PUBLIC SAFETY ANSWERING CENTER II
CHAPTER 15: NOISE

A. INTRODUCTION

The Proposed Action would facilitate the construction of a new emergency communications center, the Public Safety Answering Center II (PSAC II), for New York City ("the City"). The proposed PSAC II development would be located near the interchange of the Pelham and the Hutchinson River Parkways, and to the east of the New York, New Haven, and Hartford railroad right-of-way for Amtrak. The proposed development site, consisting of Block 4226, Lot 75, and portions of Lots 40 and 55, comprises the northernmost portion of the Hutchinson Metro Center (HMC) in Bronx Community District 11 (see Figure 1-1 in Chapter 1, "Project Description"). It encompasses approximately 8.75 acres, and is partially occupied by an at-grade accessory parking lot for the HMC (Block 4226, part of Lots 40 and 55) and partially by vacant land (Block 4226, Lot 75).

As the proposed development site is relatively isolated, bounded by the mapped public open spaces of the Pelham and the Hutchinson River Parkways on its northern and eastern edges, and partially by an Amtrak right-of-way along its western edge, the Proposed Action also involves the mapping of an existing two-way private roadway, Industrial Street, as a public street (Marconi Street). The proposed street would extend north of Waters Place to the southern boundary of the proposed development site.

This Chapter evaluates the potential for noise level impacts for the Build Year of 2012. The noise analysis includes an assessment of existing conditions (background noise) based on monitored noise levels, and an evaluation of potential future impacts. For conservative City Environmental Quality Review (CEQR) analysis purposes, this chapter considers two staffing level conditions at the proposed PSAC II development in the future with the Proposed Action, including: (1) a typical day and (2) an event when there are temporary increases of staffing levels from combined facilities (PSAC I and PSAC II operations) at the proposed development site. On a typical day, the proposed development would have a staff size of approximately 850 employees that would work over a 24-hour period in overlapping shifts with a maximum of up to approximately 315 employees per shift ("Typical Operations"). During an event when the operations of PSAC I and PSAC II would temporarily consolidate at the proposed development, up to 1,700 employees would work over a 24-hour period in overlapping shifts at PSAC II ("Consolidated Operations"). A maximum of 630 employees per shift are expected to work at the proposed development when PSAC I and PSAC II operations are combined at the site. A number of non-emergency situations, such as maintenance and emergency drills, would require the transfer of PSAC I personnel to the proposed development site (i.e., PSAC II).

B. NOISE FUNDAMENTALS

Noise is measured in sound pressure level (SPL), which is converted to a decibel scale. The decibel is a relative measure of the sound level pressure with respect to a standardized reference quantity. Decibels on the A-weighted scale are termed "dBA." The A-weighted scale is used for evaluating the effects of noise in the environment because it most closely approximates the response of the human ear. On this scale, the threshold of discomfort is 120 dBA, and the threshold of pain is about 140 dBA. Table 15-1 shows the range of noise levels for a variety of indoor and outdoor noise levels.

Because the scale is logarithmic, a relative increase of 10 decibels represents a sound pressure level that is 10 times higher. However, humans don't perceive a 10 dBA increase as 10 times louder; they perceive it as twice as loud. The following is typical of human response to relative changes in noise level:

- 3 dBA change is the threshold of change detectable by the human ear;
- 5 dBA change is readily noticeable; and
- 10 dBA increase is perceived as a doubling of noise level.

The sound pressure level (SPL) that humans experience typically varies from moment to moment. Therefore, a variety of descriptors are used to evaluate environmental noise levels over time. Some typical descriptors are defined below:

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating sound pressure levels is averaged over time to create a single number describing the mean energy or intensity level. High noise levels will have greater effect on the L_{eq} than low noise levels. The L_{eq} has an advantage over other descriptors because L_{eq} values from different noise sources can be added and subtracted to determine cumulative noise levels.

- L_{max} is the highest SPL measured during a given period of time. It is useful in evaluating L_{eq}s for time periods that have an especially wide range of noise levels.

L_{10} is the SPL exceeded 10% of the time. Similar descriptors are the L_{50}, L_{01}, and L_{90}.

C. NOISE STANDARDS AND GUIDELINES

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Protection Order-City Environmental Quality Review (CEPO-CEQR) noise standards for exterior noise levels. These standards are the basis for classifying noise exposure into four categories based on the L_{10}: Acceptable, Marginally Acceptable, Marginally Unacceptable, and Clearly Unacceptable, as shown in Table 15-2.

Table 15-3 shows the required attenuation for sensitive uses within the last three categories. For example, an L_{10} may approach 80 dBA provided that buildings are constructed of materials that reduce exterior to interior noise levels by at least 35 dBA.

TABLE 15-1
Sound Pressure Level and Loudness of Typical Noises in Indoor and Outdoor Environments

Noise Level (dBA)	Subjective Impression	Typical Sources		Relative Loudness (Human Response)
		Outdoor	Indoor	
120-130	Uncomfortably Loud	Air raid siren at 50 feet (Threshold of pain)	Oxygen torch	32 times as loud
110-120	Uncomfortably Loud	Turbo-fan aircraft at take-off power at 200 feet	Riveting machine Rock band	16 times as loud
100-110	Uncomfortably Loud	Jackhammer at 3 feet		8 times as loud
90-100	Very Loud	Gas lawn mower at 3 feet Subway train at 30 feet Train whistle at crossing Wood chipper shredding trees Chain saw cutting trees at 10 feet	Newspaper press	4 times as loud
80-90	Very Loud	Passing freight train at 30 feet Steamroller at 30 feet Leaf blower at 5 feet Power lawn mower at 5 feet	Food blender Milling machine Garbage disposal Crowd noise at sports event	2 times as loud
70-80	Moderately Loud	NJ Turnpike at 50 feet Truck idling at 30 feet Traffic in downtown urban area	Loud stereo Vacuum cleaner Food blender	Reference loudness (70 dBA)
60-70	Moderately Loud	Residential air conditioner at 100 feet Gas lawn mower at 100 feet Waves breaking on beach at 65 feet	Cash register Dishwasher Theater lobby Normal speech at 3 feet	2 as loud
50-60	Quiet	Large transformers at 100 feet Traffic in suburban area	Living room with TV on Classroom Business office Dehumidifier Normal speech at 10 feet	¼ as loud
40-50	Quiet	Bird calls, Trees rustling, Crickets, Water flowing in brook	Folding clothes Using computer	1/8 as loud
30-40	Very quiet	Quiet rural area, daytime	Walking on carpet Clock ticking in adjacent room	1/16 as loud
20-30	Very quiet	Quiet rural area, nighttime	Bedroom at night	1/32 as loud
10-20	Extremely quiet		Broadcast and recording studio	
0-10	Threshold of Hearing			

Sources: Noise Assessment Guidelines Technical Background, by Theodore J. Schultz, Bolt Beranek and Newman, Inc., prepared for the US Department of Housing and Urban Development, Office of Research and Technology, Washington, D.C., undated; Sandstone Environmental Associates, Inc.; Highway Noise Fundamentals, prepared by the Federal Highway Administration, US Department of Transportation, September 1980; Handbook of Environmental Acoustics, by James P. Cowan, Van Nostrand Reinhold, 1994.

TABLE 15-2
CEPO-CEQR Noise Exposure Guidelines for Use in City Environmental Impact Review [1]

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
1. Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	Ldn ≤ 60 dBA		Ldn ≤ 60 dBA		Ldn ≤ 60 dBA		Ldn ≤ 75 dBA
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		$55<L_{10}\leq 65$ dBA		$65<L_{10}\leq 80$ dBA		$L_{10}>80$ dBA	
3. Residence, residential hotel or motel	7 am to 10 pm	$L_{10}\leq 65$ dBA		$65<L_{10}\leq 70$ dBA		$70<L_{10}\leq 80$ dBA		$L_{10}>80$ dBA	
	10 pm to 7 am	$L10\leq 55$ dBA		$55<L_{10}\leq 70$ dBA		$70<L_{10}\leq 80$ dBA		$L_{10}>80$ dBA	
4. School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM- 10 PM)		Same as Residential Day (7 AM –10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM –10 PM)		Same as Residential Day (7 AM-10 PM)	
6. Industrial, public areas only [4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Notes:

(i) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more;

1 Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

2 Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and nursing homes.

3 One may use the FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

4 External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

Source: New York City Department of Environmental Protection (adopted policy 1983).

