PUBLIC SAFETY ANSWERING CENTER II
CHAPTER 16: CONSTRUCTION IMPACTS[1]

A. INTRODUCTION

This chapter assesses the potential impacts of the construction of new buildings and infrastructure expected to result from the Proposed Action within and adjacent to the Project Site in the Pelham Parkway area of the Bronx. Construction stages and activities are first described, followed by types of impacts likely to occur during construction, and an assessment of methods that may be employed to minimize those impacts. The following chapter discusses the potential impacts resulting from the construction of the proposed Public Safety Answering Center (PSAC II) development on the approximately 8.75-acre site, as well as the establishment of a new public street, "Marconi Street," which would extend north of Waters Place to the southern boundary of the development site generally following the roadway of an existing private access roadway, Industrial Street.

Elements of the Proposed Action include the mapping of a public street and the construction of a new public facility, PSAC II, for the City of New York (the "City"), which would be a parallel operation to the existing PSAC I in Brooklyn. The Proposed Action would result in the construction of two new buildings, including an approximately 640,000 gross square foot (gsf) office building and a 500-space accessory parking structure ("proposed development") on the proposed development site, as well as infrastructure improvements within and immediately adjacent to the Project Site. The proposed office building would contain up to 14 levels above grade (350 feet with an elevation of 374 feet) above-grade plus a single cellar level, and the accessory parking facility is expected to have three levels with rooftop green space. The proposed public street would extend north of Waters Place from a point located approximately 420 feet east of Eastchester Road for approximately 3,340 feet (0.63 miles) along the western edges of the New York State operated Bronx Psychiatric Center and the Hutchinson Metro Center (HMC) office complex properties to the southern boundary of the proposed development site.

A Build year of 2012 is assumed for the Proposed Action, as it is reasonable to expect that the infrastructure improvements, including the establishment of Marconi Street would be implemented by then. For analysis purposes, all components of the Proposed Action are assumed to be implemented by 2012.

The conclusion of this analysis is that there would be some traffic disruption, due principally to the temporary addition of construction vehicles to the existing traffic network and some short-term construction-related noise. Other types of impacts would either be mitigated or restricted to areas within the Project Site boundaries.

[1] Edits to the text of the Construction Chapter reflect requested revisions and technical comments made by NYCDOT between Draft and Final EIS.

B. DESCRIPTION OF CONSTRUCTION ACTIVITIES AND SCHEDULE

Construction of the proposed PSAC II development, including related infrastructure improvements, is expected to have a duration of approximately three and a half years (42 months).

Infrastructure Improvements

The Proposed Action involves the mapping of a new public street that would generally follow an existing private access roadway, Industrial Street, which extends north of Waters Place from a signalized intersection located to the east of the intersection of Eastchester Road and Waters Place. The proposed street segment would be mapped at a width of 60 feet for approximately 1,790 feet and 50 feet for approximately 1,550 feet. It would operate as a two-way street and would terminate in a hammerhead cul-de-sac at the southern boundary of the proposed development site. Improvements to the existing private roadway include removal of existing asphalt paving, regrading of the roadway as necessary, installing new curbs, sidewalk, and pavement, as well as installation of traffic control devices (signals, signs and striping) as needed. The grading for the sidewalks and street would use backhoes and be finished by hand labor. The new street and adjoining sidewalks would be designed and constructed to New York City Department of Transportation (NYCDOT) specifications.

The establishment of a public street would also involve the installation of several infrastructure improvements including water main with water valves and hydrants, and connection to existing water main system; storm sewer including catch basins and manholes, and connection to the existing storm sewer system; and sanitary sewer and connection to the existing sanitary sewer system. All new water and sewer lines would be designed and built in coordination with the New York City Department of Environmental Protection (NYCDEP) and would meet all of NYCDEP's requirements. In addition, electrical and telecommunications cables would also be installed within the proposed street.

It is expected that the proposed street would be built towards the end of the construction. As Industrial Street serves as the only vehicular entrance to HMC and the proposed development site, the proposed street would be constructed in segments to maintain vehicular access to the HMC, and allow construction workers and deliveries to access the proposed development site. A 24-foot wide two-lane roadway would be maintained at all times. The construction of the proposed street would be coordinated between the City and the HMC.

Proposed Development

The Proposed Action would facilitate the construction of an approximately 640,000 gsf office building containing up to approximately 14 levels above grade (350 feet with an elevation of 374 feet) and 500-space accessory parking facility with three levels and rooftop green space. If all necessary approvals are granted, construction of the proposed development is expected to commence in 2009, and continue for duration of approximately 42 months, with move-ins beginning in mid 2012. It is expected that the proposed development would be fully occupied by the end of 2012, and therefore this is the analysis year used for analysis purposes throughout this Final Environmental Impact Statement (FEIS).

Construction would proceed in several stages, some of which would overlap, including: environmental remediation, site preparation, foundations, and below-grade construction (including excavation, grading and infrastructure improvements); superstructure construction; and building finishes, parking, and final site finishes and improvements (e.g., sidewalks, landscaping, lighting).

Typical equipment used for excavation and pouring foundation would include cranes, jackhammers, loaders, pneumatic rock excavating rigs, and dump trucks. Equipment that would be used in construction would include excavators, cranes, dump trucks, pumps, exterior hoists, and concrete trucks. Trucks would remain in use for material supply and construction waste removal. It is expected that the construction of the core and shell would employ the greatest number of construction workers, and a wide variety of supplies would have to be delivered to the site.

Construction activities would normally take place on Monday through Friday, although the delivery and installation of certain critical pieces of equipment could occur during off-peak hours (i.e., nighttime or weekend hours). Hours of construction are regulated by the New York City Department of Buildings (NYCDOB) and apply in all areas of the City. In accordance with those regulations, almost all work could occur between 7:00 AM and 6:00 PM on weekdays, although some workers would arrive and begin to prepare work areas before 7:00 AM. Typically, work would end at 3:30 PM, but could be extended until 6:00 PM for such tasks as completing the drilling of piles, finishing a concrete pour for a floor deck, or completing the bolting of a steel frame erected that day. Extended workday activities may not include all construction workers on site, but only those involved in the specific task. Extended workdays would occur during foundation and superstructure tasks, and limited extended workdays could occur during other tasks over the course of construction.

Occasionally, Saturday or overtime hours would be required to complete some time-sensitive tasks. Weekend work requires a permit from the NYCDOB and, in certain instances, approval of a noise mitigation plan from the NYCDEP under the City's Noise Code. The New York City Noise Control Code, as amended December 2005 and effective July 1, 2007 limits construction (absent special circumstances as described below) to weekdays between the hours of 7:00 AM and 6:00 PM, and sets noise limits for certain specific pieces of construction equipment. Construction activities occurring after hours (weekdays between 6:00 PM and 7:00 AM and on weekends) may be permitted only to accommodate: (i) emergency conditions; (ii) public safety; (iii) construction projects by or on behalf of city agencies; (iv) construction activities with minimal noise impacts; and (v) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts and/or financial considerations. In such cases, the numbers of workers and pieces of equipment in operation would be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend work would be less than a normal workday. The typical weekend workday would be on Saturday from 7:00 AM with worker arrival and site preparation to 5:00 PM for site cleanup.

Access to the proposed development site would be tightly controlled. The work area would be fenced off, and limited access points for workers and trucks would be provided. Security guards and flaggers would be posted, and all persons and trucks would have to pass through security points. Workers or trucks without a need to be on the site would not be allowed entry. After work hours, the gates would be closed and locked. Unauthorized access would be prevented after work hours and over the weekends. Material deliveries to the site would be highly controlled and scheduled. Unscheduled or haphazard deliveries would not be allowed. To aid in adhering to the delivery schedules, flaggers would be employed at each of the entry and exit gates. The flaggers would control trucks entering and exiting the site, so that they would not interfere with one another and minimize disruptions to local on-street traffic.

Construction staging would most likely occur within the proposed development site itself. Due to the relative isolation of the proposed development site, construction efforts would not be expected to extend into adjacent streets or effect pedestrian circulation. Appropriate measures would be taken to maintain pedestrian access between the Pelham Parkway and the HMC at all times.

Environmental Remediation

Construction of the proposed PSAC II development would begin with environmental remediation to address hazardous materials currently existing on the site. The environmental remediation would be conducted under a Remedial Work Plan (RWP) and Health and Safety Plan (HASP) to be approved by the NYCDEP. The New York State Department of Environmental Conservation (NYSDEC) must also approve any remedial plans related to spill cleanup.

As described in Chapter 7, "Hazardous Materials" and in Chapter 18, "Mitigation," measures would be taken to avoid potential adverse impacts during construction activities due to the presence of subsurface soil and groundwater contamination resulting from on-and potentially off-site sources and lead-based paint. Excavation and construction activities could disturb hazardous materials and increase pathway for human exposure. However, impacts would be avoided by performing construction activities in accordance with the following protocols:

- All material that needs to be disposed of (e.g., excess fill or fill unsuitable for reuse due to contamination) would be disposed of off-site in accordance with applicable federal, state, and local requirements. In the event that soil containing petroleum is discovered during excavation activities (e.g., through staining, discoloration, or odor), such soil would be segregated, stockpiled, sampled for characterization purposes sufficient to meet the requirements of the applicable disposal facility, transported off-site by a licensed transporter and disposed of in an approved treatment or disposal facility in accordance with all applicable federal, state, and local regulations and guidelines. If soil containing other potentially contaminated (non-petroleum) material (e.g., stained soils, odors, etc.) is discovered during excavation, such soil would also be segregated, stockpiled, sampled to determine whether the material requires off-site disposal or can be reused on site under impervious surfaces or the acceptable impacted soil cap. If the material requires off-site disposal, the sampling would meet the applicable regulations and guidelines. Soil with no indication of petroleum or other contamination could be reused on-site under impervious surfaces or the acceptable imported soil cap.

- If dewatering is required for construction, there would be a potential for contact with contaminated groundwater. Testing to date indicated that, except for one Temporary Test Well (TWP) point location, the groundwater would meet NYCDEP sewer discharge requirements. The sample collected at TWP05, located along Industrial Street near the ball fields on the Bronx Psychiatric Center's campus, exceeded NYCDEP's sewer discharge limit for lead in the unfiltered metals treatment. Based on this finding, additional testing would be performed, as conditions may vary around the Project Site, and if necessary, pretreatment would be conducted prior to the water discharge to the City's sewer system, as required by the NYCDEP permit/approval requirements. If discharge into storm sewers is required during dewatering, additional sampling and laboratory analysis would be conducted, as required by the NYSDEC State Pollutant Discharge Elimination System (SPDES) permit/approval requires.

