consumption will be estimated for the proposed project based on the calculations of energy use estimated for the project in the "Energy" screening analysis conducted as part of the EAS document.
- GHG emissions associated with project-related traffic will be estimated for the proposed project using data from the transportation analysis. A calculation of Vehicle Miles Traveled (VMT) will be prepared.
- The types of construction materials and equipment proposed will be discussed along with opportunities for alternative approaches that may serve to reduce GHG emissions associated with construction.
- A qualitative discussion of stationary and mobile sources of GHG emissions will be provided in conjunction with a discussion of goals for reducing GHG emissions to determine if the proposed project is consistent with GHG reduction goals, including building efficient buildings, use of clean power, transit-oriented development and sustainable transportation, reduction of construction operations emissions, and use of building materials with low carbon intensity.

As the project site is located within the NYC Coastal Zone, the 2020s 500-year flood zone, the 2050s 100-year flood zone, and the 2050 500-year flood zone, a Climate Change assessment will be provided in the EIS. The Climate Change assessment will be performed in accordance with the *CEQR Technical Manual*.

- Projections for the future sea level rise and, to the extent available, likely future flood zone boundaries projected for the area of the site for different years within the expected life of the development will be provided.
- Any city, state, or federal initiatives to improve coastal resilience, such as those set forth in the Special Initiative for Rebuilding and Resiliency (SIRR) Report, "A Stronger, More Resilient New York," will be discussed if they have the potential to affect the project site.
- An analysis of consistency with policy 6.2 of the revised (and CPC and City Council approved) WRP will be provided.

If the results of the greenhouse gas emissions and climate change analyses identify a potential for a significant adverse impact, potential mitigation measures will be discussed.

TASK 13. NOISE

According to the 2014 *CEQR Technical Manual*, a noise analysis is appropriate if an action would generate any mobile or stationary sources of noise or would be located in an area with high ambient

noise levels. Specifically, an analysis would be required if an action generates or reroutes vehicular traffic, if an action is located near a heavily trafficked thoroughfare, or if an action would be within one mile of an existing flight path or within 1,500 feet of existing rail activity (and with a direct line of sight to that rail facility). A noise assessment would also be appropriate if the action would be located in an area with high ambient noise levels resulting from stationary sources.

The noise analysis will examine impacts of ambient noise sources (e.g., the I-95 traffic and Gun Hill (Bus) Depot) on the proposed commercial and residential uses and the impacts of project-generated traffic on noise-sensitive land uses nearby. This work will include noise monitoring to determine existing ambient noise levels. The proposed project will generate vehicular trips and introduce a new receptor, the senior housing building, near a heavily trafficked thoroughfare. Therefore, an initial mobile source noise assessment will be provided in the EIS. If existing Noise Passenger Car Equivalent (PCE) values are increased by 100 percent or more due to a proposed project (which is equivalent to an increase of 3 dB(A) or more), a detailed mobile source noise analysis will be performed. In addition, a detailed analysis of potential noise impacts due to outdoor mechanical equipment is not required, as any HVAC equipment would be designed to meet applicable regulations.

The noise analysis will describe the noise environment and the impact of the proposed project following current City criteria regarding noise descriptors. The proposed scope of work includes: selection of receptor sites, measurement of existing noise levels, prediction of future noise levels both with and without the proposed project, impact evaluation, and the identification of noise abatement measures (where necessary). The methodologies used for this analysis will be consistent with the methodologies contained in the *CEQR Technical Manual*. The following tasks would be performed:

- Select appropriate noise descriptors. Appropriate noise descriptors to describe the noise environment and the impact of the proposed project will be selected. Typically, the L_{10} , and 1-hour equivalent ($L_{eq(1)}$) noise levels are used to characterize noise levels.
- Select up to five receptor locations. Receptor site analyzed will include locations where high existing ambient noise levels could adversely affect new uses associated with the project.
- Determine existing noise levels based on noise monitoring. Perform 20-minute measurements at each receptor location during the weekday AM, midday, and PM, and during the Saturday midday peak periods. Hourly L_{eq} , L_1 , L_{10} , L_{50} , and L_{90} values will be recorded. Traffic classification counts and aircraft flyovers during the monitoring period will be tabulated. Monitored noise levels will be adjusted to existing noise levels using existing traffic volumes and the proportionality equation.
- Determine the level of attenuation necessary to satisfy *CEQR* criteria. The *CEQR Technical Manual* provides recommended levels of building attenuation to achieve acceptable levels of interior noise (which are assumed to be 45 dBA $L_{10(1)}$ for residential uses and 50 dBA $L_{10(1)}$ for office and retail uses). The level of building attenuation necessary to satisfy *CEQR* requirements is a function of exterior noise levels and will be determined. Projected future noise levels will be compared to appropriate standards and guideline levels.
- As necessary, general noise attenuation measures needed for project buildings to achieve compliance with standards and guideline levels will be recommended.

If the results of the impact analysis identify a potential for a significant adverse impact, discuss potential mitigation measures. If necessary, recommend measures to attain acceptable interior noise levels and/or reduce noise impacts to acceptable levels.

TASK 14. PUBLIC HEALTH

According to the 2014 *CEQR Technical Manual*, public health is the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; health promotion; prevention of disease, injury, disorder, disability and premature death; and reducing inequalities in health status. The goal of the CEQR analysis with respect to public health is to determine whether adverse impacts on public health may occur as a result of a proposed project, and if so, to identify measures to mitigate such effects.

According to the guidelines of the *CEQR Technical Manual*, a public health assessment may be warranted if an unmitigated significant adverse impact is identified in other CEQR analysis areas, such as air quality, hazardous materials, or noise. If unmitigated significant adverse impacts are identified in any one of these technical areas and the lead agency determines that a public health assessment is warranted, an analysis will be provided for the specific technical area or areas. If the results of the analysis identify a potential for a significant adverse impact, potential mitigation measures will be discussed in the EIS.