TABLE 15-3
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Acceptable	**Marginally Unacceptable**		**Clearly Unacceptable**		
Noise level with Proposed Action	65<L10<70	70<L10<75	75<L10<80	80<L10<85	85<L10<90	90<L10<95
Attenuation	25 dB (A)	(I) 30 dB (A)	(II) 35 dB (A)	(I) 40 dB (A)	(II) 45 dB (A)	(III) 50 dB (A)

Source: New York City Department of Environmental Protection.

In determining potential impacts to a community from a proposed action, NYCDEP considers a significant impact to be:

- An increase of 3 dBA or more where the No-Build noise level is an L_{eq} of 62 dBA or more; or
- An increase of up to 5 dBA where the No-Build noise L_{eq} is below 62 dBA, provided that the total resulting L_{eq} is equal to or less than 65 dBA; or
- A noise level that exceeds the marginally acceptable levels, where the proposed action would introduce a sensitive receptor (see Table 15-2). However, these thresholds are applicable only to mobile sources of noise; i.e., tire, wheels, and or engine noise from autos, trucks, rail cars, and aircraft. They are not intended to include emergency sirens on fire trucks and ambulances.

The New York City Noise Control Code defines sound-level standards for motor vehicles, compressors, and pavement breakers; requires that all exhausts be muffled; and prohibits all unnecessary noise adjacent to schools, hospital, or courts. That code further limits construction activities to weekdays between 7:00 AM and 6:00 PM.

D. NOISE ANALYSIS METHODOLOGY

A proportional modeling technique was used as a screening mechanism to determine locations that had the potential for having significant noise impacts, and to quantify increases in noise levels at locations where detailed noise analysis is necessary to determine significance. The proportional modeling technique assumes that traffic is the dominant noise source, and as explained below, locations where a doubling of traffic would occur have the potential for having a 3 dBA increase in noise levels.

Using this technique, typically future noise levels are estimated using changes in traffic volumes to predict changes between No-Build and Build levels. Vehicular traffic volumes can be converted into Passenger Car Equivalent (PCE) values, for which one medium-duty truck (having a gross weight between 9,900 and 26,400 pounds) is assumed to generate the noise equivalent of 13 cars, one bus (capable of carrying more than nine passengers) is assumed to generate the noise equivalent of 18 cars, and one heavy-duty truck (having a gross weight of more that 26,400 pounds) is assumed to generate the noise equivalent of 47 cars, as summarized below from the *City Environmental Quality Review (CEQR) Technical Manual.*

- Autos and light trucks = 1 passenger car;
- Medium trucks = 13 passenger cars;
- Heavy trucks = 47 passenger cars; and
- Public buses = 18 passenger cars.

Thus, Passenger Car Equivalents (PCEs) are the numbers of autos that would generate the same noise level as the observed vehicular mix of autos, medium trucks, and heavy trucks. PCEs are useful for comparing the effects of traffic noise on different roadways or for different future scenarios.

Where traffic volumes are projected to change, proportional modeling techniques, as described in the *CEQR Technical Manual*, typically are used to project incremental changes in traffic noise levels. This technique uses the relative changes in traffic volumes to project changes between (e.g.) No-Build and Build noise levels. The change in future noise levels is calculated using the following equation:

$$FNL = ENL + 10 * \log_{10} (FPCE/EPCE);$$

Where:

FNL= Future Noise Level
ENL= Existing Noise Level
FPCE= Future PCEs
EPCE= Existing PCEs

Because sound levels use a logarithmic scale, this model proportions logarithmically with traffic change ratios. For example, assume that traffic is the dominant noise source at a particular location. If the existing traffic volume on a street is 100 PCEs, and if the future traffic volume were increased by 50 PCEs to a total of 150 PCEs, the noise level would increase by 1.8 dBA. If the future traffic were increased by 100 PCEs (i.e., doubled to a total of 200 PCEs), the noise level would increase by 3.0 dBA.

This screening procedure was used to identify where there were any locations in the vicinity of the Project Site where Action-generated PCE values result in an increase of 3 dBA or more vehicle related noise levels from No-Build to Build conditions, and consequently where there is a potential for significant noise impacts.

