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5.2. TACONIC STATE PARKWAY WORK SITES

The proposed construction work at the off-site work sites would be conducted at two locations: near the Taconic State Parkway and near the Kensico Reservoir, both of which are located in the Town of Mount Pleasant in Westchester County, New York. This section describes the work that would be conducted at the Taconic State Parkway work sites (Taconic work sites) and assesses its potential environmental impacts.

5.2.1. Introduction

The proposed work at the Taconic work sites would entail pressurization of the Catskill Aqueduct.

The Kensico Reservoir was constructed as part of the Catskill System; however, it also serves as a balancing reservoir for the Delaware System. Water from both the Catskill and Delaware Aqueducts is normally discharged into the Kensico Reservoir before being conveyed through the Delaware and Catskill Aqueducts to the Hillview Reservoir. The proposed work at the Taconic work sites would entail pressurization of the Catskill Aqueduct and rebuilding Kensico Siphon blowoff manholes and replacing the blowoff valves within them.

As mentioned in Section 5, Off-Site Facilities, the section of the existing Catskill Aqueduct between Kensico Reservoir and the Eastview Site must be pressurized in order to convey up to 1,000 million gallons per day (mgd) of raw (untreated) water to the UV Facility at the correct elevation by gravity so that it can be treated in the proposed UV Facility without construction of a new 700 mgd pumping station. This pressurization work along the segment of the Aqueduct between Kensico Reservoir and the Catskill Connection Chamber (CCC) would be conducted seasonally (from approximately September through May) over a period of three to four years; this time frame would coincide with the construction period for the proposed UV Facility. It is anticipated that the pressurization work at the Taconic work sites would take place over the course of one season. A maximum of 40 workers would be conducting pressurization work at any one time (20 workers at each location). It is anticipated that there would be 1 to 2 truck deliveries per day at each site.

At the time this Final EIS was prepared, a design for all the project elements related to the proposed pressurization of the Catskill Aqueduct between Kensico Reservoir and the Eastview Site had not been completed. Conceptual design possibilities were developed based on the inspections of the Aqueduct between Kensico Reservoir and the Eastview Site that were completed in April 2004. In order to disclose the potential reasonable worst-case environmental impacts that may be associated with the pressurization of this component of the Catskill Aqueduct, the potential reconstruction efforts that would likely have the maximum short-term construction and final operational characteristics of the pressurized Catskill Aqueduct were included in the Final EIS. Based on this reasonable worst-case scenario, estimates of related construction activities were generated and used as the basis for the evaluation of potential construction impacts from this component of the proposed project. The Catskill Aqueduct pressurization work between the Boat Hole and the Eastview Site is covered under Section 4, Eastview Site, and Section 5.1, Kensico Reservoir Work Sites.

Based on the reasonable worst-case scenario projected for the Final EIS, a maximum of 40 workers could be associated with the Catskill Aqueduct pressurization work at any one time (20 workers at each of the Aqueduct pressurization work sites). Work would occur Monday through Friday on an eight-hour shift. No extended shifts are anticipated. It is anticipated that there would be 1 to 2 truck deliveries per day at each pressurization site.

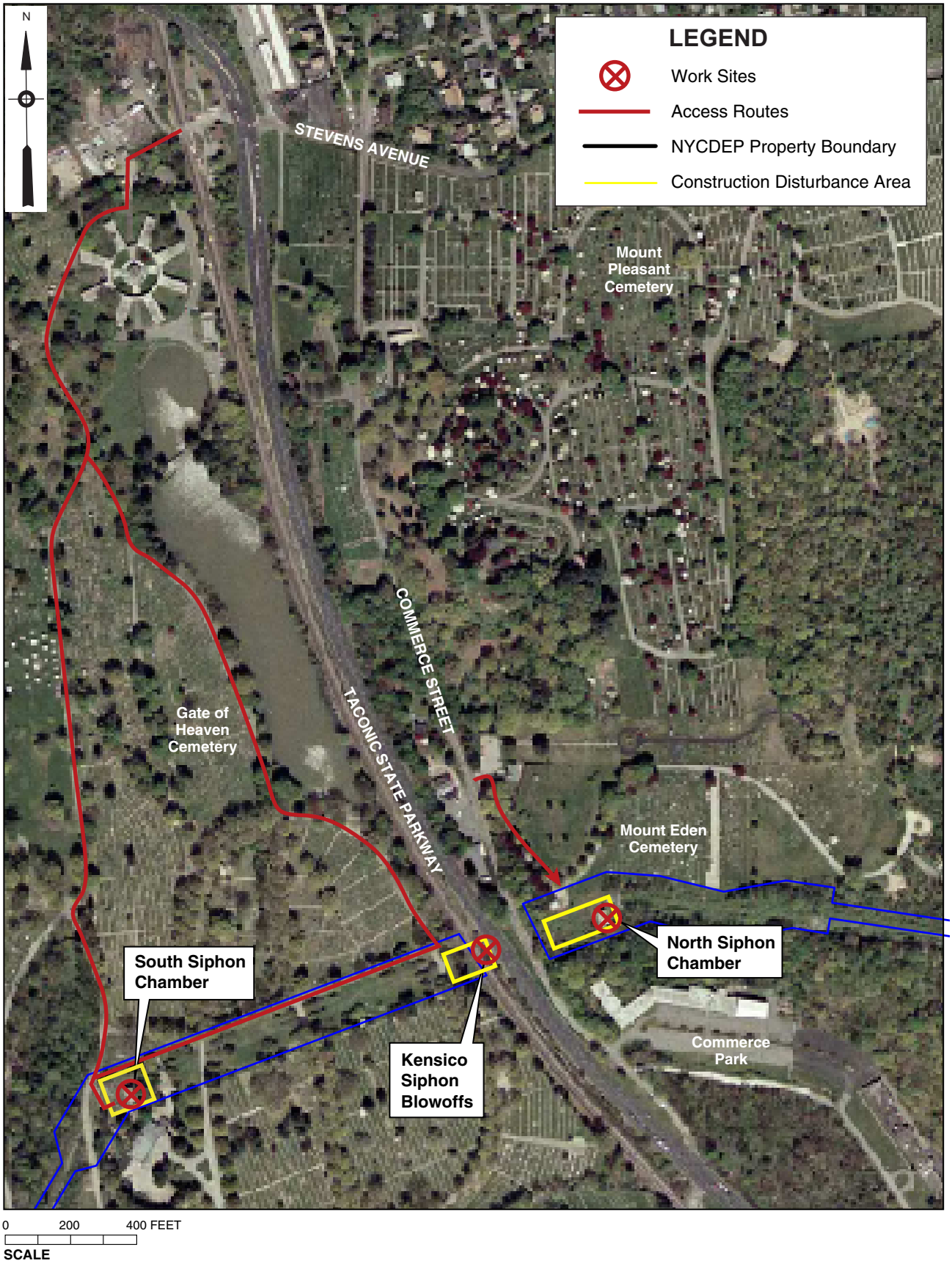
Three work sites would be used as construction staging areas and access points by workers and materials for this proposed pressurization work in the vicinity of the Taconic State Parkway, including the North Siphon Chamber, the Kensico Siphon Blowoffs, and the South Siphon Chamber (Figure 5.2-1). Work on the Kensico Grade Tunnel and the Eastview Grade Tunnel would also be staged from these access points. For work within the Catskill Aqueduct, ventilation would be provided as needed at the work site access points. Any ventilation system would be located within an aboveground structure. Descriptions of these areas and facilities are given below.

5.2.1.1. Kensico Grade Tunnel

The Kensico Grade Tunnel is the portion of the Catskill Aqueduct located between the Boat Hole and the North Siphon Chamber. The grade tunnel would be rehabilitated by repairing the existing concrete lining. No surface disturbance would be associated with this activity.

5.2.1.2. North Siphon Chamber

The North Siphon Chamber is an aboveground structure located on City property within the Mount Eden Cemetery. The North Siphon Chamber is located at the north end of the Kensico Siphon, a portion of the Catskill Aqueduct comprised of three steel pipes encased in concrete and lined with cement mortar. The chamber contains appliances for controlling the flow of the water within the Catskill Aqueduct; it would also be used as a staging area for the Catskill Aqueduct relining program. Equipment used at this site would include a hydraulic crane to raise and lower materials from the chamber; a forklift to manage materials; and an air compressor to power tools. The steps leading to the entrance of the North Siphon Chamber could be rebuilt, and facility lighting could be added at this location. The exterior of the building would be cleaned (i.e., power washed) as part of the proposed project. An area for a small office trailer and material storage would also be needed; these facilities would be located adjacent to the chamber building on City property. Deliveries would include materials for the Aqueduct lining system and fuel for construction equipment. Workers entering the Aqueduct at this point would park on City property at the Kensico campus and would be shuttled by bus to the site, most likely via either Lakeview or Stevens Avenue.



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Catskill Aqueduct Pressurization: Taconic State Parkway Work Sites

Catskill/Delaware UV Facility

Figure 5.2-1

5.2.1.3. Kensico Siphon Blowoffs

The Kensico Siphon Blowoffs are manholes. One manhole is located on each of three buried pipes, which constitute the Kensico Siphon. The blowoff manholes are located between the Taconic State Parkway and the MTA (Metro-North) Harlem rail line. Proposed work here would consist of rebuilding the manholes and replacing the blowoff valves within them. Work would be staged on the City property within Gate of Heaven Cemetery. Temporary lane closures on the Taconic State Parkway would be needed periodically for construction equipment drop-off and pick-up. NYCDEP would work with NYSDOT and the MTA to coordinate the proposed work.

5.2.1.4. South Siphon Chamber

The South Siphon Chamber is an aboveground structure located on City property within the Gate of Heaven Cemetery. The South Siphon Chamber is located at the south end of the Kensico Siphon, a portion of the Catskill Aqueduct comprised of three steel pipes encased in concrete and lined with cement mortar. The chamber contains appliances for controlling the flow of the water within the Catskill Aqueduct; it would also be used as a staging area for the Catskill Aqueduct relining program. Equipment used at this site would include a hydraulic crane to raise and lower materials from the chamber; a forklift to manage materials; and an air compressor to power tools. An area for a small office trailer and some material storage would also be needed; these facilities would be located adjacent to the chamber building on City property. The exterior of the building would be cleaned as part of the proposed project. Deliveries would include materials for the lining system and fuel for construction equipment. Workers entering the Aqueduct at this point would park on City property at the Kensico campus and would be shuttled by bus to the South Siphon Chamber, most likely via either Lakeview or Stevens Avenue.

5.2.1.5. Eastview Grade Tunnel

The Eastview Grade Tunnel is located between the South Siphon Chamber and the CCC. The grade tunnel would be rehabilitated by repairing the existing concrete lining. No surface disturbance would be associated with this activity.

5.2.1.5.1. Environmental Analysis

No operational impacts are anticipated from the proposed work near the Taconic State Parkway; none of the facilities would maintain permanent staff, and traffic associated with operations of these facilities is anticipated to be negligible. Therefore, the following sections focus on the construction impacts of the proposed pressurization work near the Taconic State Parkway. The construction year is anticipated to be 2007 or 2008. A study area of one-quarter mile was established from the sites in conducting the following analyses. The methodologies used to prepare these analyses are presented in Section 3, Data Collection and Impact Methodologies.

5.2.2. Baseline Conditions

5.2.2.1. Existing Conditions

5.2.2.1.1. Land Use, Zoning, and Public Policy

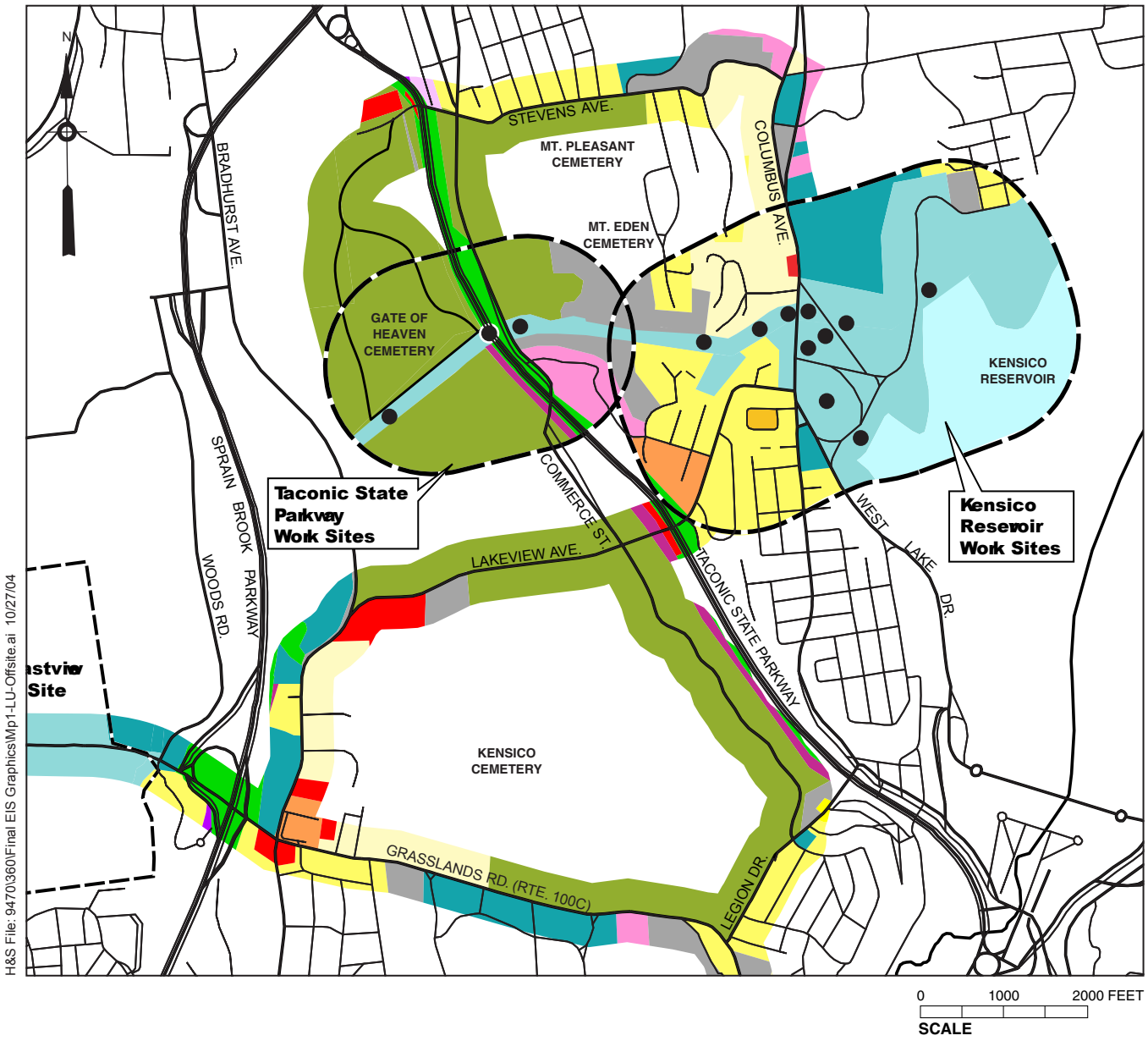
Land Use.

Work Sites. The Taconic work sites are located on three tax lots, as follows: Lot 39, Block 1 of Section 117.06 (which also includes one of the Kensico Reservoir work sites); Lot 3, Block 1, of Section 117.09; and Lot 5, Block 1, Section 117.09. The sites are located on a narrow corridor of City-owned land that traverses the parkway, the MTA Harlem line, and two cemeteries (Mount Eden and Gate of Heaven). This City property ranges from approximately 150 ft. to 200 ft. wide, and runs in an east-west direction. The Catskill Aqueduct runs beneath the property; aboveground the property is generally an open, grassy corridor with overhead electrical transmission lines and several structures that provide access to the Aqueduct. The interior roads of the cemeteries provide access to the property. Of the three Taconic work sites where the Aqueduct can be accessed, two are above grade structures (the North and South Siphon Chambers). They are similar to each other in appearance, with grey stone facades, standing at approximately 40 feet tall. The Kensico Siphon Blowoffs consist of manholes, with headwalls located between the Taconic State Parkway and the MTA Harlem line railroad tracks.

Study Area. The majority of the land within the one-quarter mile study area consists of cemeteries (see Figure 5.2-2). The Mount Eden and Mount Pleasant Cemeteries are located on the east side of the Taconic State Parkway, and the larger Gate of Heaven Cemetery is located on the west side of the Parkway.

In addition to the one-quarter mile study area used in this analysis, land uses along local roadways that would convey project-generated construction traffic were examined. This traffic includes shuttle buses that would transport construction workers between the Kensico campus and the Taconic work sites at the beginning and end of a shift, and a small number of trucks (two per day). The traffic would be routed on Columbus Avenue, Stevens Avenue, Lakeview Avenue, and Commerce Street.

In the vicinity of its intersection with Columbus Avenue, Stevens Avenue is winding and steep, with homes on the south side of the street, followed by Mount Pleasant Cemetery to the west. The Summit at Westchester, an office park, is located on the north side of Stevens Avenue, along Summit Lake Drive. (There is some undeveloped land within this office park.) To the west of this office park, there is another low-density residential neighborhood. There is a small area containing manufacturing uses on the north side of Stevens Avenue just east of the Taconic State Parkway. Construction vehicles would also be able to access the Taconic work sites via an access road within the Gate of Heaven Cemetery. This road can be accessed off Stevens Avenue, at a point west of the Taconic State Parkway. (On the north side of Stevens Avenue opposite the Gate of Heaven access road is an area of commercial land use.)



Off-Site Facilities: Land Use

Catskill/Delaware UV Facility

Figure 5.2-2

Columbus Avenue is a relatively busy collector road, with two lanes in each direction. In the vicinity of Mount Pleasant Town Hall, the northbound and southbound lanes of Columbus Avenue diverge and the avenue is divided by a large median. There are two office parks on the east side of Columbus Avenue, one of which is anchored by Pepsico, the other of which is anchored by NYNEX. The Valhalla Fire Department is located between these two office parks. The west side of Columbus Avenue is classified as very low-density residential land use. The northern portion of Commerce Street that would convey construction-related traffic is bounded by Gate of Heaven Cemetery to the west and Mount Pleasant Cemetery to the east. As Commerce Street approaches its intersection with the Taconic State Parkway, the street is bordered by a Town of Mount Pleasant water facility (pumping station) and a restaurant on the west, and an entrance to the Mount Eden Cemetery and an office park (Commerce Park) on the east.

Zoning.

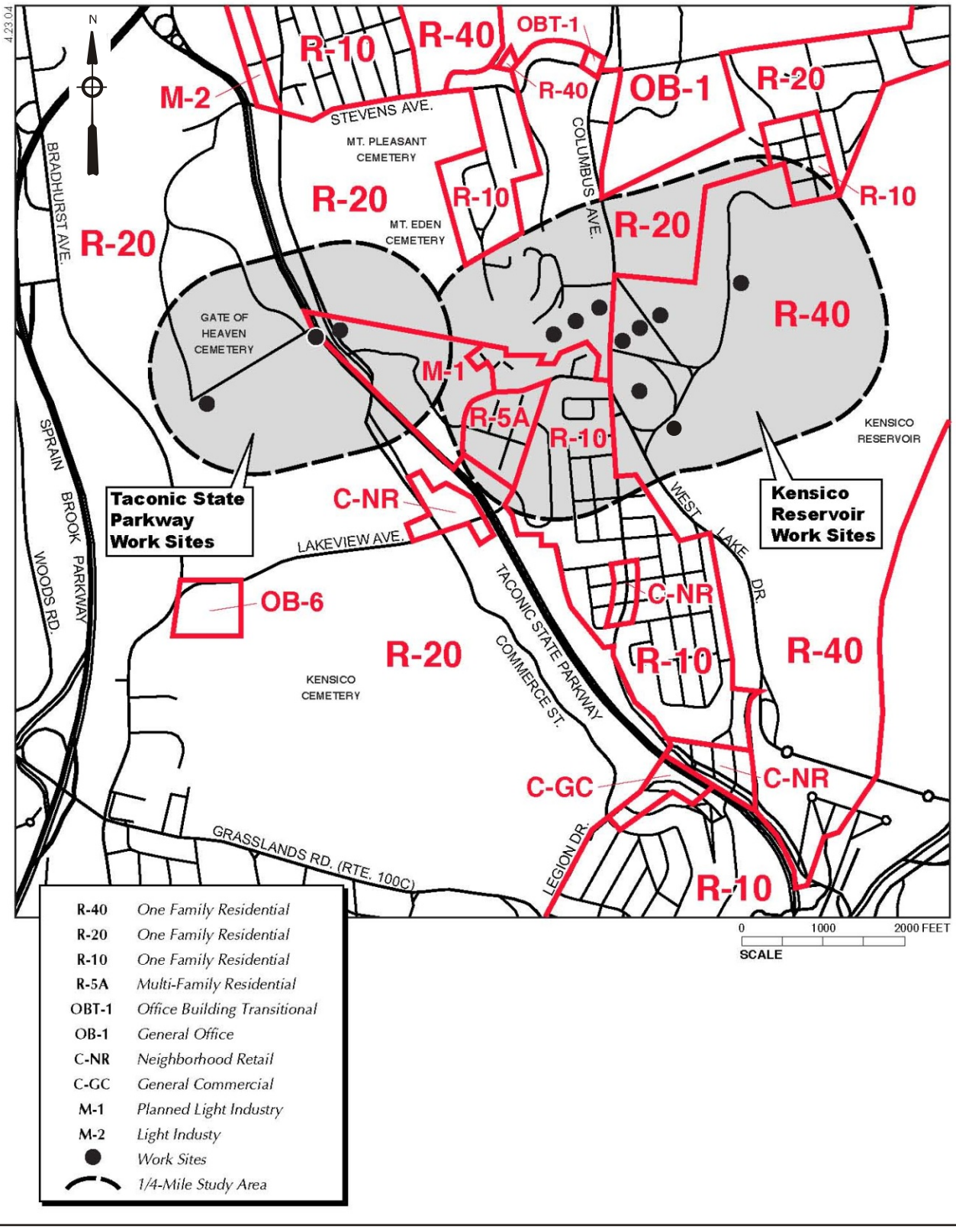
Work Sites. All of the Taconic work sites are located within the Town of Mount Pleasant's R-20 "One Family Residential" zoning district (see Figure 5.2-3). The permitted uses for the R-20 district are summarized in Table 5.2-1, below. The R-20 district requires a minimum lot area of 20,000 square feet and a minimum lot width of 85 feet at the front yard setback line.

