8.0 CONSTRUCTION-RELATED EFFECTS

This section discusses the short term impacts related to construction. Construction is expected to last approximately 18 to 36 months. It is anticipated that the project sponsor would initially build some or all of the residential development first and then focus on the office/retail space. However, construction will be driven by market conditions and it is possible that there may be overlap between construction of the commercial and residential portions of the project. Mitigation measures are described below to mitigate short term construction impacts to the extent practicable.

The following construction sequence describes in general terms the process of project construction;

1. Protect areas beyond the limit of disturbance by installing temporary silt fencing.
2. Construct stabilized construction entrances, including stone tracking pads.
3. Perform clearing and grubbing activities.
4. Install erosion control measures appropriate to each phase of work, including silt fencing, inlet protection, temporary berms, swales, and temporary sediment traps.
5. Perform grading, excavation and related operations, stockpile soil in approved areas.
6. Construct drainage system improvements, roadway improvements and street utilities.
7. Construct residential buildings and driveways.
8. Construct retail buildings and driveways.
9. During construction, all areas being disturbed will either be paved, seeded, sodded, or planted as specified in a timely manner to prevent unnecessary erosion.
10. Remove all temporary control measures.
11. Remove accumulated sediments from permanent storm water management facilities.

Steps 1 through 6 involve construction of the roads and stormwater management facilities and would be completed prior to construction of the individual buildings. Construction of the buildings would then follow a similar sequence of construction: install erosion controls, strip and store topsoil, grading, construction of utilities and buildings, and permanent stabilization. The project will be constructed in phases to limit disturbance on the site. Phase one will consist of building the infrastructure for the roads and drainage facilities - these areas will be stabilized as per the identified erosion control measures in advance of constructing the buildings Phase two will consist primarily of construction of the multi-family units plus the multi-use recreational building and will also include some of the office/retail buildings to accommodate the affordable housing units. Phase three will consist of construction of the remaining office/retail buildings.

A list of the New York State Department of Environmental Conservation Best Management Practices ("BMPs") to be employed in project construction are included in Section 4.0. A site specific Erosion Control Plan shall be included as part of the Site Plan Application, and will depict the various measures proposed to provide temporary and permanent stabilization of disturbed areas. The project will generally follow the existing topographic contours in order to reduce the amount of earth work as much as possible.

Mitigation measures are described below that would minimize or avoid potential short term construction impacts to the extent practicable.

8.1 Noise

Noise can be defined as undesirable or ñunwanted sound.ò Even though noise is somewhat subjective, it affects the full range of human activities and must be considered in local and regional planning. Most of the sounds heard in the environment are not composed of a single frequency, but are a band of frequencies, each with a different intensity or level. Levels of noise are measured in units called decibels. Since the human ear cannot perceive all pitches or frequencies equally well, these measures are adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dB(A).

It should be noted that a one decibel change in noise is the smallest change detectable by the human ear under suitable laboratory conditions. However, under normal conditions, a change in noise levels of two or three decibels is required for the average person to notice a difference. Table 8-1 shows community perception of noise change and response to increased levels. The level of a noise is measured and expressed in decibels (dB). Commonly, a standardized A-weighting is applied to sound levels to correct for certain characteristics of human hearing. The A-weighted sound level (dBA) is useful for gauging and comparing the subjective loudness of sounds.

Table 8-1
Perception of Changes in Noise Levels

Change (dBA)	Average Ability to Perceive Changes in Noise Levels Human Perception of Change
2-3	Barely perceptible
5	Readily Noticeable
10	A doubling or halving of the loudness of sound
20	A dramatic change
40	Difference between a faintly audible sound and a very loud sound

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

To the average person, a noise level increase of 2 to 3 dBA is barely perceptible, an increase of 5 dBA is noticeable, and an increase or 20 dBA is perceived as a dramatic change. Annoyance frequently results from increases of 10 dBA or more, depending on the frequency and duration of the noise events.

The level of impacts of these noise sources depends on the type and number of pieces of construction equipment being operated, as well as the distance from the construction site. The noisiest period of construction will occur during site clearing and rough grading activities.

Avoidance or Minimization of Noise During Construction

It is anticipated that nearby properties would experience temporary elevated noise levels at occasional periods during the construction period. This is a temporary, construction-related, unavoidable impact.

Local daytime ambient noise levels will increase both on and off of the project site during construction. Construction activities are an expected and necessary consequence of any new development and cannot be avoided. Noise resulting from construction activities, however, is temporary, typically of short duration, and will cease entirely upon completion of the project.

Noise levels due to construction activities will vary widely, depending on the phase of construction activities. Noise levels at the site property line are projected to temporarily range between 65 dBA and 80 dBA during construction, depending on the type and location of construction activity at a given time, which may represent an increase of 10 to 15 dBA. The following Table 8-2, shows representative maximum sound levels for diesel powered equipment and activities at a range of receptor distances.