The screening analysis examines the weekday AM (6:30 to 7:30 AM) and midday (2:30 to 3:30 PM) peak hours. These are the time periods when the Proposed Action has its maximum traffic generation and therefore the hours when the Proposed Action is most likely to have a significant noise impact. Peak hour traffic conditions for existing, No-Build, and Build conditions were based on traffic field observations of existing conditions, including vehicle classification count, and traffic analysis presented in Chapter 12, “Traffic and Parking.”

E. NOISE MONITORING

Noise monitoring was carried out at three locations on Industrial Street to establish existing noise levels in the vicinity of the Project Site. These selected locations are representative of other locations in the immediate area and are generally the locations where maximum impacts would be expected. These locations were used to assess potential impacts due to traffic noise generated by the Proposed Action.

Figure 15-1 shows the noise monitoring locations. They included: 1) the intersection of Industrial Street and Waters Place, which is at the southwestern corner of the Bronx Psychiatric Center grounds ("Monitoring Location 1"); 2) at a gate to the little league ball fields on the eastern side of Industrial Street and the western boundary of the Bronx Psychiatric Center grounds ("Monitoring Location 2"); and 3) near the southern boundary of the proposed development site ("Monitoring Location 3"). For Monitoring Location 3, the monitor was set up just south of the chain-link fence enclosing the former ball fields area, near the northern boundary of the existing parking area. Noise monitoring for the peak Midday traffic period (2:30 PM to 3:30 PM) was done on Wednesday, April 2, 2008, while monitoring for the peak AM traffic period (6:30 AM to 7:30 AM) occurred on Wednesday, April 30, 2008.

Noise levels were monitored according to the procedures outlined in the *CEQR Technical Manual*. The instrument used was a Bruel & Kjaer Sound Level Meter Type 2236, which was mounted on a tripod at a height of 5 feet above the ground. The sound monitor was calibrated before and after use. A windscreen was used during all sound measurements except for calibration. All measurement procedures conformed to the requirements of ANSI Standard S1.13-1971 (R1976). The temperatures were in the mid 40s. The conditions were calm and clear.

At Monitoring Location 1, the primary source of noise was local traffic along Waters Place. Other sources of noise at the Monitoring Location 1 were pedestrian voices and occasional car alarms or emergency sirens. At Monitoring Location 2, the primary noise source was the traffic on Industrial Street. At Monitoring Location 3, the sources of noise were passing rail cars on the Amtrak right-of-way partially bordering the western edge of the proposed development site and aircraft flyovers, as well as distant noise from the Hutchinson River Parkway, located approximately 400 feet to the east, and the Pelham Parkway, located approximately 550 feet to the north. Of the three sites, Monitoring Location 3 was the closest to the Amtrak rail line and had more aircraft flyovers. Given the low volumes of traffic at Monitoring Location 3, the monitored noise levels would be substantially similar at a more interior location on the proposed development site.

Table 15-4 displays the noise monitoring results, and Table 15-5 summarizes the traffic for the equivalent 1-hour period. As shown in Table 15-4, noise levels are generally moderate to relatively high. The worst case L_{10} value was 75.0 dBA at Waters Place and Industrial Street (Monitoring Location 1). Monitoring Location 3 (proposed development site) was the quietest location because passing traffic through the parking lot was light.

TABLE 15-4
Monitored Noise Levels (dBA)

No.	Monitoring Location [1]	Period	L_{eq}	L_{10}	MinL	MaxL	L_{01}	L_{90}
1	Waters Place and Industrial Street	AM	73.0	74.5	57.1	91.5	84.0	60.5
2	East side of Industrial Street at the gated entrance to the little league ball fields	AM	67.1	70.5	57.2	82.5	76.0	60.0
3	Proposed Development Site	AM	58.0	61.0	52.6	70.6	66.0	54.0
1	Waters Place and Industrial Street	MID	72.4	75.0	53.3	92.5	83.5	59.5
2	East Side of Industrial Street at the gated entrance to the little league ball fields	MID	68.7	71.5	59.2	85.1	77.0	62.5
3	Proposed Development Site	MID	60.5	64.8	50.5	88.1	77.5	52.0

Notes:
[1] The noise monitor for Location 2 was set up at the gate to the little league ball fields on the eastern side of Industrial Street, and for Location 3 the monitor was set up directly south of the chain-link fence enclosing the former ball fields.
Source: Sandstone Environmental Associates, Inc.

TABLE 15-5
1-Hour Equivalent Traffic and Passenger Car Equivalents (PCEs)

No.	Monitoring Location [1]	Period	Autos	Medium Trucks	Heavy Trucks	Buses	Motor-cycles	Total [2]	Total PCEs	Air-craft
1	Waters Pl. and Industrial St.	AM	1026	24	0	48	0	1,098	2,202	6
2	Industrial St. at the gated entrance to the little league ball fields	AM	165	3	0	15	0	183	474	6
3	Proposed Development Site	AM	15	3	0	0	0	18	54	24
1	Waters Pl. and Industrial St.	MID	1,854	6	3	57	3	1,923	3,138	0
2	Industrial St. at the gated entrance to the little league ball fields	MID	471	18	0	18	0	507	1,029	0
3	Proposed Development Site	MID	15	0	0	3	0	18	69	3

Notes:
[1] The noise monitor for Location 2 was set up at the gate to the little league ball fields on the eastern side of Industrial Street, and for Location 3 the monitor was set up directly south of the chain-link fence enclosing the former ball fields.
[2] Traffic count and vehicular classification data is based on field observations taken during the noise monitoring conducted on Wednesday, April 2, 2008 for the midday peak period (2:30 PM to 3:30 PM) and on Wednesday, April 30, 2008 for the AM peak period (6:30 AM to 7:30 AM)
Source: Sandstone Environmental Associates, Inc.

In terms of CEQR noise criteria noise levels at Monitoring Locations 1 and 2 are in the "Marginally Unacceptable I" category, and noise levels at Location 3 are acceptable.

F. FUTURE WITHOUT THE PROPOSED ACTION (NO-BUILD CONDITIONS)

For conservative analysis purposes, it was assumed that the proposed development site (Block 4226, Lot 75 and part of Lots 40 and 55) would remain undeveloped and continue to be partially occupied by at-grade accessory parking and partially by vacant land in the future without the Proposed Action. The area affected by the proposed street mapping would continue to serve as a private two-way roadway providing access to the HMC. The northern portion of road, which is currently closed, would be reopened to vehicular traffic.

As described in Chapter 2, "Land Use, Zoning, and Public Policy," in the future without the Proposed Action, the 32-acre HMC will be improved with the addition of two new commercial buildings ("The Towers at HMC") that will contain a total of approximately 602,000 gross square feet (gsf) of commercial space at its southwest corner, located to the south of the proposed development site, abutting Industrial Street to the east. The planned buildings would contain approximately 502,000 gsf of office space and a 150-room hotel, as well as enclosed parking. The first building, which was recently completed, is anticipated to be occupied by the end of 2008/early 2009. The existing 4-story office building containing approximately 460,000 sf of commercial floor area and the single-story, approximately 52,000 gsf warehouse located directly to the south of the proposed development site will remain. A total of approximately 1.11 million gsf of commercial/warehousing space will be provided at the HMC within four commercial buildings.

Using the proportional modeling technique previously described, noise levels for the future condition without the Proposed Action (No-Build condition) were calculated for the three monitored locations for two analysis periods. Table 15-6 shows the estimated No-Build traffic volumes for the peak AM and Midday periods at the three monitored locations with the resulting noise level increases in comparison to the observed noise levels for the monitored locations. Comparing future No-Build noise

levels with Existing noise levels, the maximum increase in L_{eq} noise would be less than 3.0 dBA. Increases of this magnitude are barely perceptible, and impacts based on CEQR criteria would not be significant.

TABLE 15-6
No-Build Noise Levels (dBA)

No.	Monitoring Location	Period	Existing PCEs	No-Build Traffic	No-Build PCEs	Noise Increase	Existing Conditions		No-Build Conditions	
							Leq	L10	Leq	L10
1	Waters Pl. and Industrial St.	AM	2,202	1,327	2,661	0.8	73.0	74.5	73.8	75.3
2	Industrial St. at the gated entrance to the little league ball fields		474	272	705	1.7	67.1	70.5	68.8	72.2
3	Proposed Development Site		54	18	55	0.1	58.0	61.0	58.1	61.1
1	Waters Pl. and Industrial St.	Mid	3,138	1,963	3,203	0.1	72.4	75.0	72.3	75.1
2	Industrial St. at the gated entrance to the little league ball fields		1,029	768	1,559	1.8	68.7	71.5	70.5	73.3
3	Proposed Development Site		69	18	70	0.1	60.5	64.8	60.6	64.9

Source: Sandstone Environmental Associates, Inc.

In terms of CEQR criteria, the L_{10}s of more than 75 dBA at Waters Place and Industrial Street would place that location in the Marginally Unacceptable II category, as compared to the Marginally Unacceptable I category in the Existing condition. The ball fields, with an L_{10} that reaches 73.3 dBA, would remain in the Marginally Unacceptable I category. The proposed development site would fall just within the Acceptable category due to its L_{10} of 64.9 dBA. Given the low volume of traffic at this monitoring location, the noise level would be substantially similar at a more interior location on the proposed development site.

G. FUTURE WITH THE PROPOSED ACTION (BUILD CONDITIONS)

The Proposed Action would facilitate the construction of a new emergency communications facility, PSAC II, on an approximately 8.75-acre site in the northeastern Bronx. An approximately 640,000 gsf public-use office building rising 14 levels above-grade to a maximum height of approximately 350 feet (elevation of 374 feet) would be built, with a footprint of approximately 41,160 square feet (sf). This new emergency communications facility would serve as the City's second 911 center that would work in tandem with the existing PSAC I facility at 11 MetroTech Center in Downtown Brooklyn. The emergency communications facility would also house command control center operations for the Fire Department of New York City (FDNY) and the New York City Police Department (NYPD).

The Proposed Action would also map an existing private roadway, Industrial Street, as a public street ("Marconi Street"). The proposed street would be mapped at width of 60 feet for approximately 1,790 feet and 50 feet for approximately 1,550 feet leading to the proposed development site.

Based on the CEPO-CEQR noise standards and criteria discussed above in *Section C, Noise Standards and Guidelines*, no noise level impacts would occur unless the Proposed Action causes an increase in noise of at least 3 dBA. Therefore, a noise screening analysis was carried out to identify locations where project-generated traffic could increase noise levels by 3 dBA or more.

During a peak traffic period, Typical Operations of the proposed PSAC II development (staff of PSAC II only) would have approximately half as many employees entering and leaving the proposed site, as temporary Consolidated Operations (staffs of both PSAC I and PSAC II) of the facility. Therefore, vehicular volumes through affected intersections in the area would be less for the Typical Operations. As indicated in the following discussion, no impacts are anticipated for Consolidated Operations of the proposed PSAC II development, and therefore, if no impacts are projected for the Consolidated Operations of the proposed development, none would be anticipated for Typical Operations.

Using the proportional modeling technique previously described, noise levels for the future condition with the Proposed Action (Build condition) were calculated for the three monitored locations for two analysis periods. Table 15-7 shows the projected increases in traffic volumes by affected intersection. Although the traffic analysis evaluated 24 intersections, only the intersections that would experience an increase in traffic were included in Table 15-7. To determine the worse case traffic and noise levels, the analysis considered an event when the operations of PSAC I and PSAC II would temporarily consolidate at the proposed development ("Consolidated Operation"). Traffic would have to double (i.e., increase by 100%) in order to increase noise levels by 3 dBA. Since traffic volumes at any given intersection would increase by a maximum of 53.1 percent, no noise impacts are projected to the study area intersections.

TABLE 15-7*
Build Noise Increments by Affected Intersection under the temporary Consolidated Operations of PSAC II (Staffs of PSAC I and PSAC II combined)