- Since much of the soil sampled does not meet the most stringent guidelines for unrestricted use, any area that would not be covered by imperious surfaces would be capped with at least two feet of certified, clean fill and vegetative top soil.

- Due to the presence of Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-Volatile Organic Compounds (SVOCs), and metal concentrations above applicable standards at the Project Site, a Community Air Monitoring Plan (CAMP) would be developed in accordance with the NYSDEC DER-10 Regulations to minimize

potential airborne contaminants release as a direct result of construction activities. The CAMP requires real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites.

- All activities involved disturbance of existing soils would be conducted in accordance with a HASP that would detail measures to reduce the potential for exposure (e.g., dust control procedures for SVOCs and metals) and a soil management plan (SMP) would include measures to identify and manage known contamination and unexpectedly encountered contamination. The HASP would meet the requirement set forth by the Occupational, Safety and Health Administration (OSHA), the New York State Department of Health (NYSDOH), the NYCDEP, and any other applicable regulations.

- Any activities with the potential to disturb lead-based paint, such as the removal of the chain-link fencing from the site, would be performed in accordance with the applicable Occupational Safety and Health Administration regulation (OSHA 29 CFR 1926.62 - Lead Exposure in Construction).

With the implementation of these measures, no significant adverse impacts related to hazardous materials would result from demolition and/or construction activities on the Project Site.

Site Preparation, Foundations, and Below-Grade Construction

Typically, soil excavation and foundation construction for a development of this size takes approximately 12 to 14 months to complete, and can be carried out concurrently with hazardous materials sampling, and, as required, remediation and disposal. Excavation and foundation work includes the use of bobcats, rockbreakers, loaders, pumps, motorized concrete buggies, concrete pumps, jackhammers, pneumatic compressors, and a variety of small, mostly handheld tools, as well as dump trucks and concrete trucks.

The Project Site would be excavated for utilities and below grade uses. As mentioned above, all material that needs to be disposed of (e.g., excess/unsuitable fill) would be disposed of off-site in accordance with applicable federal, state, and local requirements. In addition, any contaminated soil encountered during excavation would be properly disposed of. The site would be graded so that the foundations could be excavated, and final elevations established. The paved accessory parking lots occupying the southern portion of the development site would be cleared.

Following grading, construction of the proposed accessory parking facility and office building's foundation and below-grade elements would begin. Foundation work would include pile driving and pouring concrete footings and foundation. Ready-mix concrete trucks would deliver concrete to the site. For structures of this type, the foundations would typically be slab on-grade with supporting piles. Blasting is not anticipated to occur during construction. Construction equipment would include pneumatic rock excavating rigs, excavators, cranes, dump trucks, pumps, and concrete trucks.

Superstructure

Following installation of foundations, the construction of the parking facility and office building's superstructures would commence, including the construction of building shell and core. Construction of the exterior enclosure or "shell" would include construction of the building's framework (installation of beams and columns), floor decks, facades (exterior walls and cladding) and roof

construction. These activities would require the use of tower cranes, compressors, personnel and material hoists, front-end loaders, concrete pumps, on-site bending jigs, welding machines, and a variety of handheld tools, in addition to the delivery trucks bringing construction materials to the site.

Construction of the buildings' superstructures is anticipated to last approximately 19 months. As the frame is installed, work would commence on interior infrastructure— mechanical, electrical, and plumbing systems—and enclosure. This would include the installation of heating, ventilation, and air conditioning (HVAC) equipment and ductwork, the running of electrical lines within the building, and interior installation of water supply and wastewater pumping. Installation and checking of elevator and life safety systems would also take place at this stage. Interior construction would take approximately 8 to 12 months. It would be phased to overlap with the completion of the core and shell so that a significant amount of interior work is performed before the core and shell are completed. Equipment used during interior construction would include exterior hoists, pneumatic equipment, delivery trucks, and a variety of small handheld tools.

Building Finishes and Sidewalks

This phase of building construction is the exterior and interior finishes. The work would involve final roofing and finishing details on the exterior walls. While this construction is taking place, the sidewalks would be built. This phase would overlap with the superstructure phase and is anticipated to take about 9 months. As there is some overlap among the development phases, between the superstructure and building finishes, these two phases of construction should take about 24 months. Equipment used during interior construction would include exterior hoists, pneumatic equipment, and delivery trucks.

C. POTENTIAL IMPACTS DURING CONSTRUCTION

Construction of the proposed PSAC II development may be disruptive to the surrounding area during the approximately 42-month construction period. In accordance with guidelines presented in the *CEQR Technical Manual*, the technical areas for which the potential for impact is assessed include land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic resources, natural resources, hazardous materials, infrastructure, traffic and parking, transit and pedestrian, air quality, and noise impacts.

Land Use And Neighborhood Character

A construction impact analysis of land use and neighborhood character would typically be needed if construction requires continuous use of property for an extended duration, thereby affecting the nature of the land use and character of the neighborhood. This may occur, for example, if construction activity (such as staging) would occur on a particular site in a neighborhood for an extended period of time.

As is typical with large construction projects, the proposed development would cause some disruptions to activities in the surrounding area, particularly during periods of peak construction activity. These disruptions would be temporary in nature with overall construction anticipated to last 42 months. Construction would not alter surrounding land uses, although certain types of activities would be intrusive to adjacent mapped open spaces areas abutting the site to the north and east. The Pelham and

the Hutchinson River Parkways, and an Amtrak right-of-way generally sever the proposed development site from surrounding residential areas, and therefore, the area of the proposed construction is largely separated from the community, and such disruptions would not be significant. The closest residential uses are located more than 500 feet from the site across the Pelham and the Hutchinson River Parkways. Additionally, in the latter stages of construction, when work would take place primarily within building shells, effects on surrounding uses would be substantially reduced. Vehicular access to the HMC would be maintained at all times when the proposed street is being built.

An appropriate protective barrier (fence) would be installed on the perimeter of the proposed development site to protect the public. This fencing would reduce potentially undesirable views of the construction site and buffer noise emitted from construction activities. All construction-staging activities, including the storage of materials and equipment would occur within the development site, therefore disruptions to the surrounding area would be minimized and would not alter surrounding land uses or intrude on neighborhood character. The construction of the proposed development would be similar to construction at any other site in the city, and the NYCDOB would regulate the hours of construction operation.

There would be a temporary increase in noise levels in the immediate vicinity of the site due to the operation of the on-site construction equipment and construction trucks and construction workers coming to and from the site, and loading and unloading, but this would not result in a significant change in neighborhood character given the current nature of the commercial, light-industrial/warehousing and transportation uses in the immediate vicinity of the proposed development site.

The Proposed Action would not result in significant or long-term adverse impacts on the local land use patterns or the character of the nearby area, as construction activities would be temporary in nature with external construction lasting slightly less than three years.

Socioeconomic Conditions

A detailed analysis may be conducted if a proposed action would entail construction of a long duration that could affect the access and therefore viability of a number of businesses, and could cause the failure of those businesses and affect neighborhood character.

Construction of the proposed development would not result in any temporary or long-term significant adverse impacts on socioeconomic conditions in the study area. The proposed development site is relatively severed from the surrounding area, bounded by the associated mapped open space of Pelham and the Hutchinson River Parkways to the north and east, respectively, and partially bounded by the Amtrak right-of-way to the east. Therefore, area commercial businesses located in the vicinity of the Project Site would not be disrupted due to such construction activities. As noted above, access to businesses near the Project Site would not be impeded, and most businesses are not expected to be significantly affected by any temporary reduction in the amount of pedestrian foot traffic that could occur as a result of construction activities. During the construction of the proposed public street, vehicular access to the HMC would be maintained at all times. An approximately 24-foot two-way roadway would be maintained at all times to allow the employees, and visitors of businesses at the HMC and Mercy College's faculty, staff and students to access the HMC.

It should be noted that construction of the proposed development would have direct, positive economic impacts resulting from expenditures on labor, materials, and services as well as generated indirect benefits created by expenditures by material suppliers, construction workers, and others involved in development on the Project Site. Based on preliminary estimates, the total investment for

the construction of the proposed PSAC II development is estimated at approximately $650 million (in 2007 dollars) in hard costs (actual construction).

As a result of the direct expenditure associated with the proposed development ($650 million in construction costs), the direct employment based is estimated at about 3,769 person years of employment (a person year is equivalent of one employee working full-time for one year). In addition to direct employment, the total employment resulting from construction expenditures would also include jobs in business establishments providing goods and services to the contractors and resulting indirect and generated employment. The total direct and generated jobs from the construction of proposed PSAC II development are estimated to generate an additional 2,074 person-years of employment in New York City, bringing the total direct and generated jobs from the construction of the proposed development to 5,843 person years. In the larger New York State economy, it is estimated that the proposed development would generate 7,495 person years of indirect employment, bringing the total direct and generated jobs from the construction of the project to 11,264 person years of employment.

The direct wages and salaries during construction period are estimated at approximately $188 million. Total direct and generated wages and salaries resulting in New York City from construction of the proposed development are estimated at approximately $273 million. In the broader New York State economy, including New York City, total direct and generated wages and salaries from construction of the project are estimated at approximately $519 million.

Community Facilities

A construction impact analysis may be conducted for any community facility that would be directly affected by construction (e.g., if construction would disrupt services of the facility, change an entrance, or close the facility temporarily, etc.).

There are no community facilities within or immediately adjacent to the Project Site. Construction of the proposed development would not block or restrict access to any facilities in the area, and would not affect emergency response times significantly. NYPD and FDNY emergency services and response times would not be significantly affected due to the geographic distribution of the police and fire facilities and their respective coverage areas. Although community facilities in the area may be affected by construction noise, they would not experience significant adverse impacts.

Open Space

According to the *CEQR Technical Manual*, a construction impacts analysis for open space may be conducted if an open space resource would be used for an extended period of time for construction-related activities, such as construction staging, or if access to the open space would be impeded during construction activities.

Construction activities would not displace any existing open spaces. Construction of the proposed PSAC II development would occur in close proximity to the associated mapped open spaces of the Pelham Parkway and the Hutchinson River Greenway. All open spaces are expected to remain open during the entire construction period, and access to these open spaces would not be compromised at any time. As described in the Transit and Pedestrians section below, appropriate measures would be taken to maintain pedestrian access between the Pelham Parkway and the HMC.

Construction activities would be conducted with the care mandated by the close proximity of open spaces to the proposed development site. Dust control measures—including watering of exposed areas and dust covers for trucks—would be implemented to ensure compliance with Section 1402.2-9.11 of the New York City Air Pollution Control Code, which regulates construction-related dust emissions.