Study Area. The study area is predominantly zoned R-20. In addition, the southwestern portion of the study area falls within the M-1 "Planned Light Industry" zoning district. Table 5.2-1, below, summarizes the permitted uses for this district. The M-1 district requires a minimum lot area of 10 acres, with a minimum lot width of 250 feet at the front yard setback line.

TABLE 5.2-1. TACONIC STATE PARKWAY WORK SITES: ZONING DISTRICTS IN THE STUDY AREA

District	District Name	Permitted Uses
R-20*	One-Family Residential	One-family dwellings; churches and other places of worship; public schools; railroad stations; playgrounds, parks, libraries, firehouses, police stations, and other municipal uses; recreation areas and swimming pools; and municipal, state, or national historic sites or museums.
M-1	Planned Light Industry	Restaurants and cafes; business, professional, banking, and general offices; freestanding retail stores; movie theaters; indoor recreation facilities; warehouse and storage facilities and businesses; assembly halls, dance halls, bowling alleys, or billiard rooms; printing shops, heating, air conditioning, plumbing, or electrical businesses; laundries, dry-cleaning plants, creameries, and ice cream plants; parking lots or showrooms for motor vehicles; bottling plants; municipal garages and public works storage yards; and light industrial or manufacturing uses, which may include fabrication, processing, converting altering, assembling, or other handling of products.

Notes: * Zoning that applies to the Taconic work sites.
Watershed and water supply uses require a special permit



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Off Site Facilities: Zoning

Catskill/Delaware UV Facility

Figure 5.2-3

Public Policy. The same public policies apply to the Taconic work sites and the study area as those that apply to the Eastview Site, with the exception of the Town of Greenburgh's *Comprehensive Plan*. See Section 4.2.2.1.2 for a description of the applicable public policies.

5.2.2.1.2. Visual Character

Work Sites. As mentioned above in the Land Use section, all of the work sites where work would be conducted in order to pressurize the Catskill Aqueduct are located on City-owned property. This area consists of many water supply-related infrastructure components. Only the North and South Siphon Chambers are above grade structures. They are identical to each other in appearance, with grey stone facades, and heights of approximately 40 feet, and both structures can be seen from within the cemeteries and from the parkway. The Kensico Siphon Blowoffs consists of three at-grade structures (manholes) that are located between the Taconic State Parkway and MTA Harlem line railroad tracks. These manhole covers are hardly noticeable due to their size. The remaining work sites are the below-grade tunnels and the Kensico Siphon, which can be accessed by the already described above-grade access points. The visual character of the area near the Taconic work sites is anticipated to remain largely the same after work is completed at these sites. During construction, the area immediately surrounding the access points would temporarily change with the introduction of the construction workers and materials; any potential project or construction impacts are described below.

5.2.2.1.3. Community Facilities

No direct impacts on the area community facilities are anticipated as part of this off-site work associated with the proposed project. Therefore, a detailed analysis of the potential impacts of the off-site work on this parameter was not conducted. Potential temporary impacts on community facilities during construction are discussed in the Potential Construction Impacts section below.

5.2.2.1.4. Open Space

The proposed off-site work at the Taconic work sites would be conducted on land owned by the City of New York, and has not been designated for recreational or environmental purposes. However, the work sites are located within two cemeteries (Gate of Heaven and Mount Eden), which are classified as public passive open space by the *CEQR Technical Manual*. The North Siphon Chamber is located within Mount Eden Cemetery and access to this work site would need to be provided from the cemetery entry road. There is an existing driveway connecting the North Siphon Chamber to the cemetery access road. The cemetery comprises approximately 30 acres and extends north from the work site. The Kensico Siphon Blowoffs and South Siphon Chamber are located within the 230-acre Gate of Heaven Cemetery and access to these sites would be provided from the interior cemetery roads as well.

5.2.2.1.5. Neighborhood Character

The Taconic work sites are located in the Town of Mount Pleasant along the portion of the Catskill Aqueduct in the vicinity of the Taconic State Parkway, MTA Harlem Rail line, and several cemeteries. The two aboveground structures (the North Siphon Chamber and the South Siphon Chamber) are similar in appearance, with grey stone facades. Each chamber is located at a relatively high elevation and can be seen from within the cemeteries and from the parkway. The land slopes down to the parkway, railroad tracks, and Davis Brook, where the siphon blowoffs are located. The remaining work site – the Kensico Siphon Blowoffs – is simply marked by headwalls located between the Taconic State Parkway and the MTA Harlem line railroad tracks. Electrical transmission lines are visible along the length of the Catskill Aqueduct within the City property.

The study area surrounding the Taconic work sites does not contain any residences, and the character of the area is dominated by the large cemeteries situated on both sides of the parkway. The North Siphon Chamber is located within Mount Eden Cemetery, and the Kensico Siphon Blowoffs and South Siphon Chamber are located within Gate of Heaven Cemetery. Commercial uses are located on Commerce Street near its intersection with the parkway. The above-ground water supply structures mentioned above are the dominant visual forms in this area. Views of these sites are most pronounced from the cemeteries and by motorists traveling along Commerce Street, the parkway, and the Gate of Heaven Cemetery access road.

The study area's principal roads include the Taconic State Parkway and Commerce Street. In addition to these roads, Columbus Avenue, Stevens Avenue, Lakeview Avenue, and an access road within the Gate of Heaven Cemetery have also been included in the study area, as they would be used by the shuttle system that would transport construction workers from the parking area at the Kensico campus to the Taconic work sites. Of these roads, the Taconic State Parkway and Columbus Avenue convey the greatest amount of traffic, which means they are also characterized by higher noise levels. There are low-density residential neighborhoods on the west side of Columbus Avenue; as well as on north side of Stevens Avenue, west of the Summit at Westchester office park, and on the south side, east of Mount Pleasant Cemetery. Lakeview Avenue traverses a high- and low-density residential neighborhood as it makes its way to Taconic State Parkway. Institutional uses along the roadways that would convey project-generated traffic include Mount Pleasant Town Hall, the Valhalla Fire Department, and Valhalla Middle/High School. There are no major commercial corridors in this area; rather, there are pockets of commercial uses scattered throughout the study area, including florists and monument sales offices located off of Stevens Avenue within Gate of Heaven Cemetery, and a restaurant on Commerce Street. Several office parks are located within this area as well, including the Summit at Westchester, and office parks containing Pepsico and Nynex as anchors.

5.2.2.1.6. Socioeconomic Conditions

The analysis of socioeconomic conditions refers to the potential for the proposed off-site work to either directly (i.e., geographically) displace existing populations, employment or facilities at the Taconic work sites; or indirectly displace existing populations, employment or facilities due to changes in taxes, property values, living conditions or water rates that could

potentially result from the proposed project. As noted in Section 4.7, Socioeconomic Conditions, the project as a whole is not anticipated to have indirect displacement impacts related to increases in water rates. (The water rate analysis considered the capital costs of work related to the Taconic work sites.) Therefore, a water rates discussion is not necessary in this section.

The proposed work at the Taconic sites would not directly or indirectly displace existing populations, employment, or facilities. As mentioned above, there are no residences within the study area. In addition, the study area contains a modest amount of employment, as the only employment within the study area includes maintenance workers at the cemeteries, staff at the restaurant on Commerce Street, and employees within Commerce Park.

The Taconic work sites are located in an area with very low population density, as the majority of the study area is occupied by cemeteries, and the residential areas are low-density neighborhoods.

The narrow corridor of land on which the Taconic work sites are located currently generates annual property taxes of $101,315, including $16,224 for the Town of Mount Pleasant, $55,706 for the Valhalla Union Free School District, $8,961 for the Mount Pleasant Central School District, and $20,424 for the County (2004 for Town and County; 2003/2004 for School).[1]

5.2.2.1.7. Growth Inducement

Construction at the Taconic work sites is unlikely to induce growth since the work would entail modifications to existing structures. These improvements are unlikely to produce additional tax revenues for the Town of Mount Pleasant or school district. Therefore, an analysis of growth inducement is not necessary.

5.2.2.1.8. Traffic and Transportation

No impacts on traffic and transportation are anticipated as part of the work proposed at the Taconic work sites. The work would generate a maximum of 2 truck trips per day and approximately 2 shuttle bus trips, transporting workers from/to the Kensico campus during the morning arrival (between 6:30 and 7:30 AM) and afternoon departure (between 3:30 and 4:30 PM). Therefore, a detailed analysis of traffic and transportation was not conducted.

5.2.2.1.9. Noise

No impacts on ambient noise are anticipated as part of the work proposed at the Taconic work sites. With the exception of the Kensico Siphon Blowoffs beside the parkway, the work would be conducted inside existing buildings and within the subsurface Aqueduct. There would be no cut-and-cover construction and no work would be conducted on the weekends or after the normal work day. Therefore, a detailed analysis of noise was not conducted for the Taconic sites.

[1] Information provided by Town of Mount Pleasant Tax Department on May 18, 2004.

5.2.2.1.10. Air Quality

No impacts on air quality are anticipated as part of the work proposed at the Taconic work sites. Most of the construction work would occur below ground within the Catskill Aqueduct; therefore, a detailed analysis of air quality was not conducted for these sites.

5.2.2.1.11. Historic and Archaeological Resources

Historic Resources. There are no known historic resources located on the Taconic work sites, or in the immediate vicinity of the work locations. However, the Catskill Aqueduct (including both below-grade and above-ground structures) may meet the eligibility criteria for listing on the National Register of Historic Places. The Catskill Aqueduct was constructed between 1907 and 1917. The Kensico Reservoir and the above-ground facilities located between it and the Eastview Site were completed in 1915. As the second major water supply system constructed to provide water to New York City (after the Old and New Croton Aqueducts), the Catskill Aqueduct may meet eligibility Criterion A (association with events that have made a significant contribution to the broad patterns of history), as well as Criterion C in the areas of architecture and engineering. No determination about the facilities' eligibility has been made.

The above-ground features of the Catskill Aqueduct that are located on the proposed Taconic work sites include the North and South Siphon Chambers. Completed in 1915, these structures are similar concrete-faced buildings with steel truss roof systems. They are both designed to resemble Italian Renaissance palazzos with heavily rusticated concrete facades set on smooth concrete plinths, large metal entrance doors, entablatures with denticulated cornices, and hipped roofs.

No potential historic resources were identified in the immediate vicinity of the Taconic work sites.

Archaeological Resources. To evaluate the possibility that archaeological resources might exist on the Taconic work sites, an archaeological assessment was prepared.[2] Addressing each work site individually, it focuses first on potential precontact-period (Native American) archaeological resources and then on those from the historic period (beginning in the 17th century). The background research was designed to address the level of potential for archaeological resources to exist on the project site and then to address the likelihood that such resources might have survived historic-period subsurface disturbances. This research included a review of primary and secondary sources, cartographic analysis, site file reviews of previously reported archaeological findings, informant interviews, and field visits. The following discussion briefly summarizes the archaeological assessment.

Precontact-Period Potential and Sensitivity. The area's physiographic profile suggests that Native Americans likely exploited the Taconic work sites and immediate environs for

[2] Historical Perspectives, Inc., *Cultural Resource Assessment, Catskill Aqueduct Pressurization, Kensico Reservoir and Taconic State Parkway Work Sites, Westchester County, New York.* May 2004.

settlements, camp sites, and/or food procurement and processing sites. Further, a site file search at the New York State Museum and at the New York State Office of Parks, Recreation and Historic Preservation identified twelve documented precontact-period archaeological sites within a two mile radius of the Taconic work sites. These documented sites vary in size and recovered material, but types of archaeological artifacts recovered include quartz flakes and other worked lithic materials, pottery fragments, a combination of mussel shells and charcoal, and projectile points.

Although the project area would have been conducive to exploitation by Native Americans, the archaeological assessment concludes that each Taconic work site is not sensitive for precontact-period archaeological resources due to subsurface disturbance from construction of the Catskill Aqueduct. Native American resources are typically shallowly buried (within 3 to 4 feet), and construction of the Catskill Aqueduct would have destroyed any potential resources that might have been located at each of the work sites. Therefore, no further consideration of precontact-period archaeological resources is warranted.

Historic-Period Potential and Sensitivity. Research conducted for the archaeological assessment revealed that no structures were located on any of the Taconic work sites or in the immediate vicinities during the historic period (the 17th through 19th centuries). Although the North and South Siphon Chambers are located on City property within cemeteries, they predate the adjacent Mount Eden and Gate of Heaven cemeteries. The Mount Eden Cemetery was established in 1930, 15 years after completion of the North Siphon Chamber. Although the land around the South Siphon Chamber was originally part of the 19th-century Kensico Cemetery, no internments were located in that part of the cemetery. The South Siphon Chamber is currently located on City property through the Gate of Heaven Cemetery.

Due to the lack of documented use during the historic period, each work site has little, or no, potential to contain significant buried historic-period archaeological resources. In any case, construction of the Catskill Aqueduct would have destroyed, at each work site, any undocumented archaeological resources that might have been present. Therefore, no further consideration of historic-period archaeological resources is warranted.

5.2.2.1.12. Hazardous Materials

A Phase I Environmental Site Assessment (ESA) of the off-site facility locations was conducted to identify the potential for the presence of hazardous materials and/or petroleum products. The ESA included results from limited asbestos and lead paint surveys of the North and South Siphon Chambers at the Taconic work sites. A copy of the Phase I ESA is included in Appendix E. Based on the findings in the ESA, hazardous materials are known to exist in the North and South Siphon Chambers, specifically lead-containing paint. (The limited asbestos survey did not detect any asbestos.) In addition, according to the NYCDEP, book shelves (and the books themselves) in the North Siphon Chamber are covered with lead paint dust.

There is a potential for additional hazardous materials to be present in the siphon chambers. The asbestos survey was conducted only in accessible areas of the on-site buildings; walls and ceilings were not disturbed, and roofing materials were not sampled. Additional asbestos

materials may exist in areas not accessible during the survey, including: underground piping insulation or materials; old window caulking that may be underneath new silicone-sealed windows; water service line gaskets; window glazing on replacement panes; vapor barriers that could be present below ground or between layers of walls; electrical wiring and insulation; power supply transformers; and roofing materials. In addition, polychlorinated biphenyls (PCBs) could be present in electrical equipment (i.e., transformers, capacitors, fluorescent light ballasts), corrosion-resistant paint, and lubricating oil used for gate valve stems.

Soil. In October 2004, seven soil borings were advanced at the Taconic work sites to evaluate the subsurface soil conditions that would be encountered during construction of the UV Facility. The borings ranged in depth from 4 to 18 feet below ground surface (bgs). During drilling, soil samples were field screened for contamination using direct observation (visual and olfactory) and ambient air sampling above the sample using an organic vapor meter (OVM).

Field observations during drilling activities provided no indication of potential contamination. Groundwater was not encountered at any of the boring locations. The soil samples from the borings were collected at the interval before the final depth of the boring (2 to 15 feet bgs). Samples were collected from the Geoprobe sampler or hand auger using stainless steel trowels and transferred to the sample jar.

Soil samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by USEPA Method 8260, TCL semi-volatile organic compounds (SVOCs) by USEPA Method 8270, Target Analyte List (TAL) metals by USEPA Method 6000/7000 series, TCL pesticides by USEPA Method 8081, and TCL PCBs by USEPA Method 8082,.

Analytical results from the soil samples are summarized in Table 5.2-2. Complete laboratory analytical reports are included in Appendix F. The sampling locations are depicted in Figures 5.2-4 and 5.2-5.

TABLE 5.2-2.
SUMMARY OF CHEMICAL CONSTITUENTS DETECTED IN SITE SOILS
TACONIC STATE PARKWAY WORK SITES

Sample Name	NYSDEC TAGM Criteria[1]	Eastern USA Background[2]	S-K18-3.5-4		S-K17-13-15		S-K20-4-8		S-K19-8-10		S-K21-8-10	
PARAMETER			Soil		Soil		Soil		Soil		Soil	
Sample Depth			3.5'-4		13'-15'		4'-8'		8'-10'		8'-10'	
Sample Date			10/4/2004		10/5/2004		10/5/2004		10/5/2004		10/5/2004	
			Conc		Conc		Conc		Conc		Conc	
Volatiles (ppb)												
Acetone	200	NA	5	B	3.5	B	10.0	B	3.9	B	2.8	B
Methylene chloride	100	NA	ND(0.29)		0.80	B	0.62		0.81	B	0.67	B
TOTAL TICs			7	JN	6	JN	14	JN	15	JN	NR	
Semivolatiles (ppb)												
Bis(2-ethylhexyl)phthalate	50,000	NA	ND(150)		350		ND(150)		ND(170)		ND(150)	
TOTAL TICs			829	J/JN	510	JN	217	J/JN	160	JN	200	JN
PCB's (ppb)												
None Detected												
Pesticides (ppb)												
4 4'-DDT	2,100	NA	ND(0.41)		ND(0.46)		ND(0.44)		ND(0.50)		ND(0.43)	
Metals (ppm)												
Aluminum (Al)	SB	33000 [3]	12300		15300		14600		17700		11000	
Antimony (Sb)	SB	NA	ND(1.5)	N	ND(1.6)	N	ND(1.6)	N	ND(1.8)	N	ND(1.5)	N
Arsenic (As)	7.5 or SB	3.0-12	4.8		2.7	B	2.7	B	5.1		1.7	B
Barium (Ba)	300 or SB	15-600	126		110		162		91.9		142	
Beryllium (Be)	0.16 or SB	0.0-1.75	0.37	B	0.35	B	0.41	B	0.55		0.39	B
Calcium (Ca)	SB	130-35,000	1680		1250		2640		2230		1520	
Chromium (Cr)	10 or SB	1.5-40	21.7		28.0		26.4		20.9		24.4	
Cobalt (Co)	30 or SB	2.5-60	12		12.1		15.4		11.0		21.0	
Copper (Cu)	25 or SB	1.0-50	27	*	24.0		33.1		13.9		40.3	
Iron (Fe)	2,000 or SB	2000-550,000	18900		21300		25300		22700		23900	
Lead (Pb)	SB	NA	14.9		5.5		7.0		10.8		8.5	
Magnesium (Mg)	SB	100-5,000	4920		**5690**		**6730**		4180		**5890**	
Manganese (Mn)	SB	50-5,000	420		315	N	340	N	622	N	385	N
Mercury (Hg)	0.1	0.001-0.2	ND(0.052)		ND(0.056)		0.11		0.20		**0.55****	
Nickel (Ni)	13 or SB	0.5-25	19.4		18.8		**25.2**		14.8		21.4	
Potassium (K)	13 or SB	8,500-43,000	2530	E	2540		4850		1120		5300	
Selenium (Se)	2 or SB	0.1-3.9	2.5	B	ND(2.0)	N	2.8	BN	2.3	BN	3.0	BN
Silver (Ag)	SB	NA	ND(0.41)	N	ND(0.43)	N	ND(0.42)	N	ND(0.48)	N	0.59	BN
Sodium (Na)	SB	6,000-8,000	205		ND(29.2)		ND(29.0)		46.6	B	ND(27.8)	
Vanadium (V)	150 or SB	1.0-300	30.8		38.4		36.9		32.4		32.2	
Zinc (Zn)	20 or SB	9.0-50	**67.7**	**E**	46.2	E	**64.7**	**E**	**58.7**	**E**	48.6	E
Inorganics (ppm)												
None Reported												
Solids (%)												
% Moisture	NA	NA	11.8		14.3		10.4		21.6		8.4	
% Solids	NA	NA	88.2		85.7		89.6		78.4		91.6	

Notes: This summary table lists only those compounds detected in at least one sample. The complete data package is provided in Appendix H.

[1] - Recommended Soil Cleanup Objectives as defined in NYSDEC Technical and Administrative Guidance Memorandum #4046 Determination of Soil Cleanup Objectives and Cleanup Levels, January 24, 1994

[2] - Source: NYSDEC Technical and Administrative Guidance Memorandum #4046, Table 2

[3] - Site Background

NA - Not Available

ND (5.8) - This compound was not detected above the method detection limit (5.8)

NR - Analyte not required to be analyzed

SB - Standard Background

ORGANIC QUALIFIERS

B - Indicates that the analyte was found in both the sample and its associated laboratory blank. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

J - Indicates an estimated value. This qualifier is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria and the result is less than the specified detection limit but greater than zero.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

INORGANIC QUALIFIERS

B - The reported value is less than the Contract Required Detection Limit (CRDL), but greater than the Instrument Detection Limit (IDL).

E - Indicates an estimated value because of the presence of interference.

N - Spiked sample recovery not within control limits.

* - Duplicate analysis not within control limits.