TASK 15. NEIGHBORHOOD CHARACTER

The character of a neighborhood is established by numerous factors, including land use patterns, the characteristics of its population and economic activities, the scale of its development, the design of its buildings, the presence of notable landmarks, and a variety of other physical features that include traffic and pedestrian patterns, noise levels, etc. The proposed project has the potential to alter certain constituent elements of the surrounding area's neighborhood character, including traffic and noise levels, and therefore an analysis will be provided in the EIS. The chapter will summarize changes that can be expected in the character of the neighborhood in the future without the proposed project (No-Action condition) as well as describing the proposed project's impacts on neighborhood character. Subtasks will include:

- Describe the predominant factors that contribute to defining the character of the neighborhood, drawing on relevant EIS chapters.
- Summarize changes in the character of the neighborhood that can be expected in the future No-Action Condition based on planned development projects, public policy initiatives, and planned public improvements, as applicable.
- Summarize changes in the character of the neighborhood that can be expected in the future With-Action condition, based on the proposed project, and compare to the future No-Action condition. A qualitative assessment will be presented that will include a description of the potential effects of the proposed project on neighborhood character.
- If the results of the assessment identify a potential for a significant adverse impact, potential mitigation measures will be discussed in the EIS.

TASK 16. CONSTRUCTION

Construction impacts, although temporary, can have a disruptive and noticeable effect on the adjacent community, as well as people passing through the area. Construction impacts are usually important when construction activity has the potential to affect transportation conditions,

archaeological resources and the integrity of historic resources, community noise patterns, air quality conditions, and mitigation of hazardous materials.

According to the 2014 *CEQR Technical Manual*, construction duration is often broken down into short-term (less than two years) and long-term (two or more years). Where the duration of construction is expected to be short-term, any impacts resulting from such short-term construction generally do not require detailed assessment. Construction of the proposed project would be implemented in a single phase and would be short-term, lasting up to approximately 24 months. It would involve the construction of an approximately 390,400 gsf shopping center, including an approximately 40,000 gsf shopping center, and associated public open space and accessory parking, as well as up to 100 units of senior housing and associated accessory parking at a single development site. It is expected that all proposed buildings would be completed and occupied concurrently by the project's anticipated Build Year of 2018.

The project site is not located within a Central Business District and little or no excavation is expected. It is located to the south of the MTA's regional-serving Gun Hill (Bus) Depot near the eastern terminus of East Gun Hill Road. I-95 is located directly to the east of the project site, and the interchange for I-95 and the Hutchinson River Parkway is located to the southeast of the project site. With the exception of the little league ball fields to the north, the project site is generally located at some distance from sensitive uses.

This chapter will describe the construction schedule for the proposed project and provide an estimate of activity on-site. In addition, unless otherwise specified, a qualitative analysis of the effects of construction activities will be performed. The construction assessment for the project will focus on areas where construction activities may pose specific environmental problems. The analysis will also consider other construction projects, ongoing and planned, that would occur in the area during construction of the proposed project. Where potential significant impacts are predicted, mitigation measures to avoid or reduce potential significant adverse impacts will be identified. In circumstances in which construction activities impact the surrounding community for a prolonged period, those impacts will be analyzed in greater detail. Technical areas to be analyzed include:

- **Project Site.** This section will assess any physical changes to the project site resulting from the proposed construction. A discussion of construction staging, compliance with building codes and other applicable laws, etc. will be provided.
- **Transportation Systems.** This assessment will provide a table showing the number and types of construction vehicles (including worker vehicles and trucks) expected to arrive and depart the project site hourly during construction on a quarterly basis. The assessment will identify the number of vehicular access points (i.e., driveways) available at the project site during construction and identify where vehicles are expected to be accommodated. It will qualitatively consider losses in lanes, sidewalks, and other transportation services on the adjacent streets during the various phases of construction, and identify the increase in vehicle trips from construction workers and equipment. If warranted under *CEQR Technical Manual* guidelines, a travel demand forecast for the project's construction period will be prepared.
- **Air Quality.** Air quality concerns during construction would most likely be related to vehicles going to and from the project site, equipment operated on the project site, and fugitive dust. The construction air quality impact section will contain a qualitative discussion of both mobile air source emissions from construction equipment and worker and delivery vehicles, and fugitive dust emissions. It will discuss measures to reduce impacts.

- **Noise.** Noise would be generated by project related traffic and equipment operating on the site. The construction noise impact section will contain a qualitative discussion of noise from construction activity and discuss potential effects on adjacent land uses. Measures to minimize construction noise impacts will be presented, as necessary.
- **Hazardous Materials.** In coordination with the work performed for the hazardous materials analysis, above, the EIS will contain a summary of actions to be taken during project construction to limit exposure of construction workers, residents and nearby workers to potential contaminants, including preparation of a Construction Health and Safety Plan (CHASP) that would be submitted to DEP for approval.
- **Other technical areas.** As appropriate, discuss other areas of environmental assessment— such as land use, zoning, and public policy, socioeconomic conditions, open space, and infrastructure—for potential construction-related impacts.

TASK 17. MITIGATION

Where significant adverse project impacts have been identified in Tasks 2 through 16, measures to mitigate those impacts will be described. These measures will be developed and coordinated with the responsible City/State agencies as necessary, including where appropriate, the MTA, the NYC Department of Parks and Recreation (NYCDPR), NYCDOT, and NYCDEP. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

TASK 18. ALTERNATIVES

The purpose of an alternatives analysis in an EIS is to examine reasonable and practical options that avoid or reduce project-related significant adverse impacts while achieving the goals and objectives of the proposed project. The alternatives are usually defined once the full extent of the proposed project's impacts has been identified, however, they must include the No-Action Alternative, as required by SEQRA, and may include an alternative(s) that reduces any identified significant adverse impacts. The alternatives analysis is primarily qualitative, except where significant adverse impacts of the proposed project have been identified. The level of analysis depends on an assessment of project impacts determined by the analysis connected with the appropriate tasks.

TASK 19. SUMMARY EIS CHAPTERS

In accordance with 2014 *CEQR Technical Manual* guidelines, the EIS will include the following three summary chapters, as appropriate to the proposed project:

- **Unavoidable Adverse Impacts** - summarizes any significant adverse impacts that are unavoidable if the proposed project is implemented regardless of the mitigation employed (or if mitigation is not feasible).
- **Growth-Inducing Aspects** of the proposed project - generally refer to “secondary” impacts of a proposed project that trigger further development.
- **Irreversible and Irrecoverable Commitments of Resources** - summarizes the proposed project and its impacts in terms of the loss of environmental resources (loss of vegetation, use of fossil fuels and materials for construction, etc.), both in the immediate future and in the long term.

TASK 20. EXECUTIVE SUMMARY

The executive summary will utilize relevant material from the body of the EIS to describe the proposed project, the necessary approvals, study areas, environmental impacts predicted to occur, measures to mitigate those impacts, unmitigated and unavoidable impacts (if any), and alternatives to the proposed project. The executive summary will be written in sufficient detail to facilitate drafting of a Notice of Completion for the EIS by the lead agency.

APPENDIX 1

**TRANSPORTATION PLANNING FACTORS AND TRAVEL DEMAND FORECAST
TECHNICAL MEMORANDUM**



TECHNICAL MEMORANDUM

To: Project Team

From: Philip Habib & Associates

Date: June 27, 2014

Project: Gun Hill Square EIS (PHA #1396)

Re: Revised Transportation Planning Factors and Travel Demand Forecast for Gun Hill Square

This memorandum summarizes the transportation planning factors to be used for the environmental impact statement (EIS) analyses of traffic, parking, transit, and pedestrian conditions for the proposed Gun Hill Square environmental review. The proposed project would facilitate the redevelopment of an underutilized 12.6-acre site in the Baychester neighborhood of the northern Bronx by introducing active commercial and residential uses to the project site. The proposed project would create new employment opportunities for local residents, would create fiscal benefits to the City in the form of increased tax revenues, as well as expand shopping, services and dining opportunities for area residents. The project would also provide approximately one acre of publicly accessible open space.

PROPOSED PROJECT

The project site is located to the northwest of the interchange of the New England Thruway (I-95) and the Hutchinson River Parkway on the north side of the eastern end of East Gun Hill Road in the Baychester neighborhood of Bronx Community District 12. As shown in Table 1, the proposed project would redevelop a vacant, underutilized site with a pedestrian-oriented open-air urban shopping center (390,400 gross square feet [gsf]) and a mid-rise residential building containing senior housing (92,000 gsf; up to 100 units). The proposed shopping center would include approximately 390,400 gsf of commercial use, including, a fitness center of up to approximately 40,000 gsf. The project would also provide approximately one acre of passive, privately-owned publicly accessible open space and both at-grade and garage accessory parking facilities (238,500 gsf; total of 1,170 spaces). For conservative analysis purposes, the proposed project, including the shopping center with fitness center and senior housing building, are assumed to be the reasonable worst case development scenario (RWCDS) for the project site, and are therefore evaluated in this analysis.

Table 1
Proposed Development Program for the Project Site

Lot Size Square Feet (SF)	Total GSF (Incl. Parking)	Commercial GSF*	Residential GSF	# of Residential Units	# of Accessory Parking Spaces	Accessory Parking Garage GSF
550,185	720,900	390,400	92,000	100	1,170	238,500

Notes: * 390,400 gsf shopping center including up to a 40,000 gsf fitness center.

As shown in Figure 1, the project site would have four vehicular/pedestrian access points, two on East Gun Hill Road and two on Edson Avenue. The proposed shopping center would have three vehicular access points including a signalized entrance on East Gun Hill Road (that provides access to an existing shopping center at 1750-1780 East Gun Hill Road located directly across the street) and two entrances on Edson Avenue, as well as three points of egress (including one on Edson Avenue, and two on East Gun Hill Road). The proposed senior housing building would have a separate unsignalized vehicular entrance/exit from East Gun Hill Road that would also serve as a vehicle egress point from the accessory parking garage.

The site is currently accessible via public transportation, including a number of nearby bus lines (Bx12 SBS, Bx23, Bx26, Bx28, Bx38, Q50) that run along either Edson, Bartow, and/or Baychester Avenues approximately ½-mile to the north (refer to Figure 5). It is also important to note that the Applicant is attempting to coordinate with the Metropolitan Transportation Authority (MTA)/New York City Transit Authority (NYCTA) to reroute/divert an existing bus route (which provides local service between Co-op City and Bedford Park in the Bronx) to travel closer to the project site or establish a new bus route along either East Gun Hill Road or Allerton Avenue that would provide service between the project site and subway service. The MTA/NYCTA has made no commits at this time.

It is the intent of the proposed project to create new employment opportunities for local residents, fiscal benefits for the City in the form of increased tax revenues, and expanded shopping, services, and dining opportunities for area residents. Construction of the proposed development is expected to begin in early 2016 with all components complete and fully operational by 2018.

FUTURE NO-ACTION ASSUMPTIONS FOR THE PROJECT SITE

In the absence of the proposed actions, no development is anticipated on the project site. Therefore, in the future without the proposed actions, the project site would remain vacant and would not support any active uses.

TRANSPORTATION PLANNING FACTORS

Table 2 shows the transportation planning factors to be used for the travel demand forecast generated by the RWCDs in the weekday AM, midday, and PM and Saturday midday peak hours. These include trip generation rates, temporal and directional distributions, mode choice factors, vehicle occupancies and truck trip factors for destination retail, fitness center, and residential uses. The factors in Table 2 were based on accepted 2014 *CEQR Technical Manual* criteria, data from the 2008-2012 American Community Survey (ACS), the *ITE Trip Generation Handbook*, PHA surveys at 1750-1780 East Gun Hill Road Shopping Center, surveys at Gateway Center in Brooklyn, and the Triangle Plaza Hub EAS.

DESTINATION RETAIL

For the purposes of the travel demand forecast, approximately 350,400 gsf of commercial space is assumed to be destination retail. Trip generation rates of 78.2 person trips per 1,000 gsf for weekday and 92.5 trips per 1,000 gsf for Saturday, and a temporal distribution of 3 percent for the weekday AM peak hour, 9 percent for the midday peak hour, 9 percent for the PM peak hour, and 11 percent for the Saturday peak hour were obtained from the *CEQR Technical Manual*. All directional distribution for the weekday and Saturday peak hours was obtained from surveys conducted at Gateway Center in Brooklyn. A modal split of 77.7 percent by auto (86.6 percent Saturday midday), 1 percent by taxi, 5.4 percent by bus (3.4 percent Saturday midday), and 15.9 percent by walk/other (10 percent Saturday midday) was based on PHA surveys conducted at the 1750-1780 Gun Hill Road Shopping Center in April and May 2014. Vehicle occupancy rates of 1.40 and 1.62 persons per auto and taxi on a weekday, and 1.72 and 1.75 persons per auto and taxi on a Saturday were based on surveys at Gateway Center in Brooklyn.