During heavier periods of construction, construction activities on the site would at times be disruptive or noticeable to users of the Pelham Parkway malls and pedestrian pathway and the Hutchinson River Greenway, which border the northern and eastern edges of the proposed development site. Construction activities are noisy (e.g., pile driving, truck traffic), and this noise would be perceptible at along these linear green spaces (see discussion under "Noise"). However, the impacts associated with the construction of the proposed development would be temporary, and therefore, would not be considered significant adverse impacts to park users.

Historic Resources

Construction impacts may occur on historic resources if in-ground disturbances or vibrations associated with project construction undermines the foundation or structural integrity of nearby historic resources. These impacts are typically assessed for any action involving construction activities within 400 feet of a historic resource. There are no known architectural resources on the Project Site, nor are there any historic structures within a 400-foot radius of the site. Therefore, development on the proposed development would not to have any direct, physical effects on these off-site resources.

The New York City Landmarks Preservation Commission (NYCLPC) has determined that the Project Site is not sensitive for archaeological resources and therefore, construction on the Project Site would not result in any significant adverse impacts on archaeological resources.

Hazardous Materials

The construction-period hazardous materials impacts of the proposed PSAC II development are described above in "Environmental Remediation."

Infrastructure

Infrastructure impacts may occur if project construction would affect or disrupt infrastructure service for extended or intermittent periods over a long period of time—for example, if in-ground construction would disturb a water main causing a long-term interruption in service. Another example for a large project would be the extensive number of construction-related heavy trucks and their effect on pavement conditions. If such disruptions were expected, a more detailed analysis would be warranted.

As the Proposed Action will add to the existing infrastructure system, no disruptions of existing services are expected (except to make connections, typically carried out overnight or during off-periods). All infrastructure improvements would meet the standards and specifications of NYCDEP and would have to be approved by that agency. NYCDEP regularly repairs, relocates, and replaces water and sewer lines without disruption to service. Therefore, no significant adverse impacts to the infrastructure systems or to users are expected.

As with the water and sewer lines, new electrical and telecommunication service lines would have to be connected to the proposed development. Energy and telecommunications suppliers regularly repair,

relocate and replace lines without disruption to service. Therefore, no significant adverse impacts to the systems or to its users are expected.

Traffic and Parking

A construction impact analysis of traffic is typically conducted when construction activity is expected to be long term and would generate sufficient traffic from employees and trucks to cause potential traffic impacts, or would result in lane closings or traffic diversions, disrupting area traffic flow. Construction of the proposed PSAC II development would be temporary and is not expected to create extensive or long-term construction-related impacts on traffic or parking conditions in the surrounding area.

It is anticipated that all construction staging for the proposed development would be accommodated on-site, and no street closures are expected. As described above, during the construction of the proposed development, vehicular access to the HMC would be maintained at all times. A maintenance and protection plan of traffic (MPT plan) would be prepared in coordination with the NYCDOT to maintain safe and convenient vehicular access to the HMC and proposed development site during construction of the proposed PSAC II facility and the reconstruction of Industrial Street (proposed public street [Marconi Street]). Traffic impacts can be minimized using construction sequencing and lane closure management measures within an overall MPT plan. The MPT plan would require that a 24-foot wide, two-way roadway be maintained at all times during construction to provide access between Waters Place and the HMC and proposed development site. This would allow for one moving lane in each direction as is currently provided along the existing Industrial Street.

During construction, there would be new vehicle trips to and from the Project Site, including trips generated by construction workers traveling to and from the site, and truck trips associated with the movement of material and equipment, as well as construction waste. The number of construction workers on-site at any one time, and the number of daily truck trips to and from the site would vary, depending on the stage of construction. Although a detailed construction plan has yet to be finalized, based on preliminary information provided by the construction coordinator, it is estimated that the average number of construction workers on-site would be as follows:

- The below-grade work, including excavation, grading, and foundations, would require up to approximately 175 workers on-site depending on the exact tasks being performed.
- Workers required for the superstructure would require up to approximately 225 workers on-site.
- Workers required for the construction of the core and shell and interior fit-out work would require up to approximately 450 workers.
- Workers involved in the exterior work would require up to approximately 475 workers.[2]

Construction would predominantly occur between 7:00 AM and 3:30 PM during weekdays. Construction workers would usually arrive before the typical AM peak commuter period and depart before the PM peak hour, and would therefore not represent a substantial increment during the area's peak travel periods. Given the Project Site's location more than a ½-mile away from any subway station, most construction workers would likely use private automobiles to access the site, and would likely travel routes similar to those that would be used by PSAC II employees in the future with the Proposed Action. Constructed-related pedestrian and transit trips would be fewer than the *CEQR Technical Manual* threshold requiring quantitative analysis; therefore, the proposed development

[2] The average number of construction workers for construction phases is based on data from the construction coordinator for the PSAC II development.

would not result in significant adverse transit or pedestrian impacts and no further analysis is necessary. It is expected that the proposed accessory parking structure containing 500 spaces would be constructed early in order to provide parking on-site for construction workers. Prior to the construction of the garage, sufficient parking would be provided on-site to accommodate construction worker vehicles.

A conservative detailed traffic analysis was performed for the peak construction period since more than 50 vehicle trips- the *CEQR Technical Manual* threshold for requiring detailed analysis- would be generated during the peak hours of the proposed development's peak construction period (refer to Table 16-2). Based on the anticipated construction schedule, the peak period of construction is expected to take place in the year 2011; as such the assessment of construction traffic conditions in the future with and without the Proposed Action was conducted for the year 2011. For discussion of existing traffic conditions, refer to Chapter 12, "Traffic and Parking."

Traffic Conditions in the Future Without the Proposed Action (Construction No-Build Condition)

In order to establish a baseline condition against which potential construction impacts would be compared, a 2011 Construction No-Build network was created by applying a background traffic growth rate of one-half percent per year to existing traffic volumes (existing volumes shown in Figure 12-2 of Chapter 12, "Traffic and Parking"), in accordance with the *CEQR Technical Manual* guidelines for the Bronx. In addition, to account for other nearby large ongoing construction projects, peak period construction-related trips generated by anticipated future development at the HMC (i.e., Tower 2 at the HMC) and the Bronx Psychiatric Center (i.e., Bronx Mental Health Redevelopment Project) were also added to the network.[3] As Tower 1 of the HMC will be fully occupied and operational by 2011, trips generated by this new office building were also added to the No-Build network. It should be noted that this traffic analysis is very conservative and accounts for peak period construction-related vehicle trips for the HMC and the Bronx Psychiatric Center both of which are expected to be completed by 2011 and would likely have their peak construction period one year early in 2010.

Similar to the traffic analysis provided in Chapter 12, the 24 study area intersections were analyzed for the No-Build construction peak hours of 6:00 AM to 7:00 AM and 3:00 PM to 4:00 PM and the results are shown in Table 16-1. Twelve traffic movements at eight intersections would operate at unacceptable LOS E or F, or have a v/c ratio of greater than 0.95, during AM and/or midday construction peak hour.

Congested movements at East Tremont Avenue and Silver Street, East Tremont Avenue and Castle Hill Avenue, Pelham Parkway West and Eastchester Road, and Westchester Avenue and Ericson Place/Middletown Road/Hutchinson River Parkway would slightly worsen as compared to existing conditions. The eastbound defacto left turn movement at East Tremont Avenue and Silver Street would operate with an LOS F and 104.9 seconds of delay in the AM peak hour, and the southbound left-right turn movement would operate with an LOS F and 106.1 and 79.5 seconds of delay in the AM and midday peak hours, respectively. The westbound left-through movement at East Tremont Avenue and Castle Hill Avenue would operate with LOS F and 84.7 seconds of delay in the midday peak hour.

[3] Trip generation projections for constructed-related vehicles for the Bronx Mental Health Redevelopment Project and the Hutchinson Metro Center development are based on the Bronx Mental Health Redevelopment Project Environmental Impact Analysis Report, dated August 2008.

TABLE 16-1
2011 No Build Construction Traffic Conditions

ANALYZED INTERSECTIONS	Lane Group	AM Peak Hour 2007 Exisitng V/C Ratio	Delay (sec)	LOS		AM Peak Hour 2011 No Build V/C Ratio	Delay (sec)	LOS		Midday Peak Hour 2007 Exisitng V/C Ratio	Delay (sec)	LOS		Midday Peak Hour 2011 No Build V/C Ratio	Delay (sec)	LOS
1. Waters Place (E-W) at Eastchester Road (N-S)	WB-L	0.41	23.9	C		0.42	24.0	C		0.55	36.4	D		0.70	40.4	D
	WB-R	0.56	21.7	C		0.57	22.1	C		0.59	22.7	C		0.72	26.8	C
	NB-TR	0.40	18.1	B		0.53	20.0	B		0.63	21.7	C		0.69	23.3	C
	SB-DefL	0.52	21.3	C		0.95	64.9	E	*	0.70	16.7	B		0.86	33.5	C
	SB-T	0.23	11.5	B		0.25	11.7	B		0.31	6.2	A		0.33	6.4	A
2. Waters Place (E-W) at Industrial Street (N-S)	EB-LT	0.41	10.6	B			22.4	C		0.63	14.0	B		0.80	20.1	C
	WB-TR	0.53	11.6	B		0.63	13.3	B		0.44	10.6	B		0.51	11.4	B
	SB-L	0.03	23.1	C		0.05	23.2	C		0.19	24.8	C		0.52	30.6	C
	SB-R	0.04	23.2	C		0.07	23.5	C		0.23	25.4	C		0.52	31.1	C
3. Waters Place (E-W) at Fink Avenue (N-S)	EB-TR	0.30	16.8	B		0.34	17.3	B		0.61	21.5	C		0.84	29.0	C
	WB-LT	0.30	18.0	B		0.49	19.2	B		0.34	17.2	B		0.37	17.6	B
	NB-LR	0.18	15.6	B		0.19	15.7	B		0.37	17.4	B		0.38	17.5	B
	SB-L	0.46	18.1	B		0.47	18.2	B		0.38	17.2	B		0.38	17.3	B
	SB-T	0.24	15.9	B		0.25	16.0	B		0.19	15.5	B		0.20	15.6	B
4. Waters Place (E-W) at entrance to Bronx Psychiatric Center (N-S)	EB-LT	0.57	15.9	B		0.75	21.4	C		0.67	17.1	B		0.86	24.2	C
	WB-TR	0.78	19.3	B		0.90	26.5	C		0.61	15.3	B		0.70	17.2	B
	SB-LR	0.10	10.2	B		0.10	10.2	B		0.20	10.8	B		0.21	10.8	B
5. Waters Place (E-W) at Westchester Avenue (N-S)	EB-LT	0.43	18.4	B		0.46	18.9	B		0.72	24.1	C		0.92	35.4	D
	NB-LT	0.20	15.9	B			17.4	B		0.34	17.3	B		0.39	17.8	B
						0.32	18.2	B								
						0.27	16.8	B								
	SB-DefL	0.29	17.6	B		0.28	17.3	B						0.40	20.3	C
	SB-T	0.27	16.8	B		0.28	16.9	B						0.36	17.9	B
	SB-LT						17.1	B		0.41	18.3	B			18.7	B
6. Little League Place at (E-W) Westchester Avenue (N-S)	WB-LR	0.20	22.0	C		0.34	24.3	C		0.41	25.6	C		0.49	27.4	C
	NB-T	0.19	10.9	B		0.21	11.0	B		0.31	11.9	B		0.32	12.0	B
	SB-T	0.36	12.4	B		0.36	12.5	B		0.32	12.0	B		0.35	12.3	B
7. Little League Place at (N-S) East Tremont Avenue (E-W) (unsignalized)	EB-LT	0.04	10.3	B		0.04	10.9	B		0.11	11.5	B		0.12	12.1	B
8. East Tremont Avenue (E-W) at Ericson Place (N-S)	EB-LT	0.23	14.6	B		0.23	14.6	B		0.50	17.9	B		0.51	18.1	B
	WB-T	0.32	15.5	B		0.34	15.7	B		0.46	17.3	B		0.48	17.5	B
	NB-LTR	0.64	29.6	C		0.75	32.9	C		0.60	28.6	C		0.67	30.4	C
9. East Tremont Avenue (E-W) at Blondell Avenue (N-S) (unsignalized)	EB-LT	0.06	11.5	B		0.06	11.8	B		0.19	13.5	B		0.20	14.0	B