** - This soil sample was re-analyzed for Mercury and a concentration of 0.31 ppm was reported.

TABLE 5.2-2.
SUMMARY OF CHEMICAL CONSTITUENTS DETECTED IN SITE SOILS TACONIC STATE PARKWAY WORK SITES

Sample Name	NYSDEC TAGM Criteria[1]	Eastern USA Background[2]	S-K22-7-9		S-K16-2-2.5		TB-1		S-FB-1		S-FB2	
PARAMETER			Soil		Soil		Aqueous		Aqueous		Aqueous	
Sample Depth			7'-9'		2'-2.5'		---		---		---	
Sample Date			10/5/2004		10/6/2004		10/4/2004		10/4/2004		10/6/2004	
			Conc		Conc		Conc		Conc		Conc	
Volatiles (ppb)												
Acetone	200	NA	2.0	B	4.3	B	2.8	B	3.2	B	2.6	B
Methylene chloride	100	NA	0.57		0.62		1.1		0.93		2.8	B
TOTAL TICs			NR		10	JN	NR		NR		NR	
Semivolatiles (ppb)												
Bis(2-ethylhexyl)phthalate	50,000	NA	ND(150)		ND(150)		NR		ND(1.6)		ND(1.6)	
TOTAL TICs			200	JN	250	J/JN	NR		NR		NR	
PCB's (ppb)												
None Detected												
Pesticides (ppb)												
4 4'-DDT	2,100	NA	0.83		ND(0.45)		NR		ND(0.043)		ND(0.044)	
Metals (ppm)												
Aluminum (Al)	SB	33000 [3]	12000		10500		NR		ND(38.4)		ND(18.2)	
Antimony (Sb)	SB	NA	ND(1.5)	N	ND(1.6)	N	NR		13.5		ND(5.8)	
Arsenic (As)	7.5 or SB	3.0-12	2.5	B	1.9	B	NR		6.5		ND(1.9)	
Barium (Ba)	300 or SB	15-600	119		147		NR		ND(0.40)		ND(0.40)	E
Beryllium (Be)	0.16 or SB	0.0-1.75	0.26	B	0.37	B	NR		ND(0.40)		ND(0.30)	
Calcium (Ca)	SB	130-35,000	1380		1170	E	NR		ND(75.6)		ND(90.4)	
Chromium (Cr)	10 or SB	1.5-40	29.0		16.5		NR		ND(0.70)		ND(0.60)	
Cobalt (Co)	30 or SB	2.5-60	12.2		12.4		NR		ND(3.2)		ND(2.5)	
Copper (Cu)	25 or SB	1.0-50	21.5		46.6		NR		ND(3.3)		ND(1.6)	
Iron (Fe)	2,000 or SB	2000-550,000	18700		17700		NR		ND(18.9)		ND(16.8)	
Lead (Pb)	SB	NA	6.7		46	*	NR		ND(2.5)		ND(1.1)	
Magnesium (Mg)	SB	100-5,000	**5470**		4140		NR		ND(11.7)		ND(6.0)	
Manganese (Mn)	SB	50-5,000	325	N	327	E	NR		ND(1.1)		ND(0.90)	E
Mercury (Hg)	0.1	0.001-0.2	ND(0.054)		0.057		NR		ND(0.20)		ND(0.20)	
Nickel (Ni)	13 or SB	0.5-25	17.9		14.4		NR		ND(2.6)		ND(1.7)	
Potassium (K)	13 or SB	8,500-43,000	3540		4990		NR		111		129	
Selenium (Se)	2 or SB	0.1-3.9	ND(1.9)	N	2.6	BN	NR		ND(8.7)		ND(8.7)	N
Silver (Ag)	SB	NA	ND(0.41)	N	0.53	BN	NR		ND(1.9)	N	ND(2.2)	N
Sodium (Na)	SB	6,000-8,000	ND(28.1)		ND(29.1)		NR		728		680	
Vanadium (V)	150 or SB	1.0-300	34.0		25.1		NR		ND(3.3)		ND(2.3)	
Zinc (Zn)	20 or SB	9.0-50	49.2	E	46.5	E	NR		ND(1.9)		ND(3.9)	
Inorganics (ppm)												
None Reported												
Solids (%)												
% Moisture	NA	NA	7.4		10.7		NR		NR		NR	
% Solids	NA	NA	92.6		89.3		NR		NR		NR	

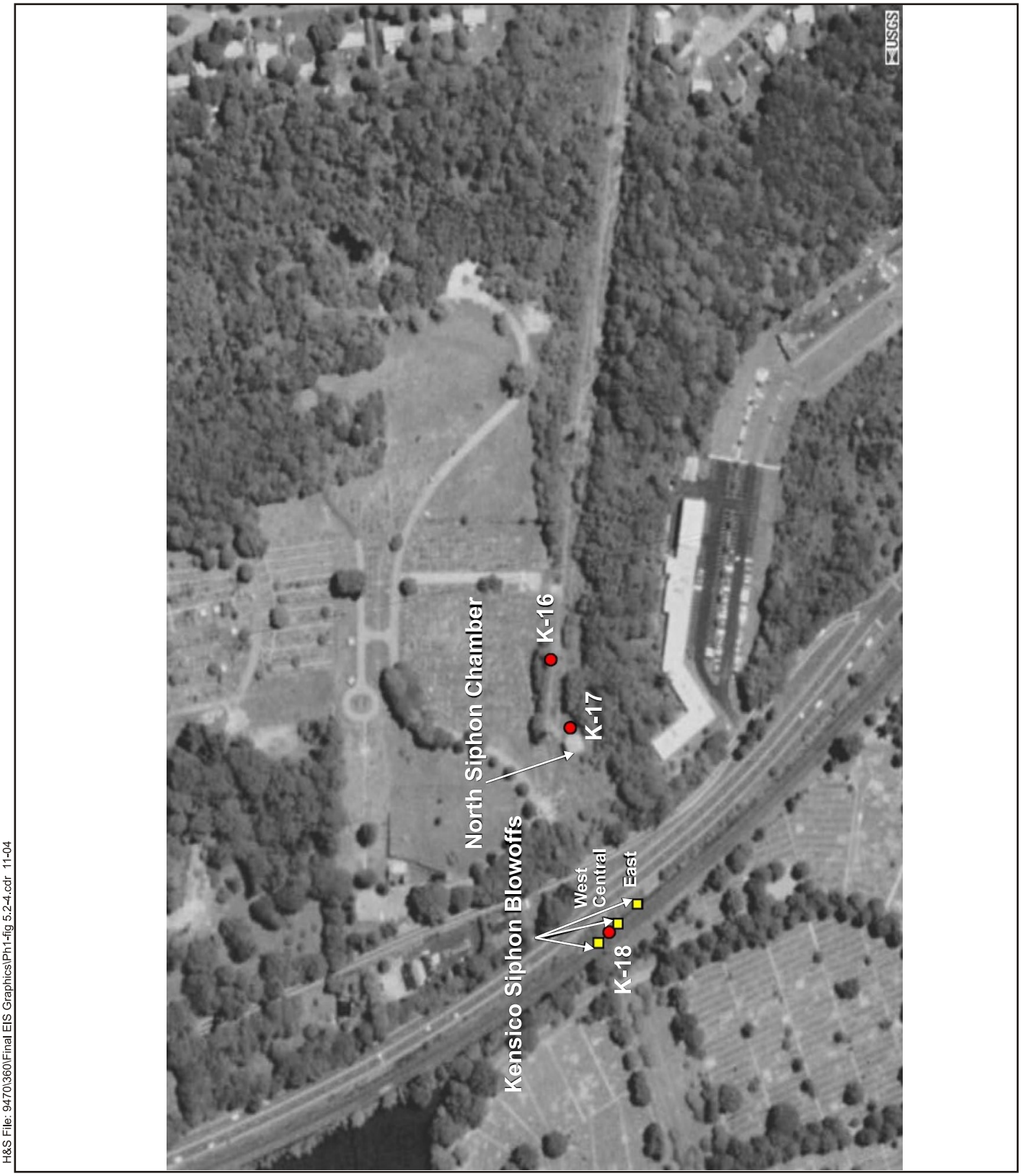
Notes: This summary table lists only those compounds detected in at least one sample. The complete data package is provided in Appendix H.

[1] - Recommended Soil Cleanup Objectives as defined in NYSDEC Technical and Administrative Guidance Memorandum #4046 Determination of Soil Cleanup Objectives and Cleanup Levels, January 24, 1994
[2] - Source: NYSDEC Technical and Administrative Guidance Memorandum #4046, Table 2
[3] - Site Background
NA - Not Available
ND (5.8) - This compound was not detected above the method detection limit (5.8)
NR - Analyte not required to be analyzed
SB - Standard Background

ORGANIC QUALIFIERS
B - Indicates that the analyte was found in both the sampleand its associated laboratory blank. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
J - Indicates an estimated value. This qualifier is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria and the result is less than the specified detection limit but greater than zero.
N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

INORGANIC QUALIFIERS
B - The reported value is less than the Contract Required Detection Limit (CRDL), but greater than the Instrument Detection Limit (IDL).
E - Indicates an estimated value because of the presence of interference.
N - Spiked sample recovery not within control limits.
***** - Duplicate analysis not within control limits.

** - This soil sample was re-analyzed for Mercury and a concentration of 0.31 ppm was reported.



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Sampling Locations

Catskill/Delaware UV Facility

Figure 5.2-4

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Sampling Locations

Catskill/Delaware UV Facility

Figure 5.2-5

PCBs were not detected in the seven soil samples collected at the site.

The volatile organic compound, acetone, was detected in all of the soil samples. Similarly, the volatile organic compound, methylene chloride, was detected in six of the seven soil samples. The detected concentrations of acetone and methylene chloride were well below the Recommended Soil Cleanup Objective (RSCO) listed in *New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum (TAGM) #4046.* Acetone and methylene chloride were also identified in the quality assurance/quality control laboratory method blanks, trip blanks, and field blanks at similar concentrations. Therefore, these results suggest that the detected volatile organic compounds are due to laboratory contamination and are not indicative on onsite contamination.

One semi-volatile organic compound, bis (2-ethylhexyl) phthalate, was detected in one of the seven soil samples, but at concentrations well below the RSCO listed in NYSDEC TAGM #4046. Phthalates, at the low concentrations reported, are commonly indicative of laboratory cross-contamination and/or artifacts of drilling activities. Therefore, the bis (2-ethylhexyl) phthalate detected in the soil sample from the site is likely not attributable to on-site contamination and does not represent an environmental concern.

The pesticide compound, 4 4'-DDT, was detected in one of the seven soil samples, at trace concentrations well below the NYSDEC TAGM #4046 soil cleanup criteria. In 1972, DDT was banned from use in the United States due to the damage caused to wildlife. Prior to this time it was used as a pesticide to control mosquitoes and other insects in agriculture. Residual traces from historical use of the pesticide at the site may have been carried down from the surface during the drilling and sampling activities. There is no other known probable source. Since the results are well below TAGM criteria and no visible sources of contamination were apparent at the time of sampling or during site reconnaissance, this data does not represent an environmental concern.

Zinc, chromium, magnesium, and/or nickel were detected in six of the seven soil samples at concentrations exceeding Eastern United States background concentrations listed in *NYSDEC TAGM #4046*. According to NYSDEC TAGM #4046, background concentrations can be used in lieu of established RSCOs for site assessment purposes). These metals are common to the geology of the area, and the detected concentrations are considered to be within normal ranges for the geology found at the site. Therefore, these detected metals are not anticipated to be a result of on-site operations and do not represent an environmental concern.