Illustrative only subject to change.

Gun Hill Square

Figure 1
Illustrative Site Plan

**Table 2
Trip Generation Assumptions**

Land Use:	Residential		Destination Retail		Fitness Center	
Size/Units:	100 DU		350,400 gsf		40,000 gsf	
Trip Generation:	(1)		(1)		(1)	
Weekday	8.075		78.2		44.7	
Saturday	9.600		92.5		26.1	
	per 1,000 sf		per 1,000 gsf		per 1,000 sf	
Temporal Distribution:	(1)		(1)		(4)	
AM	10.0%		3.0%		7.0%	
MD	5.0%		9.0%		6.1%	
PM	11.0%		9.0%		8.6%	
SatMD	11.0%		11.0%		8.6%	
	(3)		(4)		(4)	
Modal Splits:	AM/MD/PM/SAT		AM/MD/PM Sat MD		AM/MD/PM Sat MD	
Auto	68.0%		77.7% 86.6%		77.7% 86.6%	
Taxi	1.1%		1.0% 0.0%		1.0% 0.0%	
Subway-to-Bus	19.4%		0.0% 0.0%		0.0% 0.0%	
Bus	10.5%		5.4% 3.4%		5.4% 3.4%	
Walk/Other	1.0%		15.9% 10.0%		15.9% 10.0%	
	100.0%		100.0% 100.0%		100.0% 100.0%	
	(2)		(5)		(4)	
In/Out Splits:	In Out		In Out		In Out	
AM	36.0% 64.0%		62.5% 37.5%		57.0% 43.0%	
MD	50.0% 50.0%		53.6% 46.4%		49.0% 51.0%	
PM	60.0% 40.0%		51.0% 49.0%		58.0% 42.0%	
Sat MD	50.0% 50.0%		53.6% 46.4%		48.0% 52.0%	
Vehicle Occupancy:	(3)		(5)		(4) (5)	
Auto	1.1		1.40 1.72		1.34 1.47	
Taxi	1.4		1.62 1.75		1.62 1.75	
Truck Trip Generation:	(1)		(1)		(6)	
	0.06		0.35		0.04	
	per DU		per 1,000 sf		per 1,000 sf	
	(1)		(1)		(6)	
AM	12.0%		8.0%		8.0%	
MD	9.0%		11.0%		11.0%	
PM	2.0%		2.0%		1.0%	
Sat MD	9.0%		11.0%		11.0%	
	In Out		In Out		In Out	
AM/MD/PM	50.0% 50.0%		50.0% 50.0%		50.0% 50.0%	
Notes :	<ul style="list-style-type: none"> (1) 2014 City Environmental Quality Review (CEQR) Technical Manual. (2) Temporal distribution based on proportion of peak hour rate to daily rate for Land Use 252 (Senior Adult Housing) from <i>ITE Trip Generation Handbook, 8th Edition</i>. (3) Modal split data and vehicle occupancy based on ACS 2008-2012 Means of Transportation to work for Bronx Census Tracts 310 and 356. (4) Based on PHA surveys at the 1750-1780 East Gun Hill Shopping Center, April & May 2014 (5) Based on surveys Conducted in 2007 at Gateway Center, Brooklyn. (6) Triangle Plaza Hub EAS, January 2012 (CEQR No. 11DME011X) 					

FITNESS CENTER

The forecast of the travel demand from the 40,000 gsf fitness center used trip generation rates of 44.7 person trips per 1,000 sf for weekday and 26.1 trips per 1,000 sf for Saturday from the *CEQR Technical Manual*. Temporal distributions of 7 percent for weekday AM, 6.1 percent for the midday peak hour, 8.6 percent for the PM peak hour, and 8.6 percent for the Saturday midday peak hour were obtained from PHA surveys at the 1750-1780 East Gun Hill Road Shopping Center. In addition, the modal split and all directional distributions for the weekday and Saturday peak hours were also obtained from PHA surveys at the 1750-1780 East Gun Hill Road Shopping Center. Auto vehicle occupancy was obtained from PHA surveys at the 1750-1780 East Gun Hill Road Shopping Center and taxi vehicle occupancy was obtained from survey at Gateway Center.

RESIDENTIAL

The forecast of travel demand from the proposed 100 unit senior housing development used trip generation rates of 8.075 person trips per 1,000 sf for weekday and 9.600 trips per 1,000 sf for Saturday from the *CEQR Technical Manual*. Temporal distributions of 10.0 percent for the weekday AM peak hour, 5.0 percent for the midday peak hour, and 11.0 percent for the PM peak hour are also based on the *CEQR Technical Manual*, however the Saturday midday temporal distribution of 11.0 percent as well as all directional distributions, were obtained from the *ITE Trip Generation Handbook, 8th Edition*. The residential modal split of 68.0 percent by auto, 1.1 percent by taxi, 19.4 percent by subway-to-bus, 10.5 percent by bus, and one percent by walk/other during all weekday and Saturday peak hours reflects means of transportation to work data from the 2008-2012 ACS (Bronx Census Tracts 310 and 356). Although residential-based trips in the weekday and Saturday midday periods would likely be more local in nature than in the commuter peak hours (and therefore have a higher walk share, for example), the modal split based on ACS means of transportation to work data is conservatively also assumed for these analysis periods.

TRIP GENERATION

A travel demand forecast was prepared for the proposed project based on the factors shown in Table 2 and discussed above. Table 3 summarizes the results of the travel demand forecast for the proposed project based on the RWCDs. The data in Table 3 show the project's incremental increase (over the No-Action condition) in the number of peak hour person and vehicle trips that would be generated in 2018 with implementation of the proposed actions.

As shown in Table 3, the proposed project would generate an incremental increase of 1,021, 2,612, 2,702 and 3,752 person trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. Compared to No-Action conditions, there would be an increase of 599, 1,504, 1,545 and 1,913 vehicle trips (auto, taxi, and truck combined) during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. During the weekday AM and PM peak hours, the proposed project would generate 14 subway-to-bus trips and 60 bus trips, and 16 subway-to-bus trips and 149 bus trips, respectively. The proposed project would generate 152 and 416 walk-only trips during the weekday AM and PM peak hours, respectively.

