

### **3.10 Noise and Air Resources Comments and Responses**

#### **NOISE RESOURCES**

**Comment 3.10-1 (Letter 9, February 24, 2011, Patricia Dow, Majority Leader, Yonkers City Council):** Noise (Page 1 -30) - Construction Noise - How will the developer, adhering to the Federal and State regulation and Chapter 66 of the Code of the City of Yonkers referencing noise, will be enforced so as not to allow supply trucks do not deliver supplies at odd hours, i.e., 2, 3 or 4 am.? While 66 Main Street was under construction, supply trucks were delivering supplies all hours of the night.

**Response 3.10-1:** *The Construction Manager can require deliveries to be made during specific hours, during the prescribed construction period, as defined in the City of Yonkers Code. According to Chapter 66 of the Code, "Loading and unloading...between the hours of 10:00 p.m. and 7:00 a.m. the following day when the sound therefrom creates a noise disturbance across a residential real property line." The City code does not allow deliveries after 10:00 pm and before 7:00 am. According to the Code, a Noise Control Officer, including a City Police Officer can enforce the Code by issuing an appearance ticket for violations of the ordinance.*

**Comment 3.10-2 (Letter 15, January 24, 2011, Syrette Dym, AICP, VHB - City Planning Consultant):** Here or in the noise section, the length of the construction period should be stated.

**Response 3.10-2:** *The project construction is expected to occur over a three (3) year period.*

**Comment 3.10-3 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Page 3.10-6: Existing Ambient Noise Levels – "Location #1 is at the northern western portion of the property." Text should be revised to read western or northwestern.

**Response 3.10-3:** *Location #1 is located in the northwestern portion of the property, near the existing Trolley Barn building.*

**Comment 3.10-4 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Page 3.10-7: Sensitive Receptors and Table 3.10-5 (Sensitive Receptors within 1,000 feet of the Project Site) - The DEIS identifies noise receptor sites in the vicinity of the project area, but does not identify the location of residential receptors. Residential receptors should be identified.

**Response 3.10-4:** *The DEIS describes "sensitive receptors" (page 3.10-7 of the document), and they include "residences, schools, daycare facilities, hospitals, churches, cemeteries, libraries, nature preserves and certain types of outdoor recreation areas". Table 3.10-1 (Revised DEIS Table 3.10-5) identifies specific sensitive receptors within 1000 feet of the property, but does not include specific residences. Table 3.10-1 (Revised DEIS Table 3.10-5) below includes a note stating that "residential receptors within 1000 feet of the property are identified on revised Figure 3.10-1. That DEIS Figure 3.10-1 has been modified to include all residential sensitive receptors, and is provided at the end of this FEIS section.*

Table 3.10-1 (Revised DEIS Table 3.10-5) Sensitive Receptors within 1,000 feet of the Project Site			
Sensitive Receptor	Address	Use	Map ID #
Queens Daughters Daycare	73 Buena Vista Avenue	School	A
Holy Apostolic Catholic	129 Buena Vista Avenue	Religious Use	B
Public School 10	60 Hawthorne Avenue	School	C
City Harvest Church	40 Hudson Street	Religious	D
Church of God	21 Hudson Street	Religious	E
St. Johns Church	1 Hudson Street	Religious	F
City of Yonkers Library - Riverfront Branch	1 Larkin Center	Community	G
Buena Vista Park	Buena Vista Avenue	Community	H

Source: Tim Miller Associates, Inc. 2010.  
Note: Residential receptors within 1000 feet of the project site are shown in revised Figure 3.10-1, provided at the end of this FEIS Section.

**Comment 3.10-5 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Page 3.10-8: Existing Noise Generators in the Project Vicinity - “As stated above, the City of Yonkers Noise Code, 66-6, has been amended to exempt residential properties from complying with the noise standards where residential uses are in close proximity to an industrial facility.” The City of Yonkers Noise Code was recently amended by General Ordinance 9 of 2009 with Subsection K (Exemptions), which exempts Industrial (not Residential) properties provided that the sound-level from such facility does not increase beyond the sound-level from the facility’s normal overall operations. This provision applies to the introduction of a new residential use, not all residential uses in close proximity. This statement should be revised accordingly.

**Response 3.10-5:** *Comment noted. The reference to “residential” exemptions is in error and applies to existing industrial facilities where new residential properties are proposed in close proximity to an industrial facility. As indicated in the DEIS, the purpose of the amendment was to allow new residential uses while protecting existing industrial or commercial facilities. As indicated above, this exemption applies solely to new residential uses.*

**Comment 3.10-6 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Page 3.10-8: Existing Noise Generators in the Project Vicinity - “Noise from the industrial facility will not be deemed an impact to the new residential buildings proposed in the area.” The statement should include a qualifier which states that the sound-level from the industrial facility will not be deemed an exceedance of the City of Yonkers noise code with the condition that the sound-level from the sugar plant does not increase beyond the sound-level from the facility’s normal overall operations (as of December 2009). Although the City of Yonkers noise code exempts the industrial facility from a legal standpoint

and the facility will not be required to mitigate noise emissions to meet the residential standards, the welfare of future residents should be considered.

The interior noise level established by the USEPA required to protect public health is 45 dBA ( $L_{dn}$ ) for residential uses. The DEIS should discuss the features and characteristics of the building materials and construction that will be incorporated into the building design so that interior sound levels meet the recommended USEPA criteria.

***Response 3.10-6:*** *Comment noted regarding Section 66-6 of the City of Yonkers Code (see above response). Although the Domino Sugar Refinery is exempt, per City of Yonkers Code Section 66-6, the sound level from the facility will not increase beyond the sound-level of normal overall operations as measured in December 2009.*

*Building materials are rated with a Sound Transmission Class or "STC", which is a numerical rating of how well a building material attenuates airborne sound. These material ratings are established by using ASTM test methods. The new apartment building will be constructed of concrete, masonry (primarily the lower floors) steel and glass on the exterior and steel, concrete, wood and plasterboard on the interior. Insulation will be used for exterior walls.*

*According to information provided by the School of Audio Engineering (SAE) Institute, a wall with a steel stud, plasterboard and insulation will provide an STC rating of between 42 and 46<sup>1</sup>. Glass has an STC rating of 26 to 33, depending upon the thickness of glass and single pane vs. double pane. These ratings roughly correspond to the decibel reduction a partition can provide. Exterior glass on the proposed building will provide the least sound reduction, compared to solid steel or masonry walls. Assuming the building has moderate thickness glass, with an STC rating of 29, then average exterior nighttime noise measured at 60.8 to 62.2 dBA, will be reduced to between approximately 31.8 and 33.2 dBA inside the residential building. These sound levels are well below the USEPA criteria for residential uses of 45 dBA.*

**Comment 3.10-7 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** The DEIS does not include potential noise increases from the proposed project on the Queen's Daughter's Day Care Center as requested in the completeness review. Anticipated noise levels resulting from the project and potential changes in ambient noise levels in the area surrounding the project site (at sensitive receptors) are not described in sufficient detail in the DEIS.