Mercury was detected in one of the seven soil samples at a concentration (0.55 parts per million) exceeding the Eastern United States background concentrations listed in *NYSDEC TAGM #4046*. The detected concentration of mercury was considered an anomalous value based upon the non-detected concentration of mercury at the other sampling locations and laboratory re-analysis of the sample indicating a lower mercury concentration. Furthermore, there were no signs of contamination observed at this sampling location and there were no indications from the file reviews or site inspections that mercury containing equipment was in use at the site. While the detected mercury result is well below any health-based cleanup criteria for the most toxic form of mercury (about 5 to 10 parts per million), it does not appear to represent local background

conditions and may be indicative of historic manmade contamination. However, the results do no indicate any reason for environmental concern.

In summary, based on a review of historic maps and Federal, State, and local databases, there do not appear to be historic land uses or on/off-site chemical releases that would have affected soil and/or groundwater underneath the Taconic work sites. The subsurface investigation indicated no evidence of soil contamination with the exception of low concentrations of mercury at one sampling location. Before construction activities are undertaken, further assessment of soil would be performed to determine if actual mercury contamination in the soil is present. If remediation is required, it would be undertaken in compliance with applicable regulations. Therefore, no significant adverse hazardous material impacts are anticipated.

5.2.2.1.13. Natural Resources

No significant impacts to natural resources are anticipated as part of the operation of facilities at the Taconic work sites. Therefore, a detailed analysis of natural resources was not conducted for these sites. Potential construction impacts at the Taconic work sites are discussed in the Potential Construction Impacts section below.

North Siphon Chamber. The North Siphon Chamber is located within Mount Eden Cemetery. The area immediately surrounding the Siphon Chamber consists of a gravel roadway and maintained lawn. Some hardwood trees (predominantly black locust and sassafras) occur to the south of the Siphon Chamber. Trees within 75 feet to the Siphon Chamber were identified (see Table 5.2-3). Two small wetlands occur due east of the North Siphon Chamber. One is approximately ¼ acre and the other is approximately 1/8 acre in size. These wetlands occur within the right-of-way and the existing access road appears to bisect the larger wetland.

Kensico Siphon Blowoffs (Manholes). The Kensico Siphon Blowoffs (manholes) are located near a drainage ditch between the Taconic State Parkway and the MTA Harlem line railroad tracks. The drainage ditch contains scouring rush (*Equisetum hyemale*) in association with sumac (*Rhus sp*.). *Equisetum* is a non-flowering, non-vascular plant that occurs in a variety of habitats. The soil in the ditch is black cinder fill. No standing water was observed and the soil is not moist. A stream (Davis Brook) flows underneath City property in a box culvert between the railroad tracks and the cemetery roadway. The area between the MTA Harlem line railroad tracks and South Siphon Chamber contains landscaped lawn and approximately 10 mature landscape trees.

South Siphon Chamber. The South Siphon Chamber is located within Gate of Heaven Cemetery. The area immediately surrounding the Siphon Chamber consists of paved roadway and maintained lawn. Some hardwood trees (predominantly Norway maple and tree of heaven) occur to the east of the Siphon Chamber. Trees within 75 feet of the Siphon Chamber were identified (see Table 5.2-3).

5.2.2.1.14. Water Resources

No impacts to water resources are anticipated as part of the work proposed at the Taconic work sites. During construction activities, sedimentation and erosion control measures would be in place to protect the property. Therefore, a detailed analysis of water resources was not conducted for these work sites.

5.2.2.1.15. Infrastructure and Energy

As a result of the work being performed at the Taconic work sites, the Catskill Aqueduct would be enabled to convey up to 1,000 million gallons per day (mgd) to the proposed UV Facility for disinfection. No impacts to energy resources within the study area are anticipated as part of this project. Potential impacts to study area infrastructure during construction are discussed in the Potential Construction Impacts section below.

5.2.2.1.16. Electric and Magnetic Fields (EMF)/Extremely Low Frequency Fields (ELF) Analysis

No impacts related to electric and magnetic fields or extremely low frequency fields are anticipated as part of the work proposed at the Taconic work sites. Therefore, a detailed analysis of these parameters was not conducted for these sites.

5.2.2.1.17. Solid Waste

No impacts related to solid waste handling or facilities are anticipated as part of the work proposed at the Taconic work sites. Potential construction impacts are discussed in the Potential Construction Impacts section below.

5.2.2.1.18. Public Health

There is a potential for public health related issues to arise from the construction work proposed at the Taconic work sites. Of particular concern are the potential health effects from particulate matter emissions from fuel-burning sources at these sites, as well as diesel emissions from construction-related activities, especially in relation to their effects on asthma rates within Westchester County. As described in the Potential Construction Impacts section below (Air Quality), during construction of the proposed project, construction equipment would generate particulate matter emissions from the combustion of fuel and construction-related activities. These emissions would potentially be of greatest concern in 2007 or 2008, the potential peak years of construction (depending on when work at these sites commences), when construction-related on-street truck traffic related to the project would need to traverse the truck routes through the local communities.

5.2.2.2. Future Without the Project

The Future Without the Project considers the future through the year 2007 or 2008, the potential peak construction years for work related to pressurization of the Catskill Aqueduct at the Taconic work sites (the peak year depends on the start of work at these locations). No new activity would be generated at the work sites after construction is completed.

In the Future Without the Project, the Taconic work sites and study area would remain largely unchanged from their existing conditions. With the exception of routine maintenance of the Aqueduct and related structures, the Taconic work sites would generate relatively low levels of activity. The cemeteries would continue to operate, and at some point in the future, there may be some modest infill development in the vicinity of Commerce Park, as there is some undeveloped land currently located within this area, but there are no known development proposals before the Town of Mount Pleasant Planning Board at this time within the surrounding area.

In the Future Without the Project, it is anticipated that potential historic resources on the Taconic work sites (such as the Catskill Aqueduct and its related above-ground structures) would not change. It is anticipated that archaeological resources that may currently exist on the work sites would remain undisturbed. No hazardous materials would be introduced and the existing conditions would not be changed within the Taconic work sites study area.

For analysis parameters that performed quantified impact analyses for this scenario, the Future Without the Project conditions are reported in the Potential Impacts section below.

5.2.3. Potential Impacts

5.2.3.1. Potential Project Impacts

When construction at the Taconic work sites is completed, the area would return to its existing condition. No permanent employment would be generated by the proposed work and, in general, the aboveground structures related to the Aqueduct would look the same as they do today. Since there would be no permanent employees at these locations, there would not be a need for potable water or solid waste disposal.

The North Siphon Chamber, the Kensico Siphon Blowoffs, and the South Siphon Chamber do not maintain any stormwater drainage system. In a storm event, runoff from these sites is discharged to the surrounding vegetation areas.

Currently, there are no electrical power requirements for the North Siphon Chamber or the South Siphon Chamber. With the commencement of the pressurization work, there is a possibility that there would be a need for a 220/110V, 100 Amp “house service” which would be used for lighting and security. Con Edison would maintain the power, if necessary for lighting, to the Taconic work sites. The annual amount of energy that would be consumed by these sites is minimal, and comparable to an average household use. All electrical equipment would be housed within an enclosed building and therefore no significant impacts would occur from EMF/ELF.

5.2.3.2. Potential Construction Impacts

The anticipated year of peak construction of the proposed Catskill Aqueduct pressurization work at the Taconic work sites is 2007 or 2008. Therefore, potential construction impacts have been assessed by comparing the Future With the Project conditions against the Future Without the Project conditions for the year 2008. Proposed construction work would take place over one season (September 2007 through May 2008 or September 2008 through May 2009).

5.2.3.2.1. Land Use, Zoning, and Public Policy

Land Use. During the proposed pressurization work, land use at the Taconic work sites would change temporarily in terms of the overall level of activity occurring on each site. Starting in 2007, the Catskill Aqueduct Pressurization work would take place seasonally September through May) for up to four years, although work at the Taconic work sites would only occur over one season. A total of 20 workers would be assigned to each work site at any given time. A maximum of 40 workers would be active at the pressurization work sites at any one time. The workers would park their vehicles on the Kensico campus, roughly one mile to the east, and a shuttle system would transport them to and from the Taconic work sites via Columbus Avenue, Stevens Avenue, and Commerce Street. A fence would be erected around the areas to be disturbed, and a small amount of construction equipment would be stored beside each work site (e.g., an office trailer and a hydraulic crane).

The proposed construction activities would not have any significant adverse land use impacts on land uses surrounding the work sites. The Taconic work sites are all located within cemeteries on land owned by the NYCDEP. By scheduling construction work to occur between 7 AM and 4 PM on weekdays only, impacts to cemetery visitors would be avoided, as cemetery use is highest during the weekend. The construction work that would take place at the North Siphon Chamber and South Siphon Chamber would occur inside the buildings and belowground within the existing Aqueduct. In addition, an area for a small office trailer and material storage would be located on the North and South Siphon Chamber work sites. Parking for staff would be provided on the Kensico campus within an already cleared area, and construction workers would be shuttled to the work sites.

During the peak construction period, there would be a maximum of two trucks traveling to each of the work sites each day. Shuttle buses would run between the Kensico campus and the Taconic work sites during the morning arrival (6:30 to 7:30 AM) and afternoon departure (3:30-4:30 PM). The addition of this traffic to the local roadways within the study area would be negligible, and would therefore not result in a significant adverse impact to land use.

Although work at the Kensico Siphon Blowoffs would occur underground, one of the southbound lanes on the Taconic State Parkway would need to be closed periodically for delivery and pickup of construction materials. (The blowoffs are located immediately to the west of the parkway between the guide rail and the MTA Harlem line railroad tracks.) The temporary lane closure would require approval from NYSDOT. In the past, the westernmost southbound lane has been closed periodically during inspections of the Catskill Aqueduct, and no significant

land use or traffic impacts were experienced. Given this precedent, the proposed construction work is not anticipated to have a significant impact.

Zoning and Public Policy. Neither the Town of Mount Pleasant's zoning regulations nor the County's or Town's public policies would apply to the proposed Catskill Aqueduct pressurization activities at the Taconic work sites. No new structures would be constructed and most of the work would be conducted within the interior of existing buildings or underground within the aqueduct.

5.2.3.2.2. Visual Character

In order to secure the construction site and provide a safe working environment, a temporary fence would surround the construction areas during the seasonal construction period. The fence would be a temporary visual impact at the Taconic work sites for the duration of construction. Since construction is only anticipated to take place over one season (September through May), these adverse impacts are considered temporary and therefore not significant. Workers would access segments of the Catskill Aqueduct between the Boat Hole and Catskill Connection Chamber through the two Siphon Chambers. This work would all be performed below grade and therefore would create no impacts to visual resources of the study area.

North and South Siphon Chambers. During the construction period, there would be construction equipment and a small office trailer stored at both work sites. Both Siphon Chambers are located in Cemeteries (the North Siphon Chamber is located within Mount Eden Cemetery and the South Siphon Chamber is located within the Gate of Heaven Cemetery). The work at these sites would be temporary, and since these sites would be used as access points for the below grade work, workers would be predominantly below grade and therefore not disturb the overall serene environment of the cemeteries. Therefore, no impacts on the study area visual character are anticipated from construction activities at the Siphon Chambers.