SELECTION OF PEAK HOURS FOR ANALYSIS

Four peak hours have been selected for traffic analysis, which include the weekday AM, midday, and PM peak periods, as well as the Saturday midday peak period.

**Table 3
Travel Demand Forecast Summary**

Land Use:		Residential		Destination		Fitness Center		Total		
Size/Units:		100	DU	350,400	gsf	40,000	gsf			
Peak Hour Trips:										
	AM		74		822		125		1,021	
	MD		37		2,466		109		2,612	
	PM		82		2,466		154		2,702	
	Sat MD		97		3,565		90		3,752	
Person Trips:										
			In	Out	In	Out	In	Out	In	Out
AM	Auto	18	32	399	240	55	42	472	314	
	Taxi	0	1	5	3	1	1	6	5	
	Subway-to-Bus	5	9	0	0	0	0	5	9	
	Bus	3	5	28	17	4	3	35	25	
	Walk/Other	0	0	82	49	11	10	93	59	
	Total		26	47	514	309	71	56	611	412
MD	Auto	13	13	1,027	889	42	43	1,082	945	
	Taxi	0	0	13	11	1	1	14	12	
	Subway-to-Bus	4	4	0	0	0	0	4	4	
	Bus	2	2	71	62	3	3	76	67	
	Walk/Other	0	0	210	182	8	2	218	191	
	Total		19	19	1,321	1,144	54	56	1,394	1,219
PM	Auto	33	22	977	939	69	50	1,079	1,011	
	Taxi	1	0	13	12	1	1	15	13	
	Subway-to-Bus	10	6	0	0	0	0	10	6	
	Bus	5	3	68	65	5	3	78	71	
	Walk/Other	0	0	200	192	14	10	214	202	
	Total		49	31	1,258	1,208	89	64	1,396	1,303
Sat MD	Auto	33	33	1,655	1,433	37	40	1,725	1,506	
	Taxi	1	1	0	0	0	0	1	1	
	Subway-to-Bus	9	9	0	0	0	0	9	9	
	Bus	5	5	65	56	1	2	71	63	
	Walk/Other	0	0	191	165	4	5	195	170	
	Total		48	48	1,911	1,654	42	47	2,001	1,749
Vehicle Trips :										
			In	Out	In	Out	In	Out	In	Out
AM	Auto (Total)	16	29	285	171	41	31	342	231	
	Taxi	0	1	3	2	1	1	4	4	
	Taxi Balanced	1	1	4	4	2	2	8	8	
	Truck	0	0	5	5	0	0	5	5	
	Total		17	30	294	180	43	33	355	244
MD	Auto (Total)	12	12	734	635	31	32	777	679	
	Taxi	0	0	8	7	1	1	9	8	
	Taxi Balanced	0	0	11	11	2	2	17	17	
	Truck	0	0	7	7	0	0	7	7	
	Total		12	12	752	653	33	34	801	703
PM	Auto (Total)	30	20	698	671	51	37	779	728	
	Taxi	1	0	8	7	1	1	10	8	
	Taxi Balanced	1	1	11	11	2	2	18	18	
	Truck	0	0	1	1	0	0	1	1	
	Total		31	21	710	683	53	39	798	747
Sat MD	Auto (Total)	30	30	962	833	25	27	1,017	890	
	Taxi	1	1	0	0	0	0	1	1	
	Taxi Balanced	2	2	0	0	0	0	2	2	
	Truck	0	0	1	1	0	0	1	1	
	Total		32	32	963	834	25	27	1,020	893
Total Vehicle			In	Out	Total					
	AM		355	244	599					
	MD		801	703	1,504					
	PM		798	747	1,545					
	Sat MD		1,020	893	1,913					

Transit (subway and bus) analyses generally examine conditions during the weekday 8-9 AM and 5-6 PM commuter peak periods, as it is during these times that overall transit demand (and the potential for significant adverse impacts) is typically greatest. The analyses of transit conditions therefore focus on these two periods.

VEHICLE TRIP ASSIGNMENT AND TRAFFIC STUDY AREA

The project site is highly accessible from major limited access roadways, including I-95 and the Hutchinson River Parkway, which are located in the immediate vicinity of the project site. The proposed shopping center is expected to be a retail destination that would draw patrons from a larger distribution area, and therefore, a substantial proportion of vehicular trips are expected to be non-local, originating from the surrounding areas of the Bronx and southern Westchester County. Typically, the primary trade area of a shopping center similar to the proposed project encompasses an area within an approximate 10 minute drive of the project site.