***Response 3.10-7:*** *The DEIS provides a description of potential noise that will be generated by the proposed Teutonia Buena Vista project and potential noise increases that may affect the Queens' Daughter Day Care and nearby sensitive receptors (residences). Potential noise sources may include: HVAC equipment, garage doors, landscaping equipment and delivery trucks. The following is an assessment of potential increases in noise above ambient conditions.*

***Garage doors*** *As discussed in Response 3.10-12 below, new models of garage doors fitted with sound reducing features (belt drives, vibration reducing motors, vinyl wheels) will reduce garage door noise to between 38 and 52 dBA, measured at 50 feet from the source. These levels are below the current average ambient daytime noise levels of 60.2*

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<sup>1</sup> School of Audio Engineering Institute website, [www.sae.edu](http://www.sae.edu), reference material.

*dB(A) (measured at location 2, adjacent to Queen's Daughter Daycare). The facilities garage doors will not increase ambient daytime noise for local sensitive receptors.*

*HVAC Equipment The details for the building HVAC system have not yet been determined, although HVAC units will be located on the rooftop of the residential building, 25-stories from the ground surface. According to Lennox Heating and Cooling systems, current models of commercial residential split system air conditioning units have sound ratings of 76 to 80 dBA, as measured by ARI Standard 270 (2008). This measurement is taken at one meter from the operating unit. The applicant proposes to surround HVAC equipment on the roof within a structure, substantially attenuating noise levels. According to the project architect, solid walls, 16 to 30 feet in height will surround the rooftop HVAC equipment on all four sides of the building. Certain equipment such as chiller units will need to be exposed to the sky for air circulation. Nevertheless, the solid walls would reduce the 76 to 80 dBA noise levels to at least 65 dBA by proposed sound barriers.*

*In addition to surrounding the rooftop equipment with solid walls, noise levels would be reduced further over the distance from the roof, to the ground level, a distance of approximately 250 feet. The project will be required to adhere to the City of Yonkers Noise Code requirements of 50 dBA between the hours of 10:00 pm and 7:00 am at the nearest residential property. The building's HVAC units will not increase ambient noise for local sensitive receptors.*

*Landscape Maintenance The new residential building will require limited landscape maintenance for the very small areas of landscaping proposed in the building courtyard. Maintenance, occurring approximately once per week in the spring, summer and fall periods could introduce noise from equipment such as mowers. Noise levels may range from 70 to 80 dBA at the property line for short periods during working hours. This future landscaping maintenance noise will not be different from the noise currently being generated from existing on-site residential properties, e.g., 61 and 65 Buena Vista Avenue. Landscaping activity will not increase ambient noise for local sensitive receptors. To the extent that the maintenance occurs within the courtyard area, noise will be effectively blocked by the apartment building structure especially for those properties either to the north, south or west of the site.*

*Deliveries - Pick-up Delivery trucks (Fed-Ex, UPS) and City garbage collection trucks will visit the site on an "as need" basis. This infrequent truck traffic will not substantially increase from the traffic that currently uses Buena Vista Avenue. Noise from occasional pick-ups and deliveries is not expected to increase ambient noise conditions. To the extent that these deliveries are made within the autocourt, the proposed structure to a large degree will block noise from properties located to the south, north and west.*

**Comment 3.10-8 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Page 3.10-9 and Page 1-27: Short-term Construction-related Noise - "Construction noise would not exceed 85 dBA beyond 100 feet from the property... The Queens Daughters Daycare is within 100 feet and therefore noise impacts at the Queens Daughters Daycare may exceed 85 dBA during construction." These statements are based on the maximum sound-level from a single piece of construction equipment. However, a construction site is likely to have multiple pieces of equipment operating simultaneously and trucks hauling materials to and from the site. Therefore, it is likely that the Queen's Daughter's Daycare Center will experience sound levels above 85 dBA during construction. The NYSDEC guidance first

level noise impact evaluation states that “the initial evaluation for most facilities should determine the maximum amount of sound created at a single point in time by multiple activities for the proposed project. All facets of the construction and operation that produce noise should be included such as land clearing activities, drilling, equipment operation for excavating, hauling or conveying materials, pile driving...” The change in noise levels during construction has not been quantified and compared to the applicable criteria to assess significant impacts and is therefore not technically sufficient. A more detailed analysis is likely to show significant impacts to the Queen’s Daughter’s Daycare Center and require mitigation during construction. Necessary mitigation measures should be identified in this section so that the responsible party will plan accordingly for implementing mitigation.

***Response 3.10-8:*** *Assessing potential future construction noise at the Buena Vista site is complicated given the potential use of multiple pieces of equipment at different locations on the property. A “worst case” assessment can be approximated by assuming several large pieces of construction equipment operating at the same time near the southern property line and the Queen’s Daughter Day Care. The NYSDEC guidance document Assessing and Mitigating Noise Impacts<sup>2</sup> provides a procedure for assessing the combined noise from multiple pieces of construction equipment.*

*Assuming four pieces of heavy equipment are working near the southern property line, the following noise levels can be expected:*

*Backhoe: 86 dBA  
Generator: 78 dBA  
Dump Truck: 91 dBA  
Compressor 67 dBA*

*According to the NYSDEC guidance policy, the total sound pressure from multiple sound sources is not mathematically additive. Since noise is measured on a logarithmic scale, the combined effects of multiple sources needs to be calculated. Based upon the NYSDEC procedures, the cumulative noise from the above equipment will be approximately 92 dBA. This estimate does not include the potential for pile driving. As noted in Response 3.10-10, below, the noise emissions from pile driving can vary greatly depending upon the type of drivers (impact, vibratory, installation of caissons), the type of pile (wood, steel, concrete), and the ground conditions. As further described below, noise emissions from pile driving can vary from 62 to 105 dBA.*