Intersection	No-Build Conditions Traffic Volume	Build Conditions "Consolidated Operations" (Staffs of both PSAC I and PSAC II)		
		Project Increment	Traffic Volume	% Increase
AM Peak (6:30 – 7:30 AM)				
Waters Pl. / Eastchester Rd.	1,708	238	1,946	13.9%
Waters Pl. / Industrial St. (Proposed public street)	1,340	712	2,052	53.1%
Waters Pl. / Fink Ave.	1,723	474	2,197	27.5%
Waters Pl. / Bronx Psych. Center	1,387	474	1,861	34.2%
Waters Pl. / Westchester Ave.	1,646	442	2,088	26.8%
Little League Pl. / Westchester Ave.	847	229	1,076	27.0%
Little League Pl. / East Tremont Ave.	887	217	1,104	24.5%
East Tremont Ave. / Ericson Pl.	1,237	217	1,454	17.5%
East Tremont Ave. / Silver St.	1,182	64	1,246	5.4%
East Tremont Ave. / Castle Hill Ave.	1,855	64	1,919	3.5%
Pelham Parkway N / Eastchester Rd.	948	33	981	3.5%
Pelham Parkway W / Eastchester Rd.	1,913	88	2,001	4.6%
Pelham Parkway E / Eastchester Rd.	1,736	88	1,824	5.1%
Westchester Ave. / East Tremont Ave.	1,343	12	1,355	0.9%
Westchester Ave. / Blondell Ave.	970	12	982	1.2%
Eastchester Rd. / Bassett Rd.	1,199	174	1,373	14.5%
Eastchester Rd. / Ives St.	1,063	174	1,237	16.4%
Eastchester Rd. / Morris Park Ave.	1,568	174	1,742	11.1%
Eastchester Rd. / Stillwell Ave.	1,238	174	1,412	14.0%
Eastchester Rd. / Rhinelander Ave.	1,054	143	1,197	13.6%

**TABLE 15-7 (continued)*
Build Noise Increments by Affected Intersection under the temporary
Consolidated Operations of PSAC II (Staffs of PSAC I and PSAC II combined)**

Intersection	No-Build Conditions Traffic Volume	Build Conditions "Consolidated Operations" (Staffs of both PSAC I and PSAC II)		
		Project Increment	Traffic Volume	% Increase
Midday Peak (2:30 – 3:30 PM)				
Waters Pl. / Eastchester Rd.	2,566	250	2,816	9.7%
Waters Pl. / Industrial St. (Proposed public street)	2,002	746	2,748	37.3%
Waters Pl. / Fink Ave.	2,089	496	2,585	23.7%
Waters Pl. / Bronx Psych. Center	1,764	496	2,260	28.1%
Waters Pl. / Westchester Ave.	2,358	462	2,820	19.6%
Little League Pl. / Westchester Ave.	1,255	246	1,501	19.6%
Little League Pl. / East Tremont Ave.	1,652	234	1,886	14.2%
East Tremont Ave. / Ericson Pl.	1,891	234	2,125	12.4%
East Tremont Ave. / Silver St.	1,348	68	1,416	5.0%
East Tremont Ave. / Castle Hill Ave.	2,187	68	2,255	3.1%
Pelham Parkway N / Eastchester Rd.	1,628	34	1,662	2.1%
Pelham Parkway W / Eastchester Rd.	2,919	89	3,008	3.0%
Pelham Parkway E / Eastchester Rd.	2,745	89	2,834	3.2%
Westchester Ave. / East Tremont Ave.	2,340	12	2,352	0.5%
Westchester Ave. / Blondell Ave.	1,462	12	1,474	0.8%
Eastchester Rd. / Bassett Rd.	1,966	182	2,148	9.3%
Eastchester Rd. / Ives St.	1,824	182	2,006	10.0%
Eastchester Rd. / Morris Park Ave.	2,503	182	2,685	7.3%
Eastchester Rd. / Stillwell Ave.	1,876	182	2,058	9.7%
Eastchester Rd. / Rhinelander Ave.	1,662	150	1,812	9.0%

Notes: * Table 15-7 has been updated to reflect revisions to Chapter 12, "Traffic and Parking."
Sources: Philip Habib & Associates, Sandstone Environmental Associates, Inc.

Table 15-8 shows the PCEs and noise levels for Build Conditions at each of the monitored locations. Based on projected noise levels for No-Build Conditions, an impact would occur if noise levels were to increase by 3 dBA at Monitoring Locations 1 and 2, or by 4.4 dBA at Monitoring Location 3. As indicated under Section C, Noise Standards and Guidelines, a noise level may increase up to 5 dBA where the No-Build noise L_{eq} is below 62 dBA, provided that the total resulting L_{eq} is equal to or less than 65 dBA.

No noise impacts are anticipated for Monitoring Locations 1 and 2. Build noise levels at Monitoring Location 1 would remain in the Marginally Unacceptable II category, and at Monitoring Location 2 would be placed in the Marginally Unacceptable II category, as compared to the Marginally Unacceptable I category in the No-Build condition. Although noise levels at Monitoring Location 2 (the little league ball fields) would increase by 3.0 dBA during the peak AM period, the ball fields are typically not in use at this time of day (6:30 to 7:30 AM), so no impact would occur to users of the ball fields. During the afternoon period, when the fields could be in use, the relative increase is below 3.0 dBA, and therefore, no impact would occur.