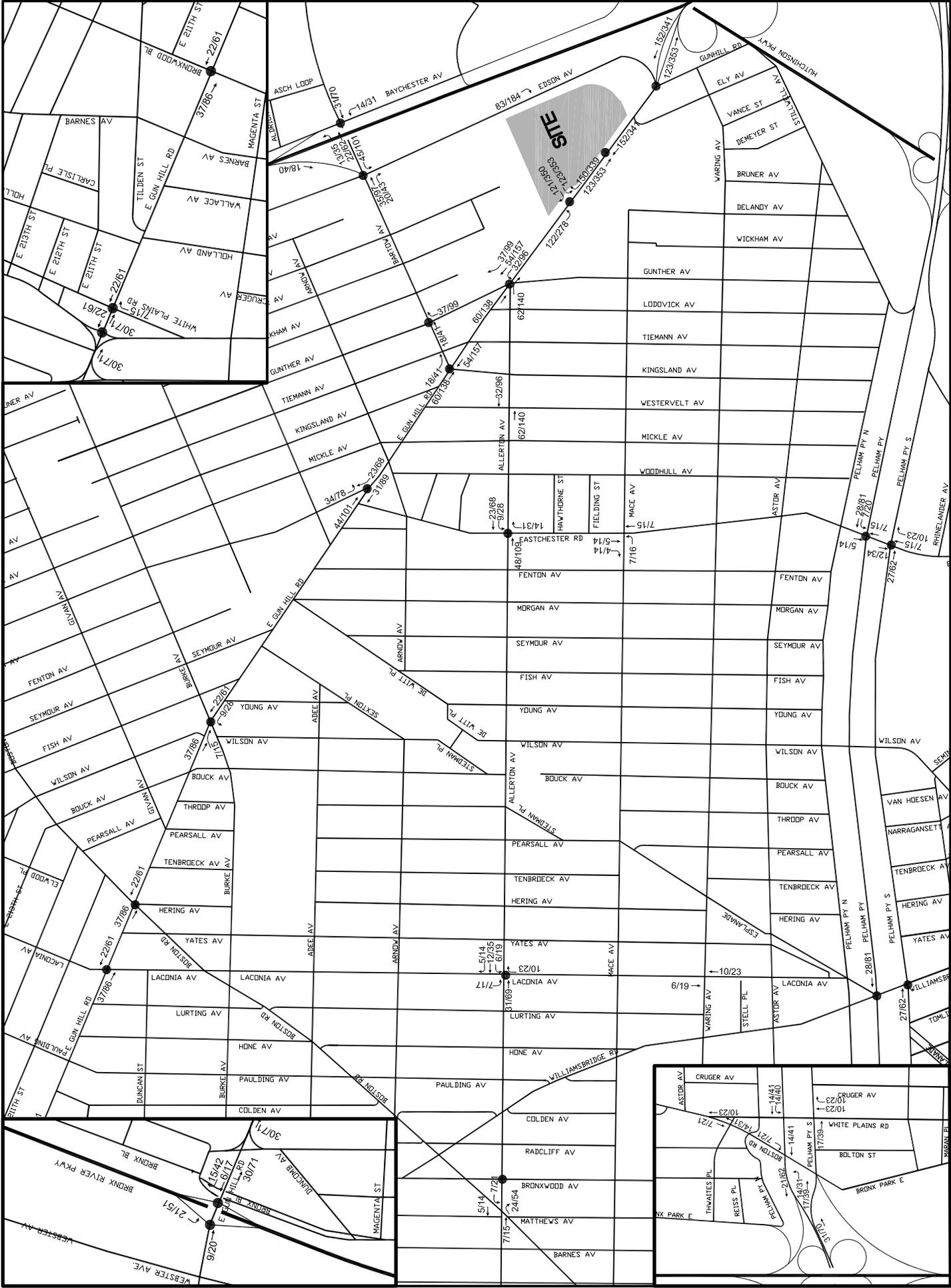
The origins and destinations of weekday and Saturday project increment auto and taxi trips were determined using 2010 U.S. Census population data for all census tracts within an approximate 3-mile radius of the project site, which represents about a 10 minute driving radius. A 3-mile radius was considered due to the large amount of destination retail proposed for the project site, as a substantial proportion of trips are expected to be non-local, originating from the surrounding areas of the Bronx and southern Westchester County. Autos were assigned to the most likely routes between these origins/destinations and all parking is expected to be accommodated on the project site. Taxis were assigned to the most direct routes between residential origins/destinations.

Figure 2 shows the vehicle assignment diagram for the project-generated traffic, and Figures 3 and 4 show the project increments during the four peak hour periods and the intersections that would exceed the *CEQR Technical Manual* threshold of 50 vehicles per intersection. As shown in Figures 2 through 4, project-generated vehicle trips are expected to be most concentrated along Bartow Avenue, E. Gun Hill Road, Allerton Avenue, and the Pelham Parkway.

As shown in Figures 3 and 4, a total of 24 intersections have been selected for the analysis of traffic conditions during the weekday and Saturday peak hours based on the assignment of project-generated traffic. These intersections, listed below, are where traffic generated by the proposed project is expected to be most concentrated.

Traffic Analysis Locations – Weekday and Saturday

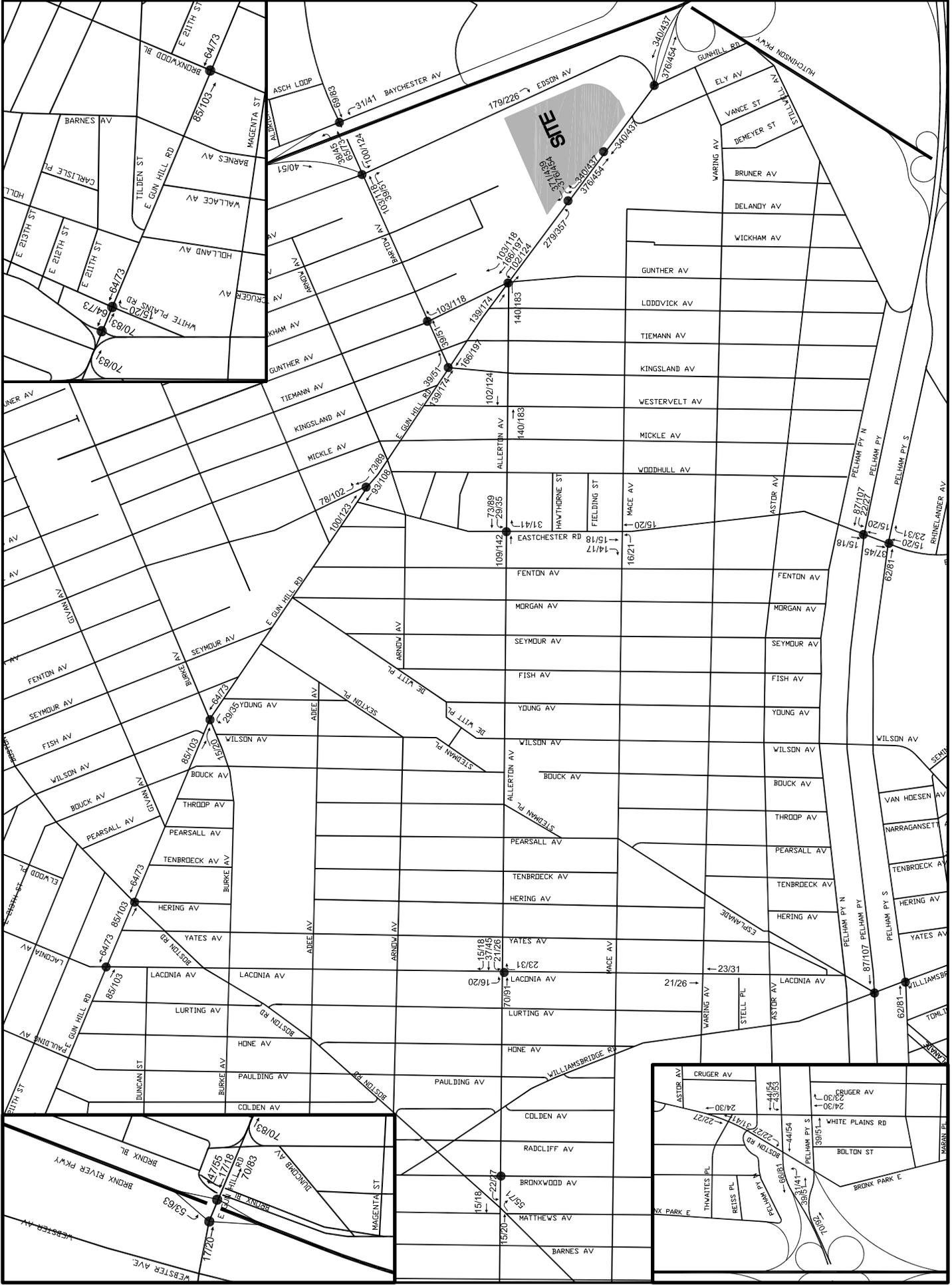
1. Bartow Avenue at Edson Avenue
2. Bartow Avenue at Gunther Avenue
3. Bartow Avenue at E. Gun Hill Road
4. Bartow Avenue at Baychester Avenue
5. E. Gun Hill Road at Gunther Avenue
6. E. Gun Hill Road at the entrance to the 1750-1780 E. Gun Hill Road Shopping Center
7. E. Gun Hill Road at the entrance to Home Depot at 1806 E. Gun Hill Road
8. E. Gun Hill Road at Bronx River Parkway Southbound On/Off-Ramp
9. E. Gun Hill Road at Bronx River Parkway Northbound On/Off-Ramp
10. E. Gun Hill Road at Boston Road
11. E. Gun Hill Road at Burke Road
12. E. Gun Hill Road at Eastchester Road
13. E. Gun Hill Road at Edson Avenue
14. E. Gun Hill Road at Laconia Avenue
15. E. Gun Hill Road at Bronxwood Avenue
16. E. Gun Hill Road at White Plains Road (northbound)
17. E. Gun Hill Road at White Plains Road (southbound)
18. Allerton Avenue at Eastchester Road