*The applicant proposes to erect a temporary construction noise barrier along the southern property line, shared with the Queen’s Daughter daycare, and along a portion of Buena Vista Avenue. The noise barrier will have a Sound Transmission Class (STC) rating of at least 30. According to a noise barrier supplier, Controlled Acoustics, sound levels opposite the noise barrier will be reduced by approximately 10 to 15 dBA (to approximately 77 to 82 dBA), since a certain amount of noise will pass over the wall as noise “shadow”. The Queen’s Daughter Daycare playground is located south of the daycare building, and therefore the building will provide an additional solid barrier between the playground and the construction activity. Given the height of the daycare building, at approximately 24 feet, the building will reduce the construction noise reaching the playground by an additional approximately 12 dBA<sup>3</sup>. Outdoor noise from*

<sup>2</sup> Assessing and Mitigating Noise Impacts, NYSDEC, Rev. Feb. 2001 (DEP-00-1)

<sup>3</sup> Estimate based upon solid barrier effectiveness procedures described in The Noise Guidebook, US Department of Housing and Urban Development, 1985.

*project construction at the Queen's Daughter daycare playground will be approximately 65 to 70 dBA, assuming on-site noise levels of 92 dBA, and reductions from a 22 foot high temporary noise barrier and the daycare building. The specific type of noise barrier and its height will be determined during detailed site plan review.*

**Comment 3.10-9 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** The City Harvest Pre-school and several residences are also located within 300 feet. The pre-school and residences should be identified as having potential short-term impacts.

**Response 3.10-9:** *Comment noted. The City Harvest pre-school is located in the City Harvest Church, identified as a sensitive receptor in the document. The Church and pre-school are located approximately 275 feet from the project site (west side of Buena Vista Avenue). The pre-school would likely be effected by short-term noise during the project's construction. Should the City Harvest Pre-school file a noise disturbance complaint, the Applicant agrees to meet with the administration of the pre-school and provide additional appropriate mitigation (see Response 3-10-16).*

*There are a number of residential properties within 300 feet of the project site that would likely be affected by construction noise. These residential locations are shown in Figure 3.10-1.*

**Comment 3.10-10 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** In addition, the document has indicated that piles may be driven during foundation construction. Pile driving has not been addressed in this document and may have sound-levels in excess of 85 dBA at a 50-foot reference distance.

**Response 3.10-10:** *To provide an indication of the potential noise levels associated with pile driving, the New York City Noise Code Chapter 28 - Citywide Construction Noise Mitigation states: "Noise emission levels from pile drivers can vary widely based upon the type of driver, the type of pile (steel, concrete, wood) and the underlying ground conditions". Piles are often needed to stabilize deep excavation or trench walls or to create coffer dams to hold back unstable soil or water. Piles can be installed with impact hammers, vibratory hammers or through the drilling of caissons (tubes) and filling with concrete. Chapter 28 of the NYC Code provides specific equipment and methods to reduce the noise from pile driving.*

*Noise from pile driving can vary from 82 to 105 for diesel and pneumatic drivers and 62 to 91 for gravity or bored drivers, based upon a construction noise study from Canada<sup>4</sup>. These noise levels are substantially different, since a 10 dBA change in sound will be perceived as a doubling or halving of sound.*

*If pile driving is necessary for project construction, the applicant will specify driving equipment that produces noise at the lower range of potential noise (62 to 91 dBA). In addition, the proposed construction noise barriers will reduce the noise from pile driving by a minimum of 10 to 15 dBA (or to approximately 52 to 81 dBA). As described in Response 3.10-8 above, these would be sound levels on the opposite side of the noise barrier and noise for the Queen's Daughter Daycare outdoor play area would be further reduced by the daycare building. Noise from pile driving will be a short-term*

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<sup>4</sup>Construction Noise, Workers Compensation Board of British Columbia, Feb. 2000 (ARCS Ref No. 0135-20).

*construction-related impact. In the event that noise from the pile driving creates a nuisance to the day-care, the applicant will meet with the administration of the day care to provide additional appropriate mitigation (see Response 3-10-16).*

**Comment 3.10-11 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** There is no discussion of the truck route which goes past several dense residential areas and past the Queen's Daughter's Daycare. The NYSDEC guidance document summarizes truck sound-levels as 91 dBA at a 50-foot reference distance. Can the proposed truck route be re-routed away from the day care center and the dense residential area (i.e., to the north and onto Main Street versus through Prospect Street and a residential area) as a method to mitigate noise?

**Response 3.10-11:** *The proposed construction truck route was carefully evaluated to minimize the overall impacts of truck traffic to neighbors, the community and the larger City of Yonkers. As shown in Sheet TR - Site Plan Proposed Truck Route, Prospect Street is a boulevard with two lanes separated by a median and travel lanes approximately 18 feet in width. On-street parking on this boulevard is only permitted on the block between Hawthorne Avenue and Buena Vista Avenue and therefore, the majority of the route has no side-street parking to interfere with traffic flow. Nepperhan Avenue is 750 feet directly east of Buena Vista Avenue on Prospect Street. Nepperhan provides direct access to South Broadway (NYS Route 9/ 9A), and Yonkers Avenue which accesses the Cross County Parkway and Interstate-87. While routing the traffic to the north and onto Main Street would reduce the pass-by traffic to the daycare, it would push construction traffic in areas where there may be more potential vehicular movement conflicts with cars attempting to park on Main Street, pedestrians and shoppers, and delivery trucks. Prospect Street, although not ideal, is a preferable truck route. To the extent that there may be less delay for construction vehicles traveling to and from the site, this would also help in keeping noise levels reduced.*

**Comment 3.10-12 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Page 3.10-9 and Page 1-27: Long-Term Noise Effects - "The bay doors proposed to be used as the entrance to the parking garage would face to Buena Vista Avenue and would not direct any noise toward the adjoining daycare facility..." - Although the sound-levels would be reduced, sound may be audible at the Queen's Daughter's Day Care Center (depending upon the location of the equipment within the garage and the sound-levels at the equipment source). Indirect sound may cause an increase in existing sound-levels and impact the day care center. This has not been quantified (i.e., potential change in ambient noise level) in sufficient technical detail. In addition, residences are located across the street that may have a direct line of sight to the equipment. Residences are also sensitive receptors. This equipment has not been assessed in sufficient technical detail. The equipment will need to comply with the City of Yonkers Noise Ordinance.

**Response 3.10-12:** *The proposed building garage door opening equipment will be designed to minimize the noise typically associated with garage doors. Noise from garage doors is usually the result of metal on metal contact or vibration. These factors can be substantially reduced with current manufacturers' equipment. Rubber or vinyl belt drives are used instead of chain drives, reducing noise. Motors and the garage door mounting system can be fitted with vibration isolating material, further reducing noise. Wheels for the door tracks made of nylon are much quieter than traditional steel wheels.*

*The Canadian Mortgage and Housing Corporation conducted a study of methods to reduce garage door noise in various housing projects<sup>5</sup>. Typical garage doors produce noise in the range of 48 to 55 dBA in the frequency range of 63 to 250 hertz, within 50 feet of the source. Cushioned mechanism and door tracks reduce the noise by 3 to 10 dBA over that frequency range. Therefore, garage door noise would be reduced to 45 to 52 dBA within 50 feet of the source, at the lower range of effectiveness and up to 38 to 45 dBA at the upper range. These reduced noise levels are well below the average ambient daytime noise levels on the property of 65.4 dBA. Also, the garage doors are recessed into the garage structure helping to attenuate the noise since the building itself will block noise to the north, south and west.*

**Comment 3.10-13 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Page 3.10-10: Long-Term Noise Effects - "Any noise associated with activities within the auto court are blocked and attenuated by the design of the building." While this statement may be accurate with respect to the Queen's Daughter's Day Care Center, it may not be applicable to nearby residences. Will there be bay doors on the garage and auto court that remain closed? Will residents across the street have line of sight into the garage? Sound levels associated with the auto court (i.e., stacking system) have not been quantified in sufficient detail and have not been compared to the existing sound levels or the City of Yonkers Noise Ordinance sound-level performance standards.

**Response 3.10-13:** See Response 3.10-12 above. *The proposed garage entrance door will face north into the courtyard and four garage exit doors will face east onto Buena Vista Avenue. According to the automated garage representative, ATP Parking, the actual garage stacking equipment produces noise levels of approximately 70 to 72 dBA at the source of the equipment<sup>6</sup>. The stacking machinery will be fully enclosed within the masonry and concrete structure. The garage stacking equipment is only engaged when the garage doors are closed and therefore, this noise is isolated. Residents on the east side of Buena Vista Avenue will have a line of sight to the garage exit doors. As described in Response 3.10-12, the anticipated noise from these garage doors opening and closing is expected to be in the range of 38 to 52 dBA. These noise levels are well below the existing ambient sound levels.*

**Comment 3.10-14 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Page 3.10-10: Long-Term Noise Effects - "The...NYSDEC Assessing and Mitigating Noise Criteria indicates that the ambient noise level should not be raised above 65 dBA. Therefore, the continuous operation Metro North Hudson Line should not result in adverse noise impacts to future residents." The last sentence should read "of the" Metro North Hudson Line. In addition to stating that the ambient noise level should not be raised above 65 dBA, the NYSDEC guidance also states that lower ambient noise levels may be necessary if there are sensitive receptors nearby and that 55 dBA ( $L_{dn}$ ) is sufficient to protect public health.

In addition, the USEPA states that a 45 dBA ( $L_{dn}$ ) interior sound-level for residential uses during the nighttime hours is protective of public health and welfare. The impacts from the Metro-North

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<sup>5</sup> Canada Mortgage and Housing Corporation, Research Project on the Reduction of Noise Produced by Garage Doors in Multiple Housing Projects, Technical Series 99-110.

<sup>6</sup> Telephone communication, April 18, 2011, Mr. Lee Lazarus, ATP Parking Technologies, Inc.

Hudson Line have not been quantified through an assessment of the future condition sound levels and the potential impacts to residents.

**Response 3.10-14:** *Comment noted regarding the NYSDEC criteria.*

*The interior of the Teutonia Buena Vista residential building will have interior sound levels of less than 45 dBA, consistent with USEPA criteria for residential nighttime uses. As discussed in Comment 3.10-6, above, interior residential building sound levels are estimated to be between approximately 31.8 and 33.2 dBA. These levels were estimated based upon the Sound Transmission Class (STC) ratings of the proposed building materials. These sound levels are below the USEPA criteria for residential uses of 45 dBA.*

**Comment 3.10-15 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Will the number of train pass-bys increase in the future condition? Is the building constructed of materials with sufficient STC rating to reduce the outdoor to interior sound-levels to below 45 (L<sub>dn</sub>) as recommended by the USEPA?

**Response 3.10-15:** *Train pass-bys may increase in the future, depending upon Metro-north ridership and public demand for train service, but future service is difficult to forecast. Ridership depends upon many variables including population trends, employment opportunities, the economy, the price of gasoline and Metro-north fares.*

*The building will be constructed of materials with sufficient STC ratings to meet USEPA recommendations (see Response 3.10-6 above).*

**Comment 3.10-16 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Page 3.10-11: Construction Mitigation – “The construction manager will notify the Queen’s Daughter’s Daycare Center regarding activities that are expected to produce high noise levels. If necessary the use of a temporary noise barrier may reduce the impacts related to construction to the Queen’s Daughter’s Daycare Center.” The DEIS Section 3.10.1.3 Mitigation Measures includes a discussion of potential noise mitigation. However, this section does not identify or describe mitigation measures in sufficient detail.