TABLE 15-8
Build PCEs and Noise Levels for the Temporary Consolidated Operations of the Proposed PSAC II Development (Staffs of PSAC I and PSAC II combined)

Location	No-Build PCEs	Project Autos	Build PCEs	Noise Increase	No-Build		Build	
					L_{eq}	L_{10}	L_{eq}	L_{10}
AM Peak								
1. Waters Pl. and Industrial St. (proposed public street)	2,661	712	3,373	1.0	73.8	75.3	74.8	76.3
2. Industrial St. at the gated entrance to the little league ball fields	705	712	1,417	3.0	68.8	72.2	71.8	75.2
3. Proposed Development Site	55*	712	712	11.1	58.1	61.1	69.2	72.2
Midday Peak								
1. Waters Pl. and Industrial St. (Proposed public street)	3,203	746	3,949	1.4	73.3	75.1	73.4	76.0
2. Industrial St. at the gated entrance to the little league ball fields	1,559	746	2,305	1.7	70.5	73.3	72.2	75.0
3. Proposed Development Site	70*	746	746	10.3	60.6	64.9	70.5	75.2

Note: * Not present at site under Build Conditions
Source: Sandstone Environmental Associates, Inc.

At Monitoring Location 3, the proposed development site, only the project-generated traffic was included, as the traffic volumes for the accessory parking lot projected for No-Build Conditions would not be present. Due to the substantial increase in traffic under Build Conditions, noise levels at Monitoring Location 3 would increase by up to 11.1 dBA. However, this would not constitute an impact, as no sensitive receptors are present at this location. Site-generated traffic would enter the future garage entrance at the southwestern boundary of the proposed development. The garage is approximately 125 feet wide, and the proposed PSAC II building would be set back from the garage entrance by approximately 100 feet. Therefore, the distance from the garage entrance to the PSAC II building is about 170 feet. Table 15-9 shows the noise levels at the proposed building based on the attenuation of traffic noise levels over this distance. At the building's location, noise levels would fall below an L_{10} of 65.0 dBA. This is within the Marginally Acceptable category and would be comparable to Existing and No-Build noise levels. The relative increase would be below 4.4 dBA. Therefore no noise impacts are projected for the proposed development site.

TABLE 15-9
Noise Levels (dBA) at Proposed Development Site for the Temporary Consolidated Operations of the Proposed PSAC II Development (Staffs of PSAC I and PSAC II combined)

Location	Period	No-Build Condition		Build Condition at Proposed Garage		Distance Attenuation	Build Condition at Proposed PSAC II Building	
		L_{eq}	L_{10}	L_{eq}	L_{10}		L_{eq}	L_{10}
3. Proposed Development Site	AM	58.1	61.1	69.2	72.2	8.3	57.9	60.9
3. Proposed Development Site	PM	60.6	64.9	70.5	75.2	8.3	59.5	63.8

Note: * Not present at site under Build Conditions
Source: Sandstone Environmental Associates, Inc.

There would be no stationary sources introduced by the Proposed Action that would generate significant noise. No detailed designs of the proposed building's mechanical systems (i.e., heating, ventilation, and air conditioning systems) are available at this time. However, these systems would be designed to meet all applicable noise regulations and requirements, and would be designed to reduce noise levels, which would not result in any significant increases in ambient noise levels.

H. CONCLUSION

This noise analysis conservatively considers the Consolidated Operations of the proposed PSAC II development when the staffs of both PSAC I and PSAC II are temporarily combined at the proposed development site. The analysis shows that, even under temporary Consolidated Operations, noise from increased traffic due to the Proposed Action would not cause noise level impacts at affected intersections. At the little league ball fields along the east side of Industrial Street (proposed public street), no increases of 3 dBA or more would occur during periods when the ball fields would be in use. At the proposed PSAC II building, due to its approximately 170-foot distance from the proposed garage entrance, noise levels would fall within the Marginally Acceptable category, also with no impact. Therefore, the Proposed Action would not result in any significant adverse noise impacts.