NOTES:
This table is new to the EIS.
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Analysis considers a De facto Left Lane on this approach
V/C Ratio-Volume to Capacity Ratio, SEC/VEH-Seconds per Vehicle
LOS- Level of Service
* - Denotes Congested Intersection (LOS E or F, or V/C>0.95)
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000)

TABLE 16-1
2011 No Build Construction Traffic Conditions

(continued)

ANALYZED INTERSECTIONS		Lane Group	AM Peak Hour 2007 Exisitng V/C Ratio	Delay (sec)	LOS		AM Peak Hour 2011 No Build V/C Ratio	Delay (sec)	LOS		Midday Peak Hour 2007 Exisitng V/C Ratio	Delay (sec)	LOS		Midday Peak Hour 2011 No Build V/C Ratio	Delay (sec)	LOS	
10. East Tremont Avenue (E-W) at Silver Street (N-S) (Eastchester Road)		EB-DefL	0.78	42.6	D		1.09	104.9	F	*	0.65	28.6	C		0.77	37.3	D	
		EB-T	0.35	23.1	C		0.36	23.2	C		0.45	19.0	B		0.46	19.1	B	
		WB-T	0.28	21.3	C		0.29	21.4	C		0.37	16.8	B		0.38	16.9	B	
		NB-L	0.33	43.3	D		0.33	43.3	D		0.07	35.1	D		0.07	35.1	D	
		NB-TR	0.23	42.2	D		0.24	42.3	D		0.18	35.9	D		0.18	35.9	D	
		SB-LR	0.97	85.8	F	*	1.04	106.1	F	*	0.72	36.9	D		1.00	79.5	E	*
11. East Tremont Avenue (E-W) at Castle Hill Avenue (N-S)		EB-T	0.56	36.8	D		0.67	39.4	D		0.49	29.6	C		0.53	30.4	C	
		EB-R	0.18	12.6	B		0.19	12.7	B		0.50	20.2	C		0.51	20.4	C	
		WB-LT	0.77	32.4	C		0.85	37.2	D		0.96	46.5	D	*	1.09	84.7	F	*
		NB-L	0.82	53.8	D		0.83	55.0	D		0.76	42.9	D		0.77	43.7	D	
		NB-R	0.16	38.4	D		0.16	38.5	D		0.19	32.4	C		0.20	32.4	C	
12. East Tremont Avenue (E-W) and Williamsbridge Road (E-W) at Frisby Ave. (N-S)	*From E. Tremont Ave.*	EB-LT	0.19	23.7	C		0.19	23.8	C		0.51	27.5	C		0.52	27.6	C	
	From Williamsbridge Rd.	EB-T	0.31	35.3	D		0.31	35.4	D		0.58	32.1	C		0.59	32.3	C	
	To E. Tremont Ave.	WB-T	0.31	25.3	C		0.32	25.4	C		0.44	26.1	C		0.45	26.2	C	
	To Williamsbridge Rd.	WB-T	0.11	5.3	A		0.11	5.4	A		0.21	7.7	A		0.22	7.7	A	
		NB-LR	0.19	42.2	D		0.19	42.2	D		0.44	32.5	C		0.45	32.7	C	
13. Pelham Parkway North (E-W) at Eastchester Road (N-S)		WB-LTR	0.56	32.0	C		0.57	32.3	C		0.51	38.9	D		0.52	39.2	D	
		NB-LT	0.25	7.6	A		0.26	7.7	A		0.47	12.0	B		0.49	12.4	B	
		SB-TR	0.46	27.3	C		0.49	27.7	C		0.64	39.3	D		0.66	39.9	D	
14. Pelham Parkway West (E-W) at Eastchester Road (N-S)		WB-L	0.54	24.2	C		0.61	25.9	C		0.72	50.6	D		0.77	53.7	D	
		WB-T	0.54	22.4	C	WB-TR	0.58	23.0	C		0.84	49.8	D	WB-TR	0.93	57.3	E	*
		WB-R	0.06	17.4	B						0.18	36.3	D					
		NB-DefL	0.38	15.8	B		0.40	16.3	B		0.39	13.3	B		0.45	17.5	B	
		NB-T	0.44	16.1	B		0.45	16.2	B		0.61	13.9	B		0.64	14.6	B	
		SB-TR	0.48	25.4	C		0.51	25.8	C		0.87	56.1	E	*	0.90	59.0	E	*
15. Pelham Parkway East (E-W) at Eastchester Road (N-S)		EB-LT	0.57	22.9	C		0.82	30.5	C		0.72	34.6	C		1.03	71.0	E	*
		NB-TR	0.34	23.4	C		0.34	23.5	C		0.53	27.8	C		0.58	29.0	C	
		SB-LT	0.61	18.3	B		0.67	19.5	B		0.73	24.6	C		0.79	27.2	C	
16. Westchester Avenue (N-S) at East Tremont Avenue (E-W)		EB-T	0.18	21.7	C		0.18	21.7	C		0.45	20.9	C		0.46	21.0	C	
		EB-R	0.09	21.0	C		0.10	21.0	C		0.11	17.4	B		0.11	17.4	B	
		WB-T	0.30	23.3	C		0.31	23.4	C		0.36	19.7	B		0.37	19.8	B	
		NB-T	0.34	26.2	C		0.38	27.0	C		0.68	29.1	C		0.70	29.9	C	
		SB-TR	0.39	20.0	B		0.40	20.1	C		0.39	15.3	B		0.42	15.7	B	
17. Westchester Avenue (N-S) at Blondell Avenue (E-W)		WB-LT	0.19	22.1	C		0.24	22.8	C		0.38	20.6	C		0.43	21.4	C	
		NB-LT	0.22	17.8	B		0.25	18.1	B		0.45	16.4	B		0.48	16.8	B	
		SB-TR	0.54	29.4	C		0.55	29.6	C		0.61	25.9	C		0.65	26.9	C	

NOTES:

This table is new to the EIS.

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DefL-Analysis considers a De facto Left Lane on this approach

V/C Ratio-Volume to Capacity Ratio, SEC/VEH-Seconds per Vehicle

LOS- Level of Service

* - Denotes Congested Intersection (LOS E or F, or V/C>0.95)

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000)

TABLE 16-1
2011 No Build Construction Traffic Conditions

(continued)

ANALYZED INTERSECTIONS	Lane Group	AM Peak Hour						Midday Peak Hour					
		2007 Exisitng			2011 No Build			2007 Exisitng			2011 No Build		
		V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
18. Westchester Avenue (N-S) at *From Ericson Pl.*	WB-LTR	0.53	35.2	D	0.54	35.4	D	0.77	42.2	D	0.78	43.1	D
Ericson Pl. and Hutchinson Pkwy (E-W)	NB-DefL	0.67	29.5	C	0.72	32.6	C	0.96	67.2	E *	1.31	187.0	F *
	NB-TR	0.61	26.0	C	0.63	26.5	C	0.98	57.8	E *	1.04	74.0	E *
	SB-LT	0.67	35.4	D	0.73	37.5	D	0.52	31.9	C	0.54	32.2	C
Ericson Pl./Middletown Rd *From Middletown Rd.*	WB-LTR	1.03	87.2	F *	1.05	94.6	F *	0.84	52.3	D	0.86	54.3	D
and Hutchinson Pkwy (E-W)	NB-DefL	0.69	30.3	C	0.73	33.5	C	0.98	73.4	E *	1.34	202.1	F *
	NB-TR	0.61	26.0	C	0.63	26.5	C	0.98	57.8	E *	1.04	74.5	E *
	SB-LT	0.67	35.4	D	0.73	37.5	D	0.52	31.9	C	0.54	32.2	C
19. Eastchester Road (N-S) at	WB-LR	0.27	15.0	B	0.27	15.0	B	0.29	15.2	B	0.30	15.2	B
Bassett Road (E-W)	NB-TR	0.43	9.4	A	0.47	9.8	A	0.57	10.9	B	0.66	12.2	B
	SB-LT	0.31	8.5	A	0.40	9.3	A	0.49	10.2	B	0.56	11.1	B
20. Eastchester Road (N-S) at	EB-LR	0.19	15.1	B	0.19	15.2	B	0.17	14.4	B	0.18	14.5	B
Ives Street (E-W)	NB-LT	0.60	11.9	B	0.68	13.6	B	0.83	18.6	B	0.97	33.2	C *
	SB-TR	0.20	7.7	A	0.27	8.2	A	0.41	9.3	A	0.47	9.8	A
21. Sackett Avenue (N-S) at	WB-L	---	9.7	A	---	9.8	A	---	9.0	A	---	9.0	A
Ives Street (E-W)	NB-R	---	7.8	A	---	7.9	A	---	7.5	A	---	7.6	A
unsignalized	SB-LT	---	10.4	B	---	10.5	B	---	9.1	A	---	9.2	A
22. Eastchester Road (N-S) at	EB-DefL	0.60	31.3	C	0.44	26.8	C	0.82	44.7	D	0.60	32.0	C
Morris Park Avenue (E-W)	EB-TR	0.19	21.4	C	0.22	22.5	C	0.37	23.6	C	0.33	24.4	C
	WB-LTR	0.06	20.2	C	0.06	20.2	C	0.20	22.2	C	0.19	22.0	C
	NB-DefL	0.58	17.9	B	0.78	27.8	C	0.82	40.3	D	0.99	75.9	E *
	NB-TR	0.59	17.3	B	0.27	11.6	B	0.88	32.7	C	0.46	13.6	B
	SB-LT	0.45	21.6	C	0.52	22.6	C	0.53	22.9	C	0.57	23.7	C
	SB-R	0.52	24.6	C	0.56	25.6	C	0.47	23.6	C	0.52	24.6	C
23. Eastchester Road (N-S) at	EB-LTR	0.05	20.1	C	0.05	20.1	C	0.06	20.2	C	0.09	20.6	C
Stillwell Avenue (E-W)	WB-LTR	0.23	22.6	C	0.24	22.8	C	0.25	23.0	C	0.26	23.1	C
	NB-LT	0.22	11.1	B	0.23	11.2	B	0.36	12.4	B	0.42	13.2	B
	SB-LTR	0.50	14.2	B	0.57	15.3	B	0.52	14.5	B	0.56	15.2	B
24. Eastchester Road (N-S) at	WB-LR	0.17	25.6	C	0.18	25.7	C	0.12	19.0	B	0.13	19.1	B
Rhinelander Avenue (E-W)	NB-TR	0.18	7.9	A	0.19	7.9	A	0.48	23.9	C	0.56	25.4	C
	SB-LT	0.50	10.8	B	0.56	11.5	B	0.73	30.2	C	0.81	33.8	C