Table 8-2
Typical Construction Noise Levels (dBA)

	Maximum Sound Level			
Equipment/Activity	**50 feet**	**200 feet**	**500 feet**	**1000 feet**
Backhoe	82-84	70-72	62-64	56-58
Blasting	93-94	81-82	73-74	67-68
Concrete Pump	74-84	62-72	54-64	48-58
Generator	71-87	59-75	51-67	45-61
Hauler	83-86	71-74	63-66	57-60
Loader	86-90	74-78	66-70	60-64
Rock Drill	83-99	71-87	63-79	57-73
Trucks	81-87	69-75	61-67	55-61

Source: Tim Miller Associates, Inc.

Construction activities will be conducted generally on Monday through Friday from 7:00 a.m. to 6:00 p.m., and on Saturday from 8:00 a.m. to 6:00 p.m., thus remaining within the reasonable hours for noise disturbance from construction activities as stipulated in Town Code Section 216-2.

8.2 Construction Traffic

Avoidance or Minimization of Potential Impacts

It is expected that construction-related traffic would access the site during the construction period which is anticipated to be approximately 18 to 36 months in duration. The heaviest volume of construction traffic would occur at the beginning of the construction as site clearing and rough grading is conducted, and when asphalt and building materials are transported to the site. Once construction machinery reaches the site, it is likely to remain on site until the completion of grading and excavation. Construction material storage, equipment staging and soil stockpiling will occur on graded stabilized areas of the site.

Construction traffic would primarily access the site via a stabilized construction entrance at one or more of the existing driveway locations on Old Crompond Road.

Although individual contractors have not yet been selected, it is anticipated that construction-related traffic would originate primarily within Westchester County and neighboring communities. Some workers could also be expected to travel from the lower Hudson River Valley region, including Putnam and Rockland counties.

Construction workers residing locally would be expected to use local roads to access Old Crompond Road and the site. Workers in the larger region, construction vehicles, and material deliveries would be expected to travel NYS Route 100, US Route 9, NYS Route 202/35 and the Bear Mountain Extension, to access the site via Old Crompond Road. Construction workers utilizing passenger vehicles would also likely use the Taconic State Parkway to NYS Route 202/35 to access Old Crompond Road.

An increase in construction-related vehicular traffic will occur and is a short-term, unavoidable impact. However, development of the Bear Mountain Triangle is not anticipated to have a significant impact on the local road network. The applicant will be required to adhere to NY State and local restriction on vehicle weights, traveling speeds, and parking

within the Town which would limit potential impacts to local roads from the operation and delivery of construction vehicles. If necessary, a flag man will be provided to insure smooth traffic flow on Old Crompond Road during the arrival and departure of heavy vehicle equipment. Excess material will be transported off site during non-peak hours when additional traffic capacity is available.

8.3 Demolition of Existing Structures

As part of the necessary permitting for demolition, buildings are inspected and building materials are sampled for asbestos. The samples are laboratory tested to determine if asbestos is present in the building materials. If asbestos is found, all building materials which contain asbestos are required to be removed, before the building with asbestos is demolished. The process of removing asbestos-containing materials (Asbestos Abatement) is conducted in accordance with OSHA guidelines that require that the contaminated material be disposed in an approved manner to specified locations separate from all other construction debris. This will leave the building or buildings free of asbestos-containing materials so that when demolition occurs, no hazardous material will be dispersed into the air or deposited into the soil. It is estimated that an average of two truckloads per structure may be required to handle the disposal of demolition materials. Demolition is expected to take approximately one month. Flag men will be provided as necessary to ensure a smooth flow of traffic while construction activities are taking place.

8.4 Construction Mitigation Measures

The site contractor will employ Best Management Practices as outlined in the Ten States Standards including but not limited to:

1. Protect areas beyond the limit of disturbance by installing temporary silt fencing.
2. Construct stabilized construction entrances, including stone tracking pads.
3. Install erosion control measures appropriate to each phase of work, including silt fencing, inlet protection, temporary berms, swales, and temporary sediment traps.
4. stockpile soil in approved areas.

5. Construct drainage system improvements, roadway improvements and street utilities.
6. During construction, all areas being disturbed will either be paved, seeded, sodded, or planted as specified in a timely manner to prevent unnecessary erosion.
7. Periodically remove accumulated sediments from storm water management facilities as necessary.
8. Construction activities will be conducted Monday through Friday from 7:00 a.m. to 6:00 p.m., and on Saturday from 8:00 a.m. to 6:00 p.m., and will comply with all aspects of the Town of Yorktown Code Section 216-2 Peace and Good Order.
9. It is not known if Blasting will be necessary, however if necessary a Blasting Protocol will be submitted to the Town for review and approval.
10. Once construction machinery reaches the site, it is likely to remain on site until the completion of grading and excavation. Construction material storage, equipment staging and soil stockpiling will occur on graded stabilized areas of the site.
11. Construction traffic would access the site via a stabilized construction entrance at one or more of the existing access locations on Old Crompond Road.
12. As part of the necessary permitting for demolition, buildings are inspected and building materials are sampled for asbestos. Any building materials which contain asbestos are required to be removed prior to demolition in accordance with OSHA guidelines. This will leave the buildings free of asbestos-containing materials so that when demolition occurs, no hazardous material will be dispersed into the air or deposited into the soil.

As a result of implementation of the mitigation measures listed above, short term construction impacts shall be mitigated to the maximum extent practicable and shall not result in a significant negative environmental impact.