5.2.3.2.3. Community Facilities

Local Emergency Services representatives would work with the NYCDEP and its contractors to establish a safety and emergency response plan that would adequately assess the construction activities and identify needs. In the event of an emergency, the construction workers at the work site would activate the response plan. It is not anticipated that these needs would result in a significantly adverse impact to services provided in the study area.

5.2.3.2.4. Open Space

The proposed Catskill Aqueduct pressurization work is not anticipated to have a direct impact on open space resources (i.e., increasing the demand) within the vicinity of the Taconic work sites due to the: (1) industrial nature of the work, (2) relatively short time period during which it would occur, and (3) number and types of employees it would generate. Construction workers employed for the proposed pressurization work are not anticipated to utilize open spaces, such as the cemeteries, during their workday. Furthermore, the proposed rehabilitation work would not generate long-term employment.

The potential exists for the construction work at the Taconic work sites to have indirect impacts on the cemetery uses within the study area. These impacts could result from activities associated with construction work. However, this work would be temporary (one season from September through May), and once construction is complete, the area would be returned to its existing condition. During the construction period, no construction workers would park on the interior roadways of the cemeteries, so there would be no impacts to traffic patterns within the cemeteries. In addition, construction work would be conducted inside the buildings and below ground, so noise levels are not anticipated to increase appreciably. Furthermore, no work would occur during the weekend, which is when the largest number of people typically visit cemeteries.

5.2.3.2.5. Neighborhood Character

During the proposed pressurization work, neighborhood character in the vicinity of the Taconic work sites would change temporarily in terms of the overall level of activity occurring on each site. A total of 40 workers would be active at the pressurization work sites at any one time during the peak construction period. As the proposed construction work would occur within existing structures and belowground within the Aqueduct, the potential increase in noise and dust during the construction period would not create a disturbance to the surrounding area. Furthermore, a temporary construction fence would be erected around the areas to be disturbed.

The proposed construction work that would take place at the North and South Siphon Chambers would not have any significant adverse impacts on neighborhood character, as the work would occur within existing buildings and belowground. In addition, construction equipment would be located within a fenced-in area on City-owned property. Construction workers would not park at the Taconic work sites; rather, parking would be provided on the Kensico campus, and construction workers would be shuttled to the work sites. Similarly, the proposed construction work at the Kensico Blowoffs would not affect neighborhood character, as work would occur within the pipes belowground. However, one of the southbound lanes on the Taconic State Parkway would need to be closed periodically for construction access to this site. (The blowoffs are located immediately to the west of the parkway between the guide rail and the MTA Harlem line railroad tracks.) The temporary lane closure would require approval from NYSDOT. See Section 6, Mitigation of Potential Significant or Temporary Adverse Impacts, for more details on how potential traffic impacts would be mitigated. Truck traffic at the pressurization work sites would be minimal with up to two truck deliveries per day. This would not result in a significant adverse impact to the neighborhood character in the vicinity of these sites.

As mentioned above, there are no homes located within the one-quarter mile study area surrounding the Taconic work sites, but there are low-density residential neighborhoods on the west side of Columbus Avenue, and on north and south sides of Stevens Avenue. These roads would be used by the shuttle transporting construction workers from the Kensico campus to the Taconic work sites. However, the additional two trips made by the shuttle per day during peak construction period would not result in a significant adverse impact to these residences.

The exteriors of potential historic structures (including the North and South Siphon Chambers) would not be altered. Therefore, there would be no significant adverse impact to the potentially historic structures.

5.2.3.2.6. Socioeconomic Conditions

Jobs. The peak construction period in terms of peak numbers of workers on the Taconic work sites would introduce a total of approximately 40 construction employees into the study area. These construction workers would have a median salary of approximately $42,200 (based on the salaries of the types of construction workers that would be on-site). Neither Westchester County, nor the Town of Mount Pleasant, would receive any income tax benefits from these construction workers, since neither the County nor the Town imposes personal income tax. If residing in the City of New York, however, the worker would pay approximately $1,400 in taxes per year to the City.

Indirect Effects. The 40 construction workers would likely add money to the local economy through their visits to area businesses (e.g., those located in downtown Valhalla or north of the Kensico Reservoir along Columbus Avenue). The RIMS II multipliers for the construction industry indicate that the sectors that would see the most benefits during construction are retail trade and business services. It is not possible to determine exactly where the workers may conduct business, but it is likely that they would visit gas stations, convenience stores, and restaurants. It should be noted that the economic benefits would likely affect a region larger than the County, since materials may be purchased outside of the County limits. For the complete analysis of indirect effects for the associated UV Facility, see Section 4.7, Socioeconomic Conditions, Potential Construction Impacts.

5.2.3.2.7. Growth Inducement

As stated above, no impacts related to growth inducement are anticipated as part of the work proposed at the Taconic work sites.

5.2.3.2.8. Traffic and Transportation

As stated above in Existing Conditions, no impacts on traffic and transportation are anticipated as part of the work proposed at the Taconic work sites.

5.2.3.2.9. Noise

As stated above in Existing Conditions, no impacts on noise are anticipated as part of the work proposed at the Taconic work sites.

5.2.3.2.10. Air Quality

As stated above in Existing Conditions, no impacts on air quality are anticipated as part of the work proposed at the Taconic work sites.

5.2.3.2.11. Historic and Archaeological Resources

Historic Resources. The proposed project would have limited potential for physical impacts to historic resources. No exterior work would be performed on the South Siphon Chamber. To avoid accidental construction damage to this potentially historic structure during equipment removal and its use as a staging area, NYCDEP would develop and implement appropriate construction protection measures in consultation with SHPO. These protection measures could include structural analyses of the siphon chambers to determine any existing damage or potential weaknesses, establishing protection procedures such as the erection of protective fencing or bracing, and establishing a monitoring program to measure vibrations and vertical and lateral movement.

The proposed project would rebuild the exterior stair of the North Siphon Chamber and potentially install interior lighting. As the stair is currently in a poor state of repair and would be rebuilt to resemble the existing stair (using existing salvageable material), the proposed project would not have an adverse physical impact on the North Siphon Chamber. Stair reconstruction would be designed in consultation with the Secretary of the Interior's Standards for the Treatment of Historic Properties. To avoid accidental construction damage to the North Siphon chamber during its use as a staging area, NYCDEP would develop and implement appropriate construction protection measures in consultation with SHPO. NYCDEP is currently in consultation with SHPO to determine the eligibility of the Catskill Aqueduct for either the State or National Registers of Historic Places. By implementing construction protection measures for the North and South Siphon Chambers and by following the Secretary of the Interior's Standards for the Treatment of Historic Properties for the North Siphon Chamber, no significant adverse impact would occur to the potentially historic Catskill Aqueduct.

Located within the North Siphon Chamber are hundreds of City record books dating back to at least 1907. These books document the acquisition of property for construction of the Catskill Aqueduct. Moved to this building in the late 20th century, they are deteriorating because of the absence of climate and vermin control. Therefore, before the North Siphon Chamber is used as a staging area and then as an access point into the Aqueduct, these historically significant records could be relocated to an appropriate, climate-controlled archive.

Archaeological Resources. No subsurface disturbance is proposed at the Taconic work sites as part of the project. In any case, none of the Taconic work sites are sensitive for precontact- or historic-period archaeological resources due to subsurface disturbance from

construction of the Catskill Aqueduct. Therefore, the proposed project would not have adverse impacts on archaeological resources at the Taconic work sites.

5.2.3.2.12. Hazardous Materials

Hazardous Materials Disturbed During Construction. The Phase I ESA confirmed the presence of hazardous materials in some of the Taconic work sites and indicated the possible presence of additional hazardous materials at most locations. The proposed actions at the Taconic work sites would potentially disturb some of these materials. Any hazardous materials (asbestos, lead-based paint, PCB-containing materials) identified in areas to be disturbed would be properly abated prior to the commencement of construction activities in compliance with all applicable federal, state, and local regulations. If suspect building components not sampled during the Phase I ESA are to be disturbed, these components would be sampled prior to commencement of construction activities and properly abated, if required. Prior to the start of construction, further assessment of soil quality would be conducted in the area of the South Siphon Chamber to determine the extent, if any, of mercury contaminated soil. Mercury was detected at one of the subsurface investigation sampling locations conducted in October 2004. If petroleum storage tanks are identified in areas to be disturbed, the tanks would be properly decommissioned and their contents disposed of off-site according to applicable regulations prior to starting construction. If soil contamination is identified in areas of proposed excavation, plans (i.e., a Soil Management Plan and a Construction Health and Safety Plan) would be prepared to specify the proper handling and disposal of the soils to ensure protection of construction workers and the surrounding community and environment. Therefore, the proposed actions are not anticipated to have an adverse impact with respect to hazardous materials disturbed during construction at the Taconic work sites.

Hazardous Materials Used During Construction. During construction activities at the Taconic work sites, the Contractor may introduce a variety of hazardous materials to the project sites to support the construction activity. The specific types and quantities of hazardous materials stored and used on the construction sites would depend on the nature and extent of activities being performed. In general, various petroleum-related materials would be used to support the operation of vehicles and heavy equipment (e.g., diesel fuel, gasoline, lubricants, glycol) as well as hazardous materials used in the construction process itself (e.g., concrete release agents, adhesives, paints and coatings). Each contractor would provide Material Safety Data Sheets (MSDS) for the construction-related hazardous materials that they would introduce to the project sites. In addition, these materials would be stored and handled in a manner that would prevent improper releases to the environment and/or exposure to site workers, according to applicable Federal, State and local regulations. These measures would be specified in a Construction Health and Safety Plan. Therefore, no significant adverse impacts are anticipated to result from hazardous materials used during construction activities.

5.2.3.2.13. Natural Resources

North Siphon Chamber. No impacts to natural resources at this location during construction are anticipated. Table 5.2-3 summarizes the number and species of trees identified within seventy-five feet of the North Siphon Chamber.

Kensico Siphon Blowoffs (Manholes). Construction operations at the blowoff manholes could impact a small portion of the existing vegetation adjacent to the manholes. Any impacts to the drainage ditch vegetation would be replaced after the completion of construction with on-site restoration.

South Siphon Chamber. No impacts to natural resources at this location during construction are anticipated. Table 5.2-3 summarizes the number and species of trees identified within seventy-five feet of the South Siphon Chamber.

5.2.3.2.14. Water Resources

As stated above, no impacts to water resources are anticipated as part of the work proposed at the Taconic work sites.