NOTES:
This table is new to the EIS.
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Analysis considers a De facto Left Lane on this approach
V/C Ratio-Volume to Capacity Ratio, SEC/VEH-Seconds per Vehicle
LOS- Level of Service
* - Denotes Congested Intersection (LOS E or F, or V/C>0.95)
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000)

The westbound right-through and the southbound right-through movements at the Pelham Parkway West and Eastchester Road would operate with LOS E and 57.3 and 59.0 seconds of delay in the midday peak hour, respectively. The westbound left-through-right-turn movement from Middletown Road at the Westchester Avenue and Ericson Place/Middletown Road/Hutchinson River Parkway intersection would operate with LOS F and 94.6 seconds of delay in the AM peak hour, and the northbound defacto left-turn and the northbound right-through movements would operate with LOS F (202.1 seconds of delay) and LOS E (74.5 seconds of delay) in the midday peak hour, respectively.

In addition, five traffic movements at four new intersections would become congested under the 2011 No-Build Construction condition. The southbound defacto left turn movement at Waters Place and Eastchester Road would deteriorate to an LOS E with 64.9 seconds of delay in the AM peak hour. The eastbound left-through movement at the Pelham Parkway East and Eastchester Road would deteriorate to an LOS E and 71.0 seconds of delay in the midday peak hour. The northbound left turn movement at Eastchester Road and Morris Park Avenue would operate at LOS E and a delay of 75.9 second in the midday peak hour. Furthermore, the northbound left-through movement at Eastchester Road and Ives Street would have a v/c ratio of 0.97 and LOS C.

Construction Period Traffic Conditions
(Construction Build Condition)

During peak construction period, which would last for approximately 9 months, it is anticipated that up to approximately 475 construction workers would be on-site daily. It was conservative assumed that 80 percent of these workers would arrive at the proposed development's construction site between 6:00 AM to 7:00 AM, and about 80 percent would depart between 3:00 PM to 4:00 PM. Table 16-2 provides the transportation planning assumptions and trip generation for the travel demand forecast of the peak construction period for the proposed PSAC II development. Based on 2000 Census reverse journey to work data, approximately 74 percent of workers in the surrounding area drive to work and approximately 1.3 percent arrive by taxi. Assuming vehicle occupancy of approximately 1.19 persons per auto and 1.40 persons taxi (based on the Bronx Mental Health Redevelopment Project and 2000 Census reverse journey to work data), it is estimated that construction workers would generate approximately 244 vehicle trips during the weekday AM (6:00 AM to 7:00 AM) and midday (3:00 PM to 4:00 PM) peak hours during periods of peak construction. (All construction-related trips, including construction worker vehicles and trucks, would access the development site from Waters Place via Industrial Street.)

As noted above, in addition to auto and taxi trips by construction workers, construction of the proposed development would generate truck trips associated with the movement of material and equipment, as well as construction waste. Truck movements would typically be spread throughout the day on weekdays, and would generally occur between the hours of 7:00 AM and 3:30 PM, depending on the period of construction. When possible, the scheduling of deliveries and other construction activities would take place during off-peak travel hours. Truck holding and staging would typically be accommodated on the development site.

As shown in Table 16-2, it is estimated that approximately 15 trucks would be generated (15 in trip and 15 out trips) during the AM peak hour, and approximately 15 trucks would be generated (15 in trip and 15 out trips) in the midday peak hour. In addition, during an extended shift it is likely that up to approximately 15 trucks (15 in trip and 15 out trips) would be generated during the 5:00 PM to 6:00 PM hour. A comprehensive traffic management plan, including a routing plan for construction-related vehicles would be designed and implemented. Trucks en route to and from the proposed development during construction would use NYCDOT-designated truck routes to access the Project Site.

TABLE 16-2
Trip Generation Planning Demand Assumptions for the Peak Construction Period of PSAC II

Land Use:	**Peak Construction Period**	
	(1)	
Size/Units:	475	workers
Temporal Distribution:	(2)	
AM (6:00 - 7:00)	80.0%	
MD (3:00 - 4:00)	80.0%	
	(3)	
Modal Splits:	AM	MD
Auto	74.1%	74.1%
Taxi	1.3%	1.3%
Subway	16.8%	16.8%
Bus	4.3%	4.3%
Walk/Ferry/Other	3.5%	3.5%
	100.0%	100%
	(2)	
In/Out Splits:	In	Out
AM	97.0%	3.0%
MD	3.0%	97.0%
PM	5.0%	95.0%
Vehicle Occupancy:	(4)	
Auto	1.19	
Taxi	1.40	
Truck Trip Generation:	(4)	
	120.00	
	trips per day	
	(4)	
AM	25.0%	
MD	25.0%	
	In	Out
AM/MD/PM	50.0%	50.0%

Notes :

(1) Estimate for peak construction period workers provided by project contractor.
City Environmental Quality Review (CEQR) Technical Manual, Appendix 3, 2001.
(2) Bronx Mental Health Redevelopment Project.
(3) 2000 Cenus reverse journey to work. Atlantic Yards Arena and Redevelopment Project, FEIS
(4) Hunters Point South FEIS

* Table is new to the EIS.

TABLE 16-2 (continued)
Trip Generation Planning Demand Assumptions for the Peak Construction Period of PSAC II

Land Use:		**Peak Construction Period**		
Size/Units:		475	workers	
Peak Hour Trips:				
	AM	380		
	MD	380		
Person Trips:				
		In	Out	
AM	**Auto**	273	8	
	Taxi	5	0	
	Subway	62	2	
	Bus	16	0	
	Walk/Ferry/Other	13	0	
	Total	369	10	
		In	Out	
MD	**Auto**	8	273	
	Taxi	0	5	
	Subway	2	62	
	Bus	0	16	
	Walk/Ferry/Other	0	13	
	Total	10	369	
Vehicle Trips :				
		In	Out	
AM	**Auto (Total)**	229	7	
	Taxi Balanced	4	4	
	Truck	15	15	
	Total	248	26	
		In	Out	
MD	**Auto (Total)**	7	229	
	Taxi Balanced	4	4	
	Truck	15	15	
	Total	26	248	
	Total Vehicle	In	Out	Total
	AM	248	26	274
	MD	26	248	274

* This table is new to the EIS.

Overall, it is anticipated that during periods of peak construction activity, upwards of approximately 274 auto, taxi and truck trips would be generated in the AM and midday peak hours (see Table 16-2).

As described above, site activities would mostly take place during the typical construction shift of 7:00 AM to 3:30 PM. Table 16-2a provides the peak construction hourly trip projections for 2011. As shown in Table 16-2a, construction worker travel would typically take place during the hours before and after the work trip, while construction truck trips would be made throughout the day (with more trip concentrated during the early morning and afternoon).

TABLE 16-2a
2011 Peak Construction Trips by Hours

Hour	Construction Trips				Total Vehicle Trips		Total
	Vehicle Trips		Truck Trips				
	In	Out	In	Out	In	Out	
5- 6 AM	14	0	0	0	14	0	14
6- 7	233	11	15	15	248	26	274
7-8	43	1	4	4	47	5	52
8- 9	0	0	4	4	4	4	8
9-10	0	0	4	4	4	4	8
10-11	0	0	4	4	4	4	8
11-12	0	0	3	3	3	3	6
12- 1 PM	0	0	3	3	3	3	6
1- 2	0	0	3	3	3	3	6
2- 3	0	14	3	3	3	17	20
3- 4	11	233	15	15	26	248	274
4- 5	1	29	2	2	3	31	34
5-6	0	14	0	0	0	14	14
	302	302	60	60	362	362	724

Note: The construction coordinator for the project provided the peak work force estimate.

The assessment of potential significant traffic impacts generated by the proposed development is based on significant impact criteria defined in the *CEQR Technical Manual*. A significant traffic impact is defined for No-Build LOS A, B, or C conditions that deteriorate to unacceptable LOS D, E, or F in the Build condition. For No-Build LOS A, B, or C conditions that deteriorate to unacceptable LOS D, mitigation to mid-LOS D (45.0 seconds of delay for signalized intersections and 30.0 seconds of delay for unsignalized intersections) is required.

For a No-Build LOS D, an increase of Build delay by five or more seconds is considered a significant impact if the Build delay meets or exceeds 45.0 seconds. For a No-Build LOS E, the threshold is a four-second increase in Build delay; for a No-Build LOS F, a three-second increase in Build delay is significant. However, if a No-Build LOS F condition already has delays in excess of 100 seconds, an increase in Build delay of more than one second is considered significant, unless a proposed development would generate fewer than five vehicles through that intersection in the peak hour (signalized intersections) and fewer than five passenger-car-equivalents (PCEs) in the peak hour along the critical approach (unsignalized intersections). In addition, for a minor street of an unsignalized intersection to generate a significant impact, 90 PCEs must be identified in the Build condition in any peak hour.

Table 16-3 shows the results of the traffic analysis for the 2011 Construction Build condition, and highlights the impacted locations according to the above outlined *CEQR Technical Manual* criteria.