**Response 3.0-16:** *Close coordination and contact with the daycare administration does provide mitigation for the project related noise. The daycare will be advised in advance of construction activities that are likely to result in high noise levels. These activities would include the use of heavy construction equipment close to the southern property line as well as pile driving which is likely to occur.*

*Given the potential for noise impacts to the daycare, the applicant will provide a temporary noise barrier along the southern property line. The noise barrier will be approximately 170 feet in length and will span the entire southern property line and extend approximately 50 feet from the southern property corner along Buena Vista Avenue (see Figure 3.10-2). It is estimated that the barrier will be approximately 22 feet in height to block the line of sight from the second story windows in the daycare building although this will be determined during detailed site plan review. The specifications for the noise barrier will be subject to engineering design and City of Yonkers Building Department review. The barrier will be constructed of plywood covered with noise absorptive material, such as SoundSeal model BBC-13-2, or equivalent. This material is specified for construction projects in Chapter 28 of the New York City Noise Code.*

*According to the noise barrier supplier, the material will typically reduce noise by 10 to 15 dBA<sup>7</sup>.*

*In the event of noise disturbance complaints by the daycare, the applicant will meet with the daycare administration to provide additional noise mitigation, which may include either physical or procedural methods to reduce noise. Sound dampening equipment or further physical noise reduction materials placed between the work site and the daycare building may be considered. The timing and schedule of particularly noisy construction activities (i.e. pile driving) may be adjusted to accommodate noise sensitive activities at the daycare.*

**Comment 3.10-17 (Letter 18, April 22, 2011, Yonkers Dept. of Planning & Development):**

Noise, note 85 dBA above maximum city noise levels.

***Response 3.10-17:** See Response 3.10-16 regarding the proposed temporary construction noise barrier and its effectiveness.*

**Comment 3.10-18 (Letter 18, April 22, 2011, Yonkers Dept. of Planning & Development):**

State level of noise from rooftop HVAC uses.

***Response 3.10-18:** See Response 3.10-7 regarding the potential noise from the rooftop HVAC units. The rooftop HVAC units may produce sound levels of up to 80 dBA, but this sound will be reduced to at least 65 dBA on the opposite side of proposed architectural walls/ sound barriers. Sound will be further reduced by distance between the rooftop source and receptors.*

**Comment 3.10-19 (Letter 18, April 22, 2011, Yonkers Dept. of Planning & Development):**

3.10-9 Construction impacts at Queens Daughter daycare to reach 85 dBAs. What can be done to mitigate noise impacts?

***Response 3.10-19:** As indicated in Response 3.10-16, the applicant is proposing temporary construction noise barriers, at a minimum, to reduce the potential construction noise impacts to the Queen's Daughter daycare. In addition, the construction manager will closely coordinate with the daycare operator to advise staff when unusually noisy activities are scheduled during construction and agree to other appropriate noise mitigation. The applicant agrees to provide appropriate noise mitigation for the daycare (see Response 3.10-16).*

**Comment 3.10-20 (Letter 18, April 22, 2011, Yonkers Dept. of Planning & Development):**

3.10-10 Noise Impacts. It is noted that screens will surround the HVAC and other noise generating mechanical equipment on the roof of the building and that noise at ground level will not be increased. What will the impact be at the nearby Scrimshaw House where noise receiving apartments are more proximate to the roof top of the new building? On the day care center?

***Response 3.10-20:** The screening of rooftop HVAC units is discussed in Response 3.10-7. Noise on the opposite side of the noise enclosures will be 65 dBA or lower. These noise levels will be further reduced by the loss of sound over distance. The horizontal distance between the rooftop and the Scrimshaw House is 250 feet and the*

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<sup>7</sup> Telephone communication, April 19, 2011, Controlled Acoustics, Inc., New Rochelle, NY

*vertical distance between the rooftop and lower elevation buildings such as the day-care is approximately 225 feet.*

**Comment 3.10-21 (Letter 18, April 22, 2011, Yonkers Dept. of Planning & Development):**

Page 3.10-17 Wind Snow impacts. Is there any way to gauge the wind and snow impacts upon the rail road tracks? This recent winter's blizzard had areas around taller buildings where snow was piled on one side of the building but scoured from the other. Can the potential for this be estimated for this building and can there be any mitigation built into the rear area landscaping or walls?

***Response 3.10-21:*** *It is not possible to predict snow accumulation at the base of the future apartment building, given the potential for variable wind directions and snowfall. However, given the applicant's experiences at the existing Trolley Barn building, this is not anticipated to be an issue. Note that the building alternative discussed in Section 1.0 of this FEIS would move the new apartment building an additional 5 feet farther from the westerly property line helping to further reduce potential concerns.*

**Comment 3.10-22 (Letter 18, April 22, 2011, Yonkers Dept. of Planning & Development):**

Figure 3.10-1 the radius for the 1000-foot circle was drawn from the center of the site instead of edges. Would any other sensitive receptors be hit if the area was taken from each edge? Why were the recreation pier and the Hudson River promenade not included as sensitive receptors?

***Response 3.10-22:*** *The project site is relatively small and therefore, a 1000 foot radius circle was provided from the center of the site, instead of from the property boundaries. If the circle was expanded from the site boundaries, additional residences would be captured in the 1000 foot radius. No additional churches, parks, hospitals, libraries or institutional sensitive receptors would be added.*

*The recreation pier and the Hudson River Promenade are now included on revised Figure 3.10-1.*

**AIR QUALITY**

**Comment 3.10-23 (Letter 12, February 25, 2011, Nell Twining, Member, Yonkers LPB):**

The Draft EIS is lacking in explanation of wind study. High buildings usually create new gusty wind situations, known as the wind tunnel effect. 3.10.2.2 Potential Wind Effects in the EIS claims that the building would no accelerated winds but only mentions wind on Buena Vista Avenue, and does not describe a full explanation of scientific backup to support this claim. The effect of additional wind in the downtown as a result of the proposed tower should be studied, and explained, especially given the proximity to the Hudson River, where westerly wind forces may be distorted by the tower. Wind impacts should be examined for the other streets in the area, the waterfront and the important public open spaces nearby.

***Response 3.10-23:*** *Comment noted. Given the scale of this project and surrounding land uses and buildings, the qualitative discussion that has been provided is adequate.*

**Comment 3.10-24 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):**

The DEIS should provide a more detailed description of wind effects (e.g., wind shadows, wind shear, downwash, channelization, venturi effect, bar effect) in terms of both pedestrian comfort and pollutant dispersion, based on the siting and architectural features of the proposed buildings.

**Response 3.10-24:** *Comment noted. Given the scale of this project and surrounding land uses and buildings, the qualitative discussion that has been provided is adequate.*

**Comment 3.10-25 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** Noise and Air Resources Section 3.10.2.2 – Page 3.10-13 of the DEIS includes two separate references to Table 3.10-7, the correct reference is Table 3.10-8.

**Response 3.10-25:** *Comment noted. The following references appear on page 3.10-13 of the DEIS:*

*“The potential-to-emit (PTE) from the microturbines has been estimated and is summarized in Table 3.10-7” and,*

*“As indicated in Table 3.10-7, potential emissions from stationary sources will be below major source permitting thresholds and will therefore not be considered a major source”.*

*The correct table reference is Table 3.10-8. The text on page 3.10-13 of the DEIS should read as follows:*

*“The potential-to-emit (PTE) from the microturbines has been estimated and is summarized in Table 3.10-8” and,*

*“As indicated in Table 3.10-8, potential emissions from stationary sources will be below major source permitting thresholds and will therefore not be considered a major source”.*

**Comment 3.10-26 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** **Air Quality Technical Report - 3.2 Parking Air Quality Impacts -** Parking garage air quality impacts were qualitatively evaluated in the DEIS based on an air quality study of a similar automated parking garage. The air quality technical report concluded that air quality impacts from parking would be insignificant, based on the limited number of peak-hour vehicle trips and the substantial reduction in vehicle emissions (68%-82%) due to the use of an automated parking garage. Since the Scoping Document did not specify any methodology for quantitative assessment of parking impacts, the qualitative assessment is acceptable.

**Response 3.10-26:** *Comment noted.*

**Comment 3.10-27 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** **Air Quality Technical Report - 3.3.1 Onsite Stationary Sources -** Modeled air quality impacts from on-site stationary sources were compared to the NYSDEC AGC/SGC tables dated September 10, 2007, which was the current version as of the date the August 2010 report was prepared. NYSDEC has subsequently issued revised annual guideline concentration/short-term guideline concentration (AGC/SGC) tables dated October 18, 2010 (see the NYSDEC website). The revised tables should be reviewed to determine whether any of the AGC/SGC values listed in Table 9 have changed since the 2007 edition; if so, Table 9 should be updated.

**Response 3.10-27:** *A revised Table 9 has been prepared and included as Appendix G.*

**Comment 3.10-28 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant): Air Quality Technical Report - 3.3.1 Onsite Stationary Sources -**

On page 31, the first sentence of the last paragraph of Section 3.3.1 states that “air quality impacts from the microturbines are less than both the criteria and hazardous pollutant standards.” Based on the table in the technical report, this sentence should be revised to state that air quality impacts, including background values, are less than the applicable ambient air quality standards for criteria pollutants, and that air quality impacts are less than applicable guideline concentrations for hazardous air pollutants.

**Response 3.10-28:** *Comment noted. Page 31 of the Air Quality Technical Report (Appendix I of the DEIS) has the following sentence:*

*“As indicated in Table 9, air quality impacts from microturbines are less than both the criteria and hazardous pollutant standards, and as such, the microturbine operations will have no significant impact on the air quality at or in the vicinity of the project. SCREEN3 output file is provided as Attachment 2”.*

*That sentence on page 31 of the Air Quality Technical Report in the DEIS should read as follows:*

*“As indicated in Table 9, air quality impacts, including background values, are less than the applicable ambient air quality standards for criteria pollutants, and that air quality impacts are less than the applicable guideline concentrations for hazardous air pollutants. SCREEN3 output file is provided as Attachment 2”.*

**Comment 3.10-29 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant): 3.3.2 Nearby Stationary Sources -**

Modeled air quality impacts from nearby stationary sources (i.e., American Sugar Refining Company, Inc.) were compared to the NYSDEC AGC/SGC tables dated September 10, 2007, which was the current version as of the date the report was prepared. NYSDEC has subsequently issued revised AGC/SGC tables dated October 18, 2010 (see the NYSDEC website). The analysis should be updated based on the revised AGC/SGC values, some of which have changed since the 2007 edition. For example, the AGC for lead has been reduced, based on the revised NAAQS for lead.

**Response 3.10-29:** *Updated NYSDEC AGC/SGC tables (October, 2010) are provided in Appendix G - see revised Table 10. Although the respective guidelines for several compounds have changed, none of the conclusions stated in the original Appendix need to be modified.*

**Comment 3.10-30 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant): 3.3.2 Nearby Stationary Sources -**

In Table 10 of the Air Quality Technical Report, AGCs/SGCs for several compounds are listed as “N/A” indicating that no applicable AGC or SGC exists. Some of these compounds are listed under synonyms in the AGC/SGC tables; for example, dichlorobenzene was listed as “N/A” in Table 10, however the m-, o-, and p- isomers of dichlorobenzene are listed separately in the AGC/SGC tables (dichlorobenzene should have been compared to the isomer with the lowest ACG/SCG). The AGC/SGC tables should be reviewed to determine whether any additional compounds are listed under synonyms.

**Response 3.10-30:** *A revised Table 10 is provided in Appendix G which addresses this comment.*

**Comment 3.10-31 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant): 3.3.2 Nearby Stationary Sources** - Modeled air quality impacts for arsenic, cadmium, formaldehyde and manganese exceed the AGCs, as shown in Table 10 and summarized on page 35 of the Air Quality Technical Report. It would be helpful if the extent of the exceedances were quantified (arsenic, cadmium, formaldehyde and manganese exceeded their AGCs by a factor of 6.3, 3.2, 1.5 and 1.5, respectively).

**Response 3.10-31:** *The commenter correctly calculated the extent of the exceedance at 6.3, 3.2, 1.5 and 1. For arsenic, cadmium, formaldehyde and manganese, respectively. These values are based on a screening model using worst-case assumptions, and therefore, should be overly conservative.*

**Comment 3.10-32 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant): 3.3.2 Nearby Stationary Sources** - The report indicates that the SCREEN3 modeling results are conservative, and lists the conservative modeling assumptions, including the assumption that fuel oil would be burned in all three emission sources for 8,760 hours per year. If permitted or actual annual fuel oil consumption estimates are available, modeling results should be revised to reflect more accurate data. In addition, results of this conservative modeling indicate that there are exceedances of SGCs/AGCs. There is no conclusion regarding the determination of a significant impact; the scoping document states to use the AGC/SGC tables to determine a significant impact. In addition there is no conclusion regarding the determination of whether a refined air quality modeling analysis (AERMOD) is warranted.