TABLE 5.2-3. SUMMARY OF TREES IDENTIFIED AT THE TACONIC WORK SITES

Common Name	Scientific Name	Diameter at Breast Height (inches)												Total By Species
		4-6	6-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	31-33	33-36	>36	
North Siphon Chamber														
Boxelder	Acer negundo	1	--	--	--	--	--	--	--	--	--	--	--	**1**
Black Cherry	Prunus serotina	2	--	--	--	--	--	--	--	--	--	--	--	**2**
Red Oak	Quercus rubra	1	--	--	--	--	--	--	--	--	--	--	--	**1**
Black Locust	Robinia pseudoacacia	1	2	4	1	1	--	--	--	--	--	--	--	**9**
Sassafras	Sassafras albidum	7	2	--	1	--	--	--	--	--	--	--	--	**10**
South Siphon Chamber														
Norway Maple	Acer platanoides	3	4	--	--	1	--	--	--	--	--	--	--	**8**
Tree of Heaven	Ailanthus altissima	2	2	1	--	--	--	--	--	--	--	--	--	**5**
White Mulberry	Morus alba	--	--	--	--	1	--	--	--	--	--	--	--	**1**
White Spruce	Picea glauca	--	2	--	--	--	--	--	--	--	--	--	--	**2**
Black Cherry	Prunus serotina	--	1	--	--	--	--	--	--	--	--	--	--	**1**
Black Locust	Robinia pseudoacacia	--	--	--	--	--	--	1	--	--	--	--	--	**1**
Northern White Cedar	Thuja occidentalis	--	--	--	1	1	--	--	--	1	--	--	--	**3**
	TOTAL BY DBH	**17**	**13**	**5**	**3**	**4**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**44**

5.2.3.2.15. Infrastructure and Energy

During construction, the contractor would be responsible for providing an independent water source of water for drinking and construction uses. The contractor would likely select a method of supplying water from alternate sources to best suit its method of working; therefore, no significant impact would occur to the local water supply system.

The proposed pressurization work on the Catskill Aqueduct would result in periodic shutdowns of this system. The shutdowns could result in potential impacts to a limited number of the upstate communities along the Catskill Aqueduct. These upstate communities located between Kensico Reservoir and the Eastview Site include the Town of Mount Pleasant and Westchester County Water District No. 3. Upstate communities located between the Eastview Site and Hillview Reservoir that could be affected include United Water New Rochelle and the City of Yonkers. All other users have backup connections to either the Delaware Aqueduct, the New Croton Aqueduct, or another supply.

The Town of Mount Pleasant currently relies on two connections to the City's Catskill Aqueduct; 1) near the Catskill Venturi Meter off of Columbus Avenue (Valhalla Pumping Station), and 2) a tap on the Kensico Siphon (Hawthorne Pumping Station) adjacent to the Taconic State Parkway. The Town is currently in the process of commissioning its new Commerce Street Pumping Station, which will replace both the existing Valhalla and Hawthorne Pumping Stations. The Commerce Street Pumping Station is supplied by a tap on the Kensico Siphon of the Catskill Aqueduct. During the refurbishment/reconstruction of the Catskill Aqueduct, the Aqueduct would be shut down and dewatered, so these connections would not be available. Therefore, a 30-inch diameter gravity feed connection could be installed from the Delaware Shaft No. 18 Flow Control Structure to the existing Commerce Street Pumping Station, or a temporary booster pumping station could be installed at the Eastview Site and water main could be installed to convey water from a temporary bypass pumping station on Delaware Shaft No. 19, if one is constructed to supply users south of the Eastview Site, to a connection at Mount Pleasant's Commerce Street Pumping Station.

The gravity feed connection from the Delaware Shaft No. 18 Flow Control Structure would be routed from the Kensico campus heading west along Lakeview Avenue and Wall Street before intersecting Commerce Street. This route consists of public roads and a Mount Pleasant Right-of-Way, which is adjacent to an industrial park (Farrand Controls Division, Ruhle Companies, Inc.), prior to intersecting Commerce Street. Construction would commence in late 2006. Westchester County District No. 3 would obtain water during the Catskill shutdowns via its connections with the Towns of Mount Pleasant and Greenburgh.

The pumped supply from the Delaware Shaft No. 19 could be routed from the Eastview Site to Commerce Street following one of two routes; see Section 7, Alternatives, for a description of these routes.

The installation of a water main to Mount Pleasant's Commerce Street Pumping Station would be similar to a typical utility installation, and would cover approximately 100 linear feet per day.

Two options currently exist for the provision of water to the communities between the Eastview Site and Hillview Reservoir; either option would be implemented prior to the start of the pressurization work. The first option would involve the construction of a 36-inch water main and temporary pumping station at Delaware Shaft No. 19 to convey Delaware Aqueduct water to the impacted upstate communities between the Eastview Site and Hillview Reservoir; a new connection from the Delaware Shaft No. 19 to the Catskill Aqueduct would connect downstream of the existing CCC in order to provide Delaware water to users between the Eastview Site and Hillview Reservoir. This work would take place along the eastern boundary of the Eastview Site. Another option for conveying water to users between the Eastview Site and Hillview Reservoir is to backfeed water up the Catskill Aqueduct from Hillview Reservoir. Either of these options would allow water to be supplied to United Water New Rochelle and the City of Yonkers while the upper portion of the Catskill Aqueduct (Kensico to Eastview) is shut down for rehabilitation and pressurization.

Upon completion of the pressurization work, the Catskill Aqueduct would be returned to service. These proposed engineering options to provide water to the suppliers located between Kensico Reservoir and Hillview Reservoir would prevent potential impacts to upstate suppliers during construction activities. Therefore, no significant adverse impacts are anticipated.

Construction staging would be limited to the area within construction fencing. A row of hay bales would be installed inside the construction fence to collect the minimal dust and soil anticipated from the equipment wash-water. Therefore, no significant impacts are anticipated on the existing stormwater drainage system in the study area.

The proposed pressurization work would involve installation of some minimal temporary energy demands. Temporary electrical service would be provided by an 110/220V, 400A service. The North Siphon Chamber and South Siphon Chamber would have an area for a small office trailer and material storage. Con Edison would be responsible for supplying this temporary power independently of the existing system. The Kensico Siphon Blowoffs would have no power needs. No significant impacts are anticipated to the existing energy supply within the study area; therefore, no significant adverse impacts are anticipated on the existing electrical utilities in the study area.

Natural gas would not be utilized during construction. No connection to the existing gas main would be made; therefore, no significant adverse impacts are anticipated on the existing gas utilities within the study area.

5.2.3.2.16. Electric and Magnetic Fields (EMF)/Extremely Low Frequency (ELF) Fields Analysis

Since temporary electrical equipment would be located several hundred feet away from the nearest receptor locations, there would be no significant increase above existing magnetic field levels. In addition, all electrical equipment would be housed within an enclosed building; therefore, no impacts related to EMF/ELF are anticipated.

5.2.3.2.17. Solid Waste

Construction activities would produce worker-generated solid waste and miscellaneous construction debris. All worker-generated and miscellaneous construction debris would be removed from the work sites by a private hauler.

At each of these work sites the peak number of workers would be a maximum of 20 workers, each generating approximately 13 lbs/week of solid waste. Therefore, total amount of solid waste generated would be 260 lbs/week (20 x 13 lbs/week) for each site. This volume of solid waste would be collected and transported off-site by a private hauler. No operations employees would be stationed at the sites after construction.

Additional solid waste would be generated as a byproduct of construction. This material would be highly variable in nature; it would include cardboard, wood, block, plastics, scrap steel, ductwork, sheetrock and pipe wire. This amount of waste would be added to the worker-generated waste as described above. The increase in solid waste generated from construction activities would be minimal. The quantity of solid waste generated during construction would be negligible compared to the amount handled by the County solid waste disposal system. It is anticipated that the solid waste produced by construction workers would not result in a significant adverse impact on local or regional solid waste.

5.2.3.2.18. Public Health

As noted above in Potential Construction Impacts, Air Quality, the proposed construction activities at work sites are not anticipated to have any significant or adverse impacts on air quality. Therefore, no public health impacts are anticipated as a result of the proposed construction activities at the Taconic work sites.

5.2.3.2.19. Permits and Approvals

TABLE 5.2-4. POTENTIAL DISCRETIONARY APPROVALS FOR TACONIC STATE PARKWAY WORK SITES UNDER THE PROPOSED UV FACILITY PROJECT

Regulatory Requirement	Catskill Aqueduct Pressurization	Taconic Work Sites:		
		North Siphon Chamber	Siphon Blow-offs	South Siphon Chamber
New York State Department of Environmental Conservation				
• Protection of Waters Permit (Environmental Conservation Law, Article 15, Title 15; 6NYCRR Part 608)			√	
• Freshwater Wetlands Permit (Environmental Conservation Law, Article 24; 6NYCRR Parts 663 through 665)			√	
• State Pollution Discharge Elimination System (SPDES); SPDES General Permit (GP-02-01) for Storm Water Discharge from Construction Activity (Environmental Conservation Law, Article 17, Title8; 6 NYCRR Parts 750 through 757)			√	
New York State Department of Parks, Recreation, and Historic Preservation				
• Project Approval (National Historic Preservation Act of 1966 and the New York State Historic Preservation Act of 1980)	√	√		√
New York State Department of Health				
• State Environmental Review Certification for New York Revolving Fund	√	√	√	√

TABLE 5.2-4. POTENTIAL DISCRETIONARY APPROVALS FOR TACONIC STATE PARKWAY WORK SITES UNDER THE PROPOSED UV FACILITY PROJECT

Regulatory Requirement	Catskill Aqueduct Pressurization	Taconic Work Sites:		
		North Siphon Chamber	Siphon Blow-offs	South Siphon Chamber
Program (Public Health Law, Sections 1161 and 1162; 21 NYCRR Part 2604)				
• Public Water Supply, Permit to Construct and Operate (NYCRR Title 10 Part 5-1.22)	√			
New York State Department of Transportation				
• Highway Work Permit (Title 17, Part 126 of NYCRR)	√		√	
• Traffic Enhancement Permits (Title 17, Part 126 of NYCRR)	√		√	
Westchester County Department of Planning				
• Planning Board Review (Section 239 L, M, and N of NYS General Municipal Law and Section 277.1 of County Administrative Code)	√			
Westchester County Department of Public Works				
• Building Approval	√			
• Approval of County Road Access (Westchester County Administrative Code)	√			
• Westchester County Road Opening Permit (Westchester County Administrative Code)	√			

TABLE 5.2-4. POTENTIAL DISCRETIONARY APPROVALS FOR TACONIC STATE PARKWAY WORK SITES UNDER THE PROPOSED UV FACILITY PROJECT

Regulatory Requirement	Catskill Aqueduct Pressurization	Taconic Work Sites:		
		North Siphon Chamber	Siphon Blow-offs	South Siphon Chamber
Westchester County Department of Health				
• Application for Approval of Plan for Public Water Supply Improvement (County Sanitary Code, Sec. 873.707.1)	√			
Town of Mount Pleasant Planning Board				
• Site Plan Approval (Mount Pleasant Code, Section 218-97)	√	√	√	√
• Freshwater Wetlands Permit (Mount Pleasant Code, Section 111.1)			√	
Town of Mount Pleasant Building Department				
• Building Permit (Mount Pleasant Code, Section 68-7)	√	√	√	√
• Excavation and Removal of Soil (Mount Pleasant Code, Section 96-5)			√	
• Construction Activity during hours other than normal business hours[1]		√		√
Town of Mount Pleasant Highway Department				
• Curb/Street Cut Access Permit (Mount Pleasant Code, Section 188)	√			

[1] A Noise Variance may be needed for the operation of ventilation fans during construction work within the Catskill Aqueduct.