TABLE 16-3
2011 Build Construction Level of Service

ANALYZED INTERSECTIONS	Lane Group	AM Peak Hour						Midday Peak Hour					
		2011 No Build			2011 Build Construction			2011 No Build			2011 Build Construction		
		V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
1. Waters Place (E-W) at Eastchester Road (N-S)	WB-L	0.42	24.0	C	0.43	24.1	C	0.70	40.4	D	0.76	43.1	D
	WB-R	0.57	22.1	C	0.59	22.5	C	0.72	26.8	C	0.88	37.8	D
	NB-TR	0.53	20.0	B	0.57	20.8	C	0.69	23.3	C	0.70	23.5	C
	SB-DefL	0.95	64.9	E	1.32	195.3	F *	0.86	33.5	C	0.89	37.2	D
	SB-T	0.25	11.7	B	0.25	11.7	B	0.33	6.4	A	0.33	6.4	A
2. Waters Place (E-W) at Industrial Street (N-S)	EB-DefL	0.83	45.5	D	2.09	531.5	F						
	EB-T	0.63	15.3	B	0.63	15.3	B						
	EB-LT		22.4	C		203.4	F *	0.80	20.1	C	0.83	22.0	C
	WB-TR	0.63	13.3	B	0.74	15.8	B	0.51	11.4	B	0.52	11.5	B
	SB-L	0.05	23.2	C	0.07	23.5	C	0.52	30.6	C	0.83	44.6	D
	SB-R	0.07	23.5	C	0.12	24.1	C	0.52	31.1	C	0.80	44.1	D
3. Waters Place (E-W) at Fink Avenue (N-S)	EB-TR	0.34	17.3	B	0.35	17.4	B	0.84	29.0	C	0.93	37.0	D
	WB-LT	0.49	19.2	B	0.59	20.8	C	0.37	17.6	B	0.38	17.7	B
	NB-LR	0.19	15.7	B	0.19	15.7	B	0.38	17.5	B	0.38	17.5	B
	SB-L	0.47	18.2	B	0.47	18.2	B	0.38	17.3	B	0.38	17.3	B
	SB-T	0.25	16.0	B	0.25	16.0	B	0.20	15.6	B	0.20	15.6	B
4. Waters Place (E-W) at entrance to Bronx Psychiatric Center (N-S)	EB-LT	0.75	21.4	C	0.82	25.3	C	0.86	24.2	C	0.96	36.3	D
	WB-TR	0.90	26.5	C	1.03	51.4	D *	0.70	17.2	B	0.71	17.4	B
	SB-LR	0.10	10.2	B	0.10	10.2	B	0.21	10.8	B	0.21	10.8	B
5. Waters Place (E-W) at Westchester Avenue (N-S)	EB-LT	0.46	18.9	B	0.47	19.0	B	0.92	35.4	D	0.99	47.8	D *
	NB-LT		17.4	B	NB-LT	21.5	C	0.39	17.8	B	0.40	18.0	B
	NB-DefL	0.32	18.2	B	NB-DefL 0.61	25.1	C						
	NB-T	0.27	16.8	B	NB-T 0.27	16.8	B						
	SB-DefL	0.28	17.3	B	0.28	17.3	B	0.40	20.3	C	0.41	20.5	C
	SB-T	0.28	16.9	B	0.28	16.9	B	0.36	17.9	B	0.36	17.9	B
	SB-LT		17.1	B		17.1	B		18.7	B		18.7	B
6. Little League Place at (E-W) Westchester Avenue (N-S)	WB-LR	0.34	24.3	C	0.61	31.0	C	0.49	27.4	C	0.51	27.8	C
	NB-T	0.21	11.0	B	0.22	11.1	B	0.32	12.0	B	0.32	12.0	B
	SB-T	0.36	12.5	B	0.37	12.5	B	0.35	12.3	B	0.36	12.4	B
7. Little League Place at (N-S) East Tremont Avenue (E-W) (unsignalized)	EB-LT	0.04	10.9	B	0.05	11.7	B	0.12	12.1	B	0.12	12.1	B
8. East Tremont Avenue (E-W) at Ericson Place (N-S)	EB-LT	0.23	14.6	B	0.23	14.6	B	0.51	18.1	B	0.51	18.1	B
	WB-T	0.34	15.7	B	0.34	15.8	B	0.48	17.5	B	0.48	17.5	B
	NB-LTR	0.75	32.9	C	0.87	39.4	D	0.67	30.4	C	0.68	30.6	C
9. East Tremont Avenue (E-W) at Blondell Avenue (N-S) (unsignalized)	EB-LT	0.06	11.8	B	0.06	11.8	B	0.20	14.0	B	0.20	14.0	B

NOTES:
This table is new to the EIS.
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Analysis considers a De facto Left Lane on this approach
V/C Ratio-Volume to Capacity Ratio, SEC/VEH-Seconds per Vehicle
LOS- Level of Service
* - Denotes Impacted Intersection
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000)

TABLE 16-3
2011 Build Construction Level of Service
(continued)

ANALYZED INTERSECTIONS		Lane Group	AM Peak Hour						Midday Peak Hour					
			2011 No Build			2011 Build Construction			2011 No Build			2011 Build Construction		
			V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
10. East Tremont Avenue (E-W) at Silver Street (N-S) (Eastchester Road)		EB-DefL	1.09	104.9	F	1.21	151.0	F *	0.77	37.3	D	0.79	38.7	D
		EB-T	0.36	23.2	C	0.36	23.2	C	0.46	19.1	B	0.46	19.1	B
		WB-T	0.29	21.4	C	0.29	21.4	C	0.38	16.9	B	0.38	16.9	B
		NB-L	0.33	43.3	D	0.33	43.3	D	0.07	35.1	D	0.07	35.1	D
		NB-TR	0.24	42.3	D	0.24	42.3	D	0.18	35.9	D	0.18	35.9	D
		SB-LR	1.04	106.1	F	1.07	113.1	F *	1.00	79.5	E	1.11	112.5	F *
11. East Tremont Avenue (E-W) at Castle Hill Avenue (N-S)		EB-T	0.67	39.4	D	0.71	40.8	D	0.53	30.4	C	0.54	30.5	C
		EB-R	0.19	12.7	B	0.19	12.7	B	0.51	20.4	C	0.51	20.4	C
		WB-LT	0.85	37.2	D	0.87	39.4	D	1.09	84.7	F	1.13	100.3	F *
		NB-L	0.83	55.0	D	0.83	55.0	D	0.77	43.7	D	0.77	43.7	D
		NB-R	0.16	38.5	D	0.16	38.5	D	0.20	32.4	C	0.20	32.4	C
12. East Tremont Avenue (E-W) and Williamsbridge Road (E-W) at Frisby Ave. (N-S)	*From E. Tremont Ave.*	EB-LT	0.19	23.8	C	0.19	23.8	C	0.52	27.6	C	0.52	27.6	C
	From Williamsbridge Rd.	EB-T	0.31	35.4	D	0.31	35.4	D	0.59	32.3	C	0.59	32.3	C
	To E. Tremont Ave	WB-T	0.32	25.4	C	0.32	25.4	C	0.45	26.2	C	0.45	26.2	C
	To Williamsbridge Rd.	WB-T	0.11	5.4	A	0.11	5.4	A	0.22	7.7	A	0.22	7.7	A
		NB-LR	0.19	42.2	D	0.19	42.2	D	0.45	32.7	C	0.45	32.7	C
13. Pelham Parkway North (E-W) at Eastchester Road (N-S)		WB-LTR	0.57	32.3	C	0.57	32.3	C	0.52	39.2	D	0.52	39.2	D
		NB-LT	0.26	7.7	A	0.27	7.7	A	0.49	12.4	B	0.51	12.6	B
		SB-TR	0.49	27.7	C	0.52	28.2	C	0.66	39.9	D	0.67	40.2	D
14. Pelham Parkway West (E-W) at Eastchester Road (N-S)		WB-L	0.61	25.9	C	0.61	25.9	C	0.77	53.7	D	0.77	53.7	D
		WB-TR	0.58	23.0	C	0.58	23.0	C	0.93	57.3	E	0.93	57.3	E
		WB-R												
		NB-DefL	0.40	16.3	B	0.42	16.8	B	0.45	17.5	B	0.54	21.4	C
		NB-T	0.45	16.2	B	0.46	16.4	B	0.64	14.6	B	0.66	15.1	B
		SB-TR	0.51	25.8	C	0.53	26.2	C	0.90	59.0	E	0.91	60.3	E
15. Pelham Parkway East (E-W) at Eastchester Road (N-S)		EB-LT	0.82	30.5	C	0.82	30.5	C	1.03	71.0	E	1.03	71.0	E
		NB-TR	0.34	23.5	C	0.36	23.7	C	0.58	29.0	C	0.65	30.5	C
		SB-LT	0.67	19.5	B	0.69	20.0	B	0.79	27.2	C	0.82	29.4	C
16. Westchester Avenue (N-S) at East Tremont Avenue (E-W)		EB-T	0.18	21.7	C	0.18	21.7	C	0.46	21.0	C	0.46	21.0	C
		EB-R	0.10	21.0	C	0.10	21.0	C	0.11	17.4	B	0.11	17.4	B
		WB-T	0.31	23.4	C	0.31	23.4	C	0.37	19.8	B	0.37	19.8	B
		NB-T	0.38	27.0	C	0.40	27.3	C	0.70	29.9	C	0.71	30.1	C
		SB-TR	0.40	20.1	C	0.40	20.1	C	0.42	15.7	B	0.43	15.8	B
17. Westchester Avenue (N-S) at Blondell Avenue (E-W)		WB-LT	0.24	22.8	C	0.24	22.8	C	0.43	21.4	C	0.43	21.4	C
		NB-LT	0.25	18.1	B	0.26	18.3	B	0.48	16.8	B	0.48	16.9	B
		SB-TR	0.55	29.6	C	0.56	29.7	C	0.65	26.9	C	0.66	27.2	C

NOTES:
This table is new to the EIS.
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Analysis considers a De facto Left Lane on this approach
V/C Ratio-Volume to Capacity Ratio, SEC/VEH-Seconds per Vehicle
LOS- Level of Service
* - Denotes Impacted Intersection
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000)

TABLE 16-3
2011 Build Construction Level of Service
(continued)

ANALYZED INTERSECTIONS	Lane Group	AM Peak Hour						Midday Peak Hour					
		2011 No Build			2011 Build Construction			2011 No Build			2011 Build Construction		
		V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
18. Westchester Avenue (N-S) at *From Ericson Pl.*	WB-LTR	0.54	35.4	D	0.54	35.4	D	0.78	43.1	D	0.78	43.1	D
Ericson Pl. and Hutchinson Pkwy (E-W)	NB-DefL	0.72	32.6	C	0.72	32.6	C	1.31	187.0	F	1.31	187.0	F
	NB-TR	0.63	26.5	C	0.63	26.5	C	1.04	74.0	E	1.04	74.0	E
	SB-LT	0.73	37.5	D	0.73	37.5	D	0.54	32.2	C	0.54	32.2	C
19. Eastchester Road (N-S) at	WB-LR	0.27	15.0	B	0.27	15.0	B	0.30	15.2	B	0.30	15.2	B
Bassett Road (E-W)	NB-TR	0.47	9.8	A	0.48	9.9	A	0.66	12.2	B	0.73	13.5	B
	SB-LT	0.40	9.3	A	0.46	9.9	A	0.56	11.1	B	0.58	11.4	B
20. Eastchester Road (N-S) at	EB-LR	0.19	15.2	B	0.19	15.2	B	0.18	14.5	B	0.18	14.5	B
Ives Street (E-W)	NB-LT	0.68	13.6	B	0.71	14.4	B	0.97	33.2	C	1.06	56.6	E
	SB-TR	0.27	8.2	A	0.33	8.6	A	0.47	9.8	A	0.47	9.9	A
21. Sackett Avenue (N-S) at	WB-L	---	9.8	A	—	9.8	A	---	9.0	A	—	9.0	A
Ives Street (E-W)	NB-R	---	7.9	A	—	7.9	A	---	7.6	A	—	7.6	A
unsignalized	SB-LT	---	10.5	B	—	10.5	B	---	9.2	A	—	9.2	A
22. Eastchester Road (N-S) at	EB-L	0.44	26.8	C	0.44	26.8	C	0.60	32.0	C	0.60	32.0	C
Morris Park Avenue (E-W)	EB-LT	0.22	22.5	C	0.22	22.5	C	0.33	24.4	C	0.33	24.4	C
	EB-R	0.45	26.5	C	0.45	26.5	C	0.74	37.0	D	0.74	37.0	D
	WB-LTR	0.06	20.2	C	0.06	20.2	C	0.19	22.0	C	0.19	22.0	C
	NB-L	0.78	27.8	C	0.85	35.7	D	0.99	75.9	E	1.01	80.3	F
	NB-TR	0.27	11.6	B	0.28	11.6	B	0.46	13.6	B	0.53	14.5	B
	SB-LT	0.52	22.6	C	0.60	24.1	C	0.57	23.7	C	0.59	24.1	C
	SB-R	0.56	25.6	C	0.56	25.6	C	0.52	24.6	C	0.52	24.6	C
23. Eastchester Road (N-S) at	EB-LTR	0.05	20.1	C	0.05	20.1	C	0.09	20.6	C	0.09	20.6	C
Stillwell Avenue (E-W)	WB-LTR	0.24	22.8	C	0.24	22.8	C	0.26	23.1	C	0.26	23.1	C
	NB-LT	0.23	11.2	B	0.24	11.3	B	0.42	13.2	B	0.48	13.9	B
	SB-LTR	0.57	15.3	B	0.64	16.5	B	0.56	15.2	B	0.57	15.3	B
24. Eastchester Road (N-S) at	WB-LR	0.18	25.7	C	0.18	25.7	C	0.13	19.1	B	0.13	19.1	B
Rhinelander Avenue (E-W)	NB-TR	0.19	7.9	A	0.20	8.0	A	0.56	25.4	C	0.62	26.8	C
	SB-LT	0.56	11.5	B	0.61	12.4	B	0.81	33.8	C	0.85	36.4	D

NOTES:
This table is new to the EIS.
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Analysis considers a De facto Left Lane on this approach
V/C Ratio-Volume to Capacity Ratio, SEC/VEH-Seconds per Vehicle
LOS- Level of Service
* - Denotes Impacted Intersection
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000)

Construction Period Traffic Improvements

The conservative construction traffic analysis shows that traffic impacts would occur at one or two traffic movements at four intersections in the weekday AM peak hour, and at five intersections in the weekday midday peak hour during the peak construction period for PSAC II (see Table 16-3).

Mitigation measures proposed to mitigate Project operational impacts were evaluated to determine the appropriate strategies for addressing traffic impacts during construction (see Table 16-4). While the proposed mitigation measures for the proposed PSAC II development would be adequate for most of the impacted intersections, traffic impacts at three intersections in the AM peak hour and at one intersection in the midday peak hour would remain unmitigated during the peak construction period. Table 16-5 provides detailed traffic levels of service for the Build Construction condition with the mitigation measures proposed to mitigate Project operational impacts.

As shown in Table 16-5, traffic impacts would persist at the intersections of Waters Place and Industrial Street (future Marconi Street), Waters Place and the entrance to the Bronx Psychiatric Center, and East Tremont Avenue and Silver Street (Eastchester Road) in the AM peak hour, and at Water Place and Westchester Avenue in the PM peak hour during the peak construction period. Although these four intersections would continue have unmitigated traffic impacts during one peak hour, these impacts would not be considered significant and adverse. The identified traffic impacts would be temporary, and are expected to occur only during the peak construction period for PSAC II. This traffic analysis conservatively examines the worst-case condition or peak construction period. The identified traffic impacts would be short-term occurring only during the peak construction period.

Mitigation measures for the proposed PSAC II development would be implemented by 2011, thereby addressing most of the temporary construction impacts. The remaining temporary traffic impacts would be non-mitigable during the short peak construction period.

Transit and Pedestrians

A construction impact analysis of transit and pedestrian facilities may be conducted when construction activity is expected to be long in term with a closure, relocation or narrowing of a pedestrian facility (sidewalk, walkway or stairway) or transit access (bus stop or subway entrance) to allow for construction related activity.

Construction activity at the Project Site is not expected to impact any existing transit facilities. Appropriate measures would be taken to maintain pedestrian access between the Pelham Parkway, which the Bx 12 bus route travels along, and the HMC during all construction efforts. In all cases, pedestrian access would be maintained, with provisions for pedestrian safety (such as barriers, signage, sidewalk sheds, etc.) implemented as required by City building codes and NYCDOT.

Considering that pedestrian trips generated by construction workers would occur during off-peak hours, primarily along pedestrian routes with low to moderate background pedestrian traffic, no significant adverse impacts associated with the projected increment of construction-related pedestrian trips are anticipated. Appropriate measures for maintaining temporary sidewalks and overhead protections would be provided throughout construction.

TABLE 16-4
Proposed Traffic Improvement Measures for the Peak Construction Period of PSAC II

Intersection	Approach	Period	Current Signal Timing (Seconds)	Mitigation Signal Timing (Seconds)	Description of Mitigation
1 Waters Place (WB) @ Eastchester Road (N-S)	WB NB/SB SB	AM/MD	36/23 45/45 9/22	No Changes	Prohibit parking on the east side of the NB approach for 100 ft and stripe for a right-turn only lane.
2 Waters Place (E-W) @ Industrial Street (N-S) (Future Marconi Street)	EB/WB NB	AM/MD	59/59 31/31	No Changes	Prohibit parking on the north side of the WB approach for 100 ft and stripe for a right-turn only lane.
10 East Tremont Ave (E-W) @ Silver Street (N-S) (Eastchester Road)	EB/WB NB SB	AM/MD	59/46 27/16 34/28	63/49 No Change 30/25	Prohibit parking on the west side of the SB approach for 100 ft to restripe to a left and right only lane. Transfer 4 and 3 sec of green time from SB phase to East Tremont EB/WB phase in the AM and midday peak hours, respectively.
11 East Tremont Ave (E-W) @ Castle Hill Ave. (N-S)	EB/WB WB NB PED	MD	42/29 18/11 32/22 28/28	No Changes	Align the centerline of the WB approach to southern edge of the median of the EB approach. Restripe the WB approach to include a left turn lane and 2 through lanes.
20 Eastchester Road (N-S) @ Ives Street (E-W)	EB NB/SB	MD	24/24 36/36	24/22 36/38	Transfer 2 seconds of green time from EB phase to NB/SB phase in the midday peak hour.
22 Eastchester Road (N-S) @ Morris Park Avenue (E-W)	EB/WB NB/SB NB	MD	36/36 40/40 14/14	No Change 40/36 14/18	Transfer 4 sec of green time from NB/SB phase to NB phase in the midday peak period.

Notes:

Signal timings indicate green plus yellow (including all-red) for each phase.

* This table is new to the EIS.

TABLE 16-5
2011 Level of Service under Construction of PSAC II with Traffic Improvements

		AM Peak Hour										
		2011 No Build			2011 Build Construction				2011 Build with Improvements			
INTERSECTIONS	Lane Group	V/C Ratio	Delay (sec)	LOS		V/C Ratio	Delay (sec)	LOS		V/C Ratio	Delay (sec)	LOS
1. Waters Place (E-W) at Eastchester Road (N-S)	WB-L	0.42	24.0	C		0.43	24.1	C		0.43	24.1	C
	WB-R	0.57	22.1	C		0.59	22.5	C		0.59	22.5	C
	NB-TR	0.53	20.0	B		0.57	20.8	C	NB-TR		18.1	B
									NB-T	0.29	16.7	B
									NB-R	0.47	20.3	C
	SB-DefL	0.95	64.9	E		1.32	195.3	F *		0.92	51.6	D
	SB-T	0.25	11.7	B		0.25	11.7	B		0.25	11.7	B
2. Waters Place (E-W) at Industrial Street (N-S)	EB-DefL	0.83	45.5	D	EB-DefL	2.09	531.5	F		1.02	75.7	E *
	EB-T	0.63	15.3	B	EB-T	0.63	15.3	B		0.29	8.3	A
	WB-TR	0.63	13.3	B		0.74	15.8	B	WB-TR		9.9	A
									WB-T	0.41	9.2	A
									WB-R	0.49	11.2	B
	SB-L	0.05	23.2	C		0.07	23.5	C		0.08	25.1	C
	SB-R	0.07	23.5	C		0.12	24.1	C		0.13	25.7	C
4. Waters Place (E-W) at entrance to Bronx Psychiatric Center (N-S)	EB-LT	0.75	21.4	C		0.82	25.3	C		0.82	25.3	C
	WB-TR	0.90	26.5	C		1.03	51.4	D *		1.03	51.4	D *
	SB-LR	0.10	10.2	B		0.10	10.2	B		0.10	10.2	B
10. East Tremont Avenue (E-W) at Silver Street (N-S) (Eastchester Road)	EB-DefL	1.09	104.9	F		1.21	151.0	F *		1.11	108.7	F *
	EB-T	0.36	23.2	C		0.36	23.2	C		0.34	20.4	C
	WB-T	0.29	21.4	C		0.29	21.4	C		0.27	18.9	B
	NB-L	0.33	43.3	D		0.33	43.3	D		0.33	43.3	D
	NB-TR	0.24	42.3	D		0.24	42.3	D		0.24	42.3	D
	SB-LR	1.04	106.1	F		1.07	113.1	F *	SB-LR		63.8	E
									SB-LR-shared	0.36	41.4	D
									SB-R	0.89	73.0	E