**Response 3.10-32:** *RTP Environmental Associates, Inc., discussed the above comment with the NYSDEC in Albany and the agency indicated that it does not require boilers to meet SGC/AGC guidelines and they do not require evaluations on elevated structures. NYSDEC Region 3 was also contacted, and the air quality consultant obtained the emissions statements and stack test results for American Sugar. Based on review of the emission statements and the stack test reports for American Sugar, and updated analysis, the data indicate that the concentration impacts predicted will be lower as a result of using actual data.*

*The applicant has recalculated all 1-hour maximum impacts for all pollutants listed in Table 10-Revised (See Appendix G - Air Quality Tables). Table 10 Revision No. 2, now provides separate impacts for the annual case (same as the annual values provided earlier) and maximum 1-hour impacts based on maximum hourly design rates for HAPs and the worse-case stack test emission rates for NO<sub>2</sub> from the 1-hour 2007 stack tests. The 2007 stack tests were used since the 2010 stack tests do not provide data on all units. The 2010 stack tests were conducted to establish water fuel ratios for all loads that would meet NO<sub>2</sub> emission limits for the turbine only. The 2007 stack tests demonstrated that worst-case emissions for NO<sub>2</sub> occurred during operation of all three (3) units running on oil. As noted in Table 10-Revision No. 2, the hourly normalized impact from the SCREEN3 model for the maximum 1-hour case value was multiplied by the conservative emission rate for each pollutant listed.*

*The maximum hourly impacts in Table 10-Revision No. 2 reflect an updated SCREEN3 model run which includes more refined stack parameter assumptions as compared to*

*stack parameters used in the annual model run. Specifically, actual stack flow rates from the worst-case NO<sub>2</sub> test runs were used to calculate the stack exit velocity (using actual stack diameters). A stack velocity of 8.48 meters/second and a stack diameter of 2.1 meters were used in the SCREEN3 maximum hourly model run, as compared to the lower exit velocity of 2.54 meters/second and stack diameter of 3.048 meters used in the annual analysis (See Appendix G - Air Quality Tables).*

*Maximum 1-hour and annual average emission rate calculations have been provided on separate tables as Attachment 3 Revised Addendum and Attachment 3A, respectively, and these are provided in Appendix G.*

*Based on the conservative screening analysis that was completed and discussions with NYSDEC, no further analysis is warranted.*

**Comment 3.10-33 (Letter 17, January 21, 2011, David McInerney, AICP, PS&S - City Engineering Consultant): 3.4 Construction Air Quality Impacts** - The Air Quality Technical Report quantifies construction related fugitive dust emissions; however, the report does not define the air quality nuisance guidelines or standards that it references.

**Response 3.10-33:** *In the New York State Code of Rules and Regulations, NYCRR Part 200 contains a general nuisance clause and the standards are provided in NYCRR Part 257.*

**Comment 3.10-34 (E-mail of September 29, 2011, David McInerney, AICP, PS&S - City Engineering Consultant):** The text of the Air Quality Technical Report should be revised in accordance with the applicant's response. The applicant's response was "The discrepancy is a result of listing the units in the permit and the stack test reports differently. The facility has one (1) true boiler (Boiler No. 3), turbine and a duct burner. The turbine and the duct burner are used individually or in combination. The duct burner, by itself, is listed in the permit as Boiler No. 4 and the turbine, in combination with the duct burner, is listed as Boiler No. 5".

**Response 3.10-34:** *Page 33 of the Air Quality Technical Report (Appendix I of the DEIS), indicates the following:*

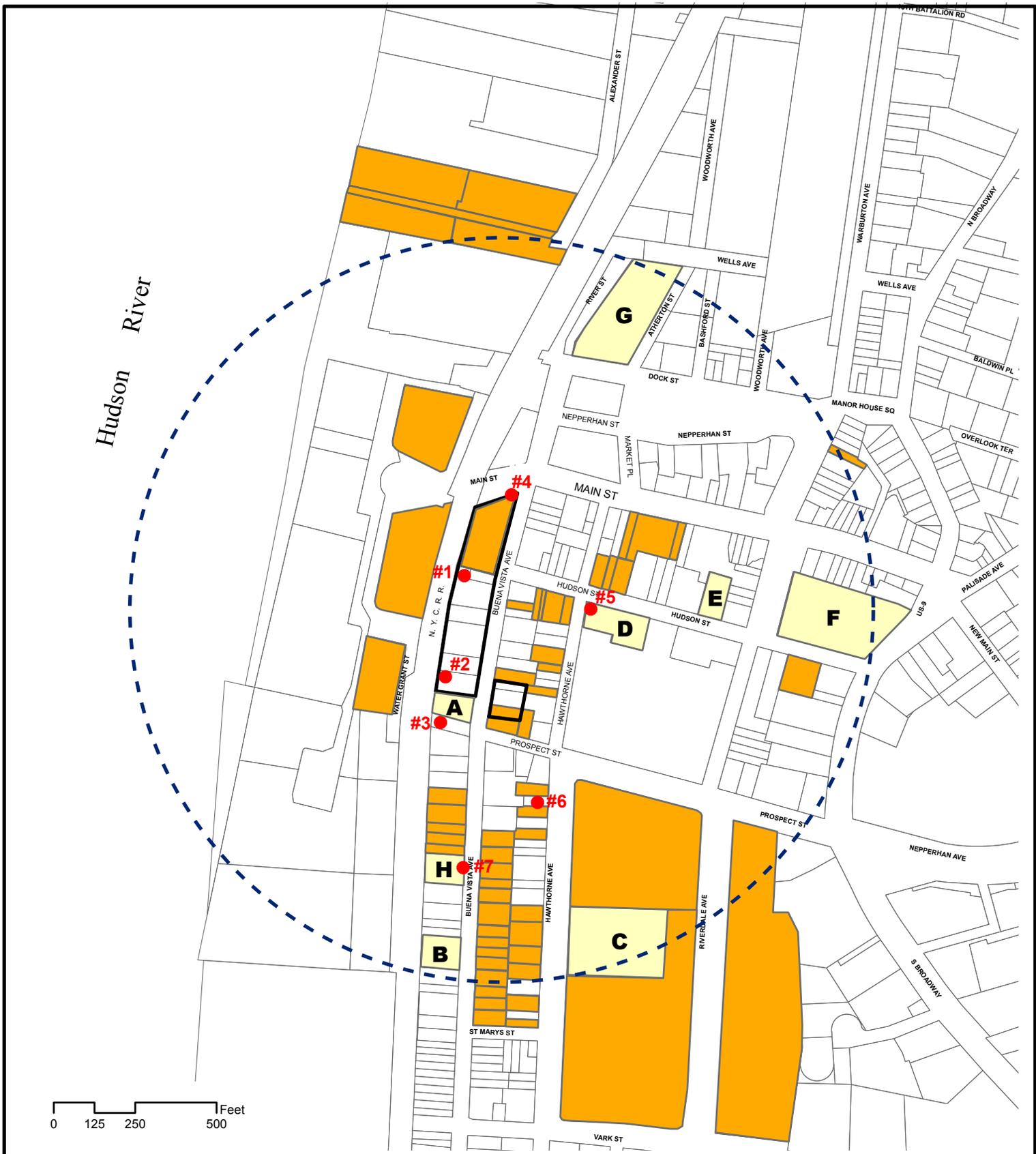
*"Emissions from ASRC are associated with the following three (3) combustion sources;*