● Analyzed Locations

Gun Hill Square

Figure 3
AM/MD Project Increment



● Analyzed Locations

Gun Hill Square

Figure 4
PM/SAT MD Project Increment

19. Allerton Avenue at Laconia Avenue
20. Allerton Avenue at Bronxwood Avenue
21. Pelham Parkway at Williamsbridge Road
22. Pelham Parkway South at Williamsbridge Road
23. Pelham Parkway at Eastchester Road
24. Pelham Parkway South at Eastchester Road

PARKING

As a quantitative traffic analysis is necessary, a preliminary analysis of future parking conditions was prepared for the project. As shown in Tables 4a and 4b below, it is anticipated that overall weekday parking demand would peak during the midday period from 12 PM to 1 PM with approximately 1,085 vehicles. On Saturdays, parking demand would peak during the early afternoon from 2 PM to 3 PM with approximately 1,154 vehicles. As 1,170 off-street parking spaces would be provided at the project site, all parking would be accommodated on-site, and no parking impacts are anticipated.

Table 4a
Weekday Parking Accumulation at the Project Site

	Residential ¹			Destination Retail ² (Customers + Employees)			Customers			Employees ⁴			Fitness Center ³		Accumulation	(1,170 Spaces)
	In	Out	75	In	Out	30	In	Out	0	In	Out	30	In	Out		
12-1 AM	3	3	75	3	13	30	0	0	0	3	13	30	0	0	95	8.1%
1-2	1	1	75	3	10	23	0	0	0	3	10	23	0	0	88	7.5%
2-3	1	1	75	1	9	15	0	0	0	1	9	15	0	0	80	6.8%
3-4	0	0	75	4	4	15	0	0	0	4	4	15	0	0	80	6.8%
4-5	0	0	75	5	3	17	0	0	0	5	3	17	0	0	82	7.0%
5-6	1	1	75	17	3	31	3	0	3	14	3	28	0	0	96	8.2%
6-7	0	2	73	23	8	46	8	7	4	15	1	42	0	0	109	9.3%
7-8	3	15	61	91	13	124	72	11	65	19	2	59	24	18	181	15.5%
8-9	17	29	49	285	171	238	216	166	115	69	5	123	43	31	295	25.2%
9-10	7	17	39	372	78	532	331	74	372	41	4	160	31	33	577	49.3%
10-11	9	16	32	570	272	830	544	265	651	26	7	179	33	30	871	74.4%
11-12	10	15	27	715	593	952	684	586	749	31	7	203	30	31	987	84.4%
12-1 PM	12	12	27	734	635	1051	713	626	836	21	9	215	31	32	1085	92.7%
1-2	15	17	25	540	692	899	499	680	655	41	12	244	30	31	930	79.5%
2-3	13	15	23	558	662	795	531	640	546	27	22	249	30	34	820	70.1%
3-4	15	10	28	610	646	759	571	617	500	39	29	259	38	33	794	67.9%
4-5	23	10	41	662	624	797	631	592	539	31	32	258	36	27	854	73.0%
5-6	30	20	51	698	671	824	680	633	586	18	38	238	51	37	905	77.4%
6-7	27	13	65	593	707	710	589	671	504	4	36	206	49	51	803	68.6%
7-8	22	14	73	621	662	669	616	631	489	5	31	180	44	52	762	65.1%
8-9	11	7	77	273	598	344	268	565	192	5	33	152	24	33	432	36.9%
9-10	3	6	74	203	309	238	201	278	115	2	31	123	13	27	309	26.4%
10-11	3	3	74	22	170	90	21	122	14	1	48	76	12	19	154	13.2%
11-12	4	3	75	1	51	40	0	14	0	1	37	40	0	0	105	9.0%
	230	230		7,604	7,604		7,178	7,178		426	426		519	519		

Notes:

1. Based on data from No. 7 Subway Extension-Hudson-Hudson Yard Rezoning and Development Program FGEIS, 2004.
2. Based on Rego Center II Mall Parking Garage Data from 2010.
3. Based on PHA surveys at 1750-1780 East Gun Hill Shopping Center, April & May 2014.
4. Based on Ridge Hill Development Parking Garage Data, 2013, Yonkers, NY.

Table 4b

Saturday Parking Accumulation at the Project Site

	Residential ¹			Destination Retail ² (Customers + Employees)			Customers			Employees ⁴			Fitness Center ³		Accumulation (1,170 Spaces)	
	In	Out	75	In	Out	30	In	Out	0	In	Out	30				
12-1 AM	1	1	75	3	13	30	0	0	0	3	13	30	0	0	95	8.1%
1-2	1	1	75	3	10	23	0	0	0	3	10	23	0	0	88	7.5%
2-3	1	1	75	1	9	15	0	0	0	1	9	15	0	0	80	6.8%
3-4	1	1	75	4	4	15	0	0	0	4	4	15	0	0	80	6.8%
4-5	1	1	75	5	3	17	0	0	0	5	3	17	0	0	82	7.0%
5-6	2	6	71	14	3	28	0	0	0	14	3	28	0	0	89	7.6%
6-7	4	12	63	28	1	55	13	0	13	15	1	42	0	0	108	9.2%
7-8	6	14	55	86	47	94	67	45	35	19	2	59	8	4	143	12.2%
8-9	6	16	45	210	62	242	141	57	119	69	5	123	13	9	285	24.4%
9-10	8	18	35	373	154	461	332	150	301	41	4	160	19	16	497	42.5%
10-11	12	18	29	430	380	511	404	373	332	26	7	179	18	20	539	46.1%
11-12	14	20	23	700	450	761	669	443	558	31	7	203	19	19	783	66.9%
12-1 PM	18	23	18	685	598	848	664	589	633	21	9	215	22	24	863	73.8%
1-2	22	25	15	832	669	1011	791	657	767	41	12	244	20	20	1,023	87.4%
2-3	30	30	15	965	836	1140	938	814	891	27	22	249	25	23	1,154	98.6%
3-4	26	21	20	770	776	1134	731	747	875	39	29	259	22	23	1,152	98.5%
4-5	25	20	25	685	745	1074	654	713	816	31	32	258	21	20	1,098	93.8%
5-6	23	17	31	792	939	927	774	901	689	18	38	238	22	21	958	81.9%
6-7	21	9	43	592	916	603	588	880	397	4	36	206	21	26	641	54.8%
7-8	20	7	56	597	770	430	592	739	250	5	31	180	19	19	481	41.1%
8-9	17	5	68	251	524	157	246	491	5	5	33	152	13	14	219	18.7%
9-10	7	3	72	92	118	131	90	87	8	2	31	123	8	11	194	16.6%
10-11	3	1	74	29	83	77	28	35	1	1	48	76	6	7	141	12.1%
11-12	2	1	75	13	50	40	12	13	0	1	37	40	0	0	105	9.0%
	271	271		8,160	8,160		7,734	7,734		426	426		276	276		

Notes:

1. Based on data from No. 7 Subway Extension-Hudson-Hudson Yard Rezoning and Development Program FGEIS, 2004.
2. Based on Rego Center II Mall Parking Garage Data from 2010.
3. Based on PHA surveys at 1750-1780 East Gun Hill Shopping Center, April & May 2014.
4. Based on Ridge Hill Development Parking Garage Data, 2013, Yonkers, NY.

SELECTION OF TRANSIT FACILITIES FOR ANALYSIS

According to the general thresholds used by the MTA and specified in the *CEQR Technical Manual*, detailed transit analyses are not required if an initial screening indicates that a proposed project would result in less than 200 new peak hour subway or bus transit riders, as fewer than this number of new transit trips is considered unlikely to create significant impacts on existing transit facilities. If a proposed project would generate more than 200 transit trips, then a detailed analysis is warranted for any subway station to which the proposed project would add 200 or more peak hour trips, or for any bus line to which 50 or more passengers per hour would be assigned (in the peak direction).

SUBWAY-TO-BUS

As there are no subway stations within walking distance of the project site, subway trips were assigned based on proximity to station entrances and the availability of bus connections. As shown in Table 3, no subway station or subway line is expected to experience more than 200 project-generated trips during the weekday AM and PM commuter periods, with approximately 14 trips in the AM peak hour and 16 in the PM peak hour. Therefore, the proposed project is not expected to result in significant impacts at any subway stations and further detailed analysis is not warranted.

BUS

As all subway users are expected to transfer to bus, it is estimated that the proposed project would generate a total of 74 and 165 new bus trips in the weekday AM and PM peak hours, respectively. Three NYC Transit bus routes, the Bx28, Bx38, and Bx26 operate within a 1/4-mile radius of the project site and provide connections to subway stations. Two additional bus routes, the Bx12 Select Bus Service (SBS) and Bx23 operate within a 1/2-mile of the project site and service the surrounding area. Since the project would not generate more than 200 bus transit trips in any peak hour and it is highly unlikely that any one of the five bus routes in the area would

experience 50 or more trips in the peak direction in any peak hour, the proposed project is not expected to result in significant impacts on any bus route and further detailed analysis is not warranted.

SELECTION OF PEDESTRIAN ANALYSIS LOCATIONS

Many project-generated trips would include a walk component using local sidewalks, street corners, and crosswalks, to access the project site. Based on the preliminary travel demand forecast shown in Table 3 and a preliminary assignment of pedestrians in Table 5 below, it is anticipated that the proposed project would have the potential to add more than the 200-trip *CEQR Technical Manual* analysis threshold to sidewalks, corner areas, and crosswalks in the immediate vicinity of the project site during the weekday midday and PM peak hours, as well as the Saturday midday peak hour.

Table 5
Total Project Generated Pedestrian Trips

Pedestrian Entrance	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
E. Gunhill Rd.	125	87	212	275	241	516	283	259	542	256	227	483
Edson Ave.	11	8	19	25	20	45	25	22	47	21	18	39
Total	136	95	231	300	261	561	308	281	589	277	245	522

Accordingly, a total of two preliminary locations have been selected for the analysis of pedestrian conditions during the weekday AM, midday, PM, and Saturday midday peak hours (see Figure 5). As listed below, locations where pedestrian trips are expected to be most concentrated, which include sidewalks, corner areas, and crosswalks providing access to entrances, and along corridors leading to nearby bus stops.

Pedestrian Analysis Locations – Weekday and Saturday

1. Gun Hill Square entrance on East Gun Hill Road (1 crosswalk, 2 corners)
2. East Gun Hill Road between Gun Hill Square entrance and Allerton Avenue (east and west sidewalks)