		Midday Peak Hour										
		2011 No Build			2011 Build Construction				2011 Build with Improvements			
INTERSECTIONS	Lane Group	V/C Ratio	Delay (sec)	LOS		V/C Ratio	Delay (sec)	LOS		V/C Ratio	Delay (sec)	LOS
5. Waters Place (E-W) at Westchester Avenue (N-S)	EB-LT	0.92	35.4	D		0.99	47.8	D *		0.99	47.8	D *
	NB-LT	0.39	17.8	B		0.40	18.0	B		0.40	18.0	B
	SB-DefL	0.40	20.3	C		0.41	20.5	C		0.41	20.5	C
	SB-T	0.36	17.9	B		0.36	17.9	B		0.36	17.9	B
10. East Tremont Avenue (E-W) at Silver Street (N-S) (Eastchester Road)	EB-DefL	0.77	37.3	D		0.79	38.7	D		0.72	30.2	C
	EB-T	0.46	19.1	B		0.46	19.1	B		0.43	16.7	B
	WB-T	0.38	16.9	B		0.38	16.9	B		0.35	14.9	B
	NB-L	0.07	35.1	D		0.07	35.1	D		0.07	35.1	D
	NB-TR	0.18	35.9	D		0.18	35.9	D		0.18	35.9	D
	SB-LR	1.00	79.5	E		1.11	112.5	F *	SB-LR		39.8	D
									SB-LR-shared	0.51	32.0	C
									SB-R	0.79	45.0	D
11. East Tremont Avenue (E-W) at Castle Hill Avenue (N-S)	EB-T	0.53	30.4	C		0.54	30.5	C		0.54	30.5	C
	EB-R	0.51	20.4	C		0.51	20.4	C		0.51	20.4	C
	WB-LT	1.09	84.7	F		1.13	100.3	F *	WB-LT		30.3	C
									WB-L	0.45	30.5	C
									WB-T	0.81	30.3	C
	NB-L	0.77	43.7	D		0.77	43.7	D		0.77	43.7	D
	NB-R	0.20	32.4	C		0.20	32.4	C		0.20	32.4	C
20. Eastchester Road (N-S) at Ives Street (E-W)	EB-LR	0.18	14.5	B		0.18	14.5	B		0.20	16.0	B
	NB-LT	0.97	33.2	C		1.06	56.6	E *		0.99	35.5	D
	SB-TR	0.47	9.8	A		0.47	9.9	A		0.45	8.5	A
22. Eastchester Road (N-S) at Morris Park Avenue (E-W)	EB-L	0.60	32.0	C		0.60	32.0	C		0.60	32.0	C
	EB-TR	0.33	24.4	C		0.33	24.4	C		0.33	24.4	C
	EB-R	0.74	37.0	D		0.74	37.0	D		0.74	37.0	D
	WB-LTR	0.19	22.0	C		0.19	22.0	C		0.20	22.0	C
	NB-L	0.99	75.9	E		1.01	80.3	F *		0.92	57.9	E
	NB-TR	0.46	13.6	B		0.53	14.5	B		0.53	14.5	B
	SB-LT	0.57	23.7	C		0.59	24.1	C		0.66	28.6	C
	SB-R	0.52	24.6	C		0.52	24.6	C		0.59	29.6	C

NOTES:
This table is new to the EIS.
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Analysis considers a De facto Left Lane on this approach
V/C Ratio-Volume to Capacity Ratio, SEC/VEH-Seconds per Vehicle
LOS- Level of Service
* - Denotes Impacted Intersection
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000)

Air Quality

Possible impacts on local air quality during construction of the proposed development on the Project Site include:

- Fugitive dust (particles and particulate matter) emissions from land clearing operations, excavation, materials transfer, and vehicle travel on paved and unpaved roads;
- Mobile source emissions, including hydrocarbons, nitrogen oxide, and carbon monoxide.

New York City Local Law 77 was passed in December 2003 in order to reduce air pollutants emitted by non-road construction equipment used on City projects. This law requires the use of ultra-low sulfur diesel (ULSD) and "best available technology" (BAT) for reducing emissions from non-road equipment greater than 50 horsepower. The law applies to "any diesel-powered non-road vehicle that is owned by, operated by or on the behalf of, or leased by a City Agency." Therefore, construction projects undertaken by city agencies, either directly or through contractors, would be required to meet the requirements of Local Law 77. Adherence to Local Law 77 would reduce the level of emissions from the on-site construction equipment and from the trucks transporting material to and from the construction sites.

Fugitive Emissions

Fugitive dust emissions could occur from land clearing, excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over paved and unpaved areas. Actual quantities of emissions depend on the extent and nature of the land clearing operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated, and type of fugitive dust control methods employed. The USEPA has suggested, in general, an overall emission rate of about 1.2 tons of particulate matter per acre per month of active construction from all phases of land clearing operations with no fugitive dust control measures. However, this is a national estimate and actual emissions would vary widely depending on may factors, including the intensity and type of land clearing operations.

Much of the fugitive dust generated by construction activities consists of relatively large-size particles (greater than 100 microns in diameter), which are expected to settle within a short distance (within 20 to 30 feet) from the construction site and to not significantly impact nearby buildings or people. All appropriate fugitive dust control measures—including watering of exposed areas and dust covers for trucks—would be employed during construction of the proposed PSAC II development on the Project Site. As a result, no significant air quality impacts from fugitive dust emissions would be anticipated during construction.

Mobile Source Emissions

Mobile source emissions may result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in traffic near the construction site. Localized increases in mobile source emissions would be minimized by following standard traffic maintenance requirements, such as:

- Construction requiring temporary street closings would be performed during off-peak houses wherever possible;
- The existing number of travel lanes would be maintained to the maximum extent possible;

- Idling of delivery trucks or other equipment would not be permitted during unloading or other inactive times.

While it would be expected that there would be a localized increase in mobile source emissions, these emissions are not expected to significantly impact air quality. Moreover, any such impacts, while minimal, would also be temporary. Therefore, no significant air quality construction impacts from mobile sources are anticipated.

Noise

Impacts on noise levels during construction of the proposed PSAC II development include noise and vibration from construction equipment operation, and noise from construction and delivery vehicles traveling to and from the site. The severity of impact from these noise sources would depend on the noise characteristics of the equipment and activities involved, the construction schedule, and the distance to potentially sensitive noise receptors. Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance from the construction site. Typical noise levels of construction equipment that may be employed during the construction process are listed in Table 16-6. Noise levels caused by construction activities would vary widely, depending on the phase—land clearing and excavations, foundation and capping, erection of structural steel, construction of exterior walls, etc—and the specific task being undertaken.

Increased noise levels caused by construction activities can be expected to be most significant during the early stages of construction. The most significant noise source associated with the construction equipment would be the use of jackhammers, paving breakers, and pile drivers. This noise would be intrusive and would be heard by the employees at surrounding businesses and the residents that live within several blocks of the Project Site. Increases in noise levels caused by delivery trucks and other construction vehicles would not be significant. Small increases in noise levels are expected to be found near a few defined truck routes and the streets in the immediate vicinity of the Project Site.

Construction noise is regulated by the New York City Noise Control Code and by USEPA noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7:00 AM and 6:00 PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. These regulations would be carefully followed. In addition, appropriate low-noise emission level equipment and operational procedures would be used. Directives to the construction contractor would ensure compliance with noise control measures. Therefore, construction noise at the Project Site would be similar to other development projects in the city, and would not result in significant adverse impacts.

Public Health

During construction of the proposed PSAC II development, traffic associated with passenger vehicles, as well as heavy-duty trucks, is expected to increase, potentially contributing to increases in particulate matter (PM) levels in the area. However, these emissions are not expected to significantly affect public health. Most of the increase in vehicle trips associated with the proposed development would be from gasoline vehicles, which emit relatively little PM. The total peak number of heavy-diesel vehicles generated by the proposed development during construction at any intersection is below the threshold

(21 trucks per hour at any intersection) currently being used on projects sponsored by the NYCDEP to determine whether an air quality impact analysis of PM smaller than 2.5 microns is necessary.

TABLE 16-6
Typical Noise Emission Levels for Construction Equipment

Equipment Item	Noise Level at 50 feet (dBA)
Air Compressor	81
Asphalt Spreader (paver)	89
Asphalt Truck	88
Backhoe	85
Bulldozer	87
Compactor	80
Concrete Plant	83 (1)
Concrete Spreader	89
Concrete Mixer	85
Concrete Vibrator	76
Crane (derrick)	76
Delivery Truck	88
Diamond Saw	90 (2)
Dredge	88
Dump Truck	88
Front End Loader	84
Gas-driven Vibro-compactor	76
Hoist	76
Jack Hammer (Paving Breaker)	88
Line Drill	98
Motor Crane	83
Pile Driver/Extractor	101
Pump	76
Roller	80
Shovel	82
Truck	88
Vibratory Pile Driver/Extractor	89 (3)

Notes:
[1] Wood, E.W. and A.R. Thompson, Sound Level Survey, Concrete Batch Plan; Limerick Generating Station, Bolt Beranek and Newman Inc., Report 2825, Cambridge, MA, May 1974.
[2] New York State Department of Environmental Conservation, *Construction Noise Survey, Report No. NC-P2*, Albany, NY, April 1974.
[3] F.B. Foster Company, Foster *Vibra Driver/Extractors, Electric Series Brochure*, W-925-10-75-5M.
Sources: Patterson, W. N., R. A. Ely, and S. M. Swanson, *Regulation of Construction Activity Noise*, Bolt Beranek and Newman Inc., Report 2887, for the Environmental Protection Agency, Washington DC, November 1974, except for notated items.

D. CONCLUSION

Construction of the proposed PSAC II development would create some disruptions and inconveniences on surrounding land uses, but these would be temporary in nature and would be minimized, as the proposed development is required to comply with various regulations. The proposed PSAC II development will also coordinate with the NYCDEP to ensure that hazardous materials concerns are addressed and therefore impacts related to hazardous material will be avoided. In addition, effects of the proposed development on transportation and air quality are also governed by applicable government regulations and no impacts related to these areas are expected to occur.

Accordingly, with its compliance to applicable regulations and construction management practices, the Proposed Action would not result in significant adverse impacts during project construction. Traffic

mitigation measures for the proposed PSAC II development would be implemented by 2011, thereby addressing most of the temporary construction impacts. The remaining temporary traffic impacts would be non-mitigable during the short peak construction period.