- *Gas Turbine with Duct Burner rated at 167.5 MMBtu/hr*
- *Boiler #3 rated at 165.5 MMBtu/hr; and*
- *Boiler #5 (replaced diesel generator in 2007) rated at 214 MMBtu/hr".*

*To clarify the report should have indicated the following;*

*"The facility has one (1) true boiler (Boiler No. 3), turbine and a duct burner. The turbine and the duct burner are used individually or in combination. The duct burner, by itself, is listed in the permit as Boiler No. 4 and the turbine, in combination with the duct burner, is listed as Boiler No. 5".*

*These emission sources and their respective ratings apply to the screening air dispersion model analysis which is summarized in Table 10-Revision No. 2. provided in Appendix G of this FEIS.*



0 125 250 500 Feet

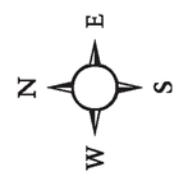
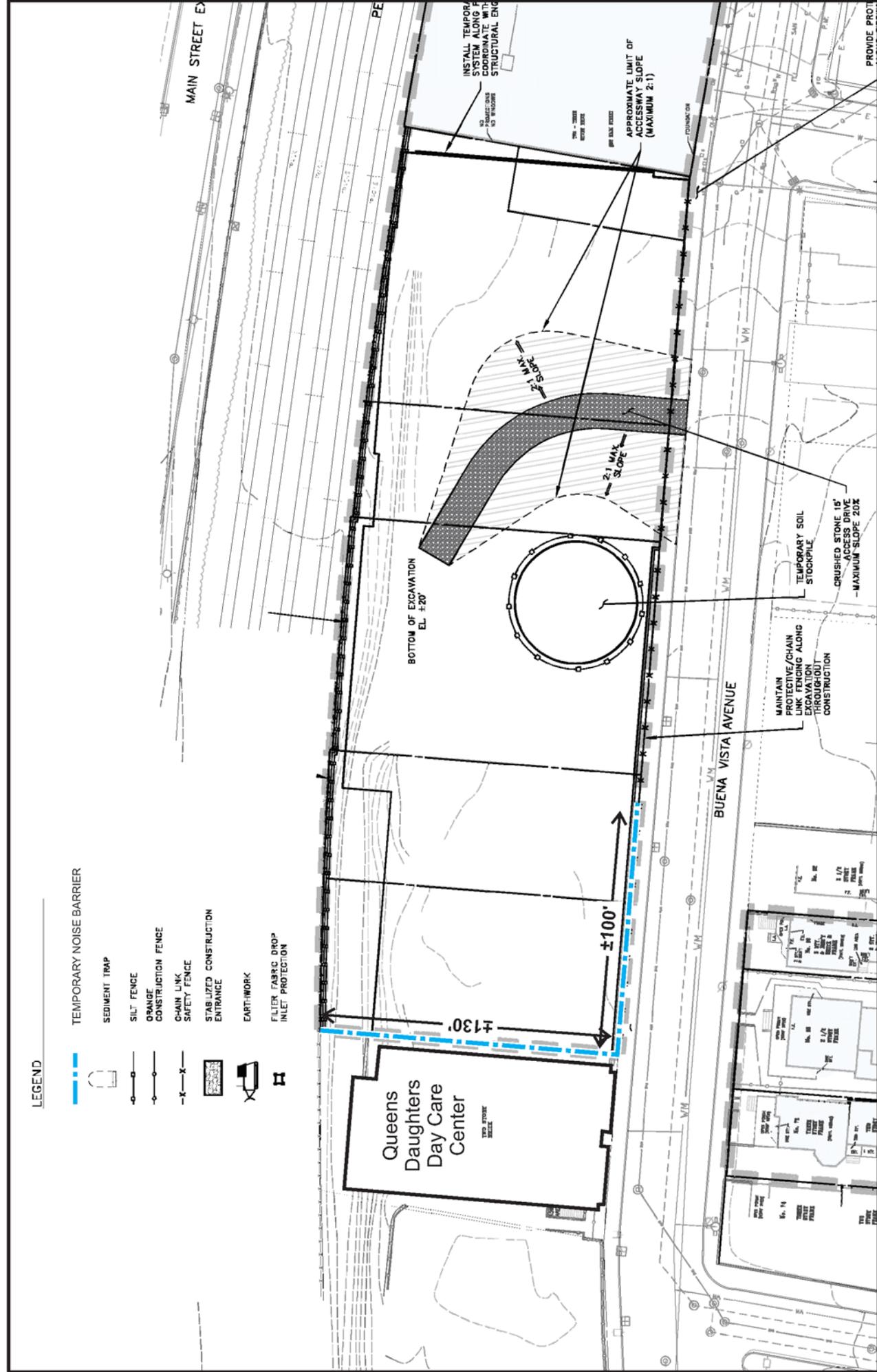


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**Legend**

- Site Property Boundary
- Noise Monitoring Location
- Institutional Sensitive Receptor
- Residential Sensitive Receptor
- 1000' Radius Boundary

**Figure 3.10-1: Noise Monitoring Locations and Sensitive Receptor Locations Buena Vista Teutonia PUR City of Yonkers, Westchester County, NY**  
Base Map: Westchester County GIS  
Scale: 1" = 400'



**Figure 3.10-2: Temporary Noise Barrier**  
 Buena Vista Teutonia PUR  
 City of Yonkers, Westchester County, New York  
 Base: The Lessard Architectural Group, P.C.  
 BKSK Architects, LLP  
 Drawing Date: 10/09/10