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PHASE 1A
CULTURAL RESOURCES
SENSITIVITY EVALUATION

WOLFE'S POND
AND
SWEET BROOK WATERSHEDS
STORM WATER AND SANITARY DRAINAGE PLAN
SOUTH RICHMOND, STATEN ISLAND, NEW YORK

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STORM WATER AND SANITARY DRAINAGE PLAN
SOUTH RICHMOND, STATEN ISLAND, NEW YORK**

**NEW YORK CITY
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

PREPARED BY

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MANAGEMENT SUMMARY

A Phase 1A cultural resources sensitivity survey was conducted within the Wolfe's Pond and Sweet Brook Watersheds located in South Richmond, Staten Island, New York. This survey was in response to the New York City Department of Environmental Protection's drainage management plan for these watersheds that includes the construction of in-road sanitary wastewater collection lines and Best Management Practice (BMP) features.

Background research indicated that prehistoric people occupied and utilized the land at two locations within the Wolfe's Pond Watershed and one dubious site within the Sweet Brook Watershed. Nine loci within the project areas, which will be impacted by the proposed construction work, have been determined to have high or medium archaeological sensitivity or potential for containing evidence of prehistoric occupation. Therefore, a Phase 1B investigation involving archaeological testing is recommended at these locations: BMP's WP-1 and WP-3, and Addison and Maxwell Avenues (proposed or paper streets) within the Wolfe's Pond Watershed; BMP's SB-1, SB-2 (two loci), and a section of both Arthur Pond and Grantwood Avenue, within the Sweet Brook Watershed.

One historic feature, the foundation of a dwelling, was located at the proposed BMP site WP-3 at the south end of Wolfe's Pond. (A prehistoric site may be located here as well.) Phase 1B archaeological testing is recommended at this location. The proposed construction of in-road sanitary sewer lines and BMP features will have no adverse impact upon any other historical resources.

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I. INTRODUCTION

A. PROJECT DESCRIPTION

The New York City Department of Environmental Protection proposes to install sanitary wastewater collection lines and a storm water management system within the Wolfe's Pond and Sweet Brook watersheds located in South Richmond, Staten Island, New York. This project will include the construction of in-road sanitary sewer lines for the collection and conveyance of wastewater for treatment at the Oakwood Beach Water Pollution Control Plant. In addition, storm water drainage facilities will be constructed including in-road storm water sewer lines, and storm water controls termed Best Management Practices (BMPs). The BMP features will consist of outlet stilling basins, extended wetland detention ponds, stream restoration and re-creation and the replacement of culverts.

This report presents the results of a Phase 1A cultural resources sensitivity survey conducted within the two watershed project areas. This study was conducted in accordance with the New York City Environmental Quality Review (CEQR) regulations. The objective of this cultural resources investigation was to evaluate the historic and prehistoric sensitivity of the watershed project areas.

B. STUDY AREA LOCATION

The Wolfe's Pond Watershed is generally bounded by Woodrow Road on the north, Foster Road-Seguine Avenue on the west, Huguenot Avenue on the east, and Raritan Bay on the south (FIGURE 1, 2).

The Sweet Brook Watershed is adjacent to the north end of Wolfe's Pond Watershed. It is generally oriented west-east and extends from Huguenot Avenue on the west to Ocean View Cemetery on the east. The north and south boundaries of the watershed are irregular and cannot be identified with one particular street.

Based on CEQR guidelines and previous Landmarks Preservation Commission comments on identical watershed study projects, the area of concern for archaeological resources in this investigation is limited to that land which may experience direct, subsurface construction-related impacts (see Historical Perspectives, Inc., 1997;

NYCLPC 1997). Standing structures were not investigated or assessed except those listed as New York City Landmarks or as eligible for city, state, and/or national recognition.



Figure 1
U.S.G.S. Quad/Arthur Kill
scale 1:24000/
86% reduction

NYC DEP
Project Location
/approximate



Figure 2



Wolfe's Pond and Sweet Brook Watersheds

II. ENVIRONMENTAL OVERVIEW

A. INTRODUCTION

The Wolfe's Pond and Sweet Brook Watersheds are located in southeastern Staten Island and encompass an area of approximately 2,459 acres. The topography of this area slopes from north to south and all streams flow southerly toward Raritan Bay. The proposed watersheds drainage plan will utilize the topography and natural features of this region to manage storm water flow through the use of existing streams and wetlands and storm water controls (BMPs).

The following discussion is a synopsis of the principal environmental characteristics within each watershed.

B. WOLFE'S POND WATERSHED

This watershed is situated within the Coastal Plain physiographic province (Schuberth 1968). The underlying deposits in the region were laid down during the Cretaceous period some seventy million years ago and consist of sands and clays called the Raritan-Magothy formation (Gratacap 1909:175-176). Glacial deposits, in turn, overlie those of the Cretaceous period and date to about 14,000 years ago. Glacial till and outwash sediments consisting of sands, silts and gravels form the region's surface features and deposits, and are of post-glacial origin, that is, they began forming approximately 14,000 years ago (Kraft and Chacko 1978:41).

In general, the topography of this watershed can be characterized as low and flat to gently sloping. The local elevations range from approximately 135 feet above mean sea level at Woodrow Road on the north to around five feet above m.s.l. near the southern end of Wolfe's Pond.

Wolfe's Pond Watershed extends over 600 acres and contains both developed and undeveloped land. A large portion of this watershed is Wolfe's Pond Park which consists of 317 acres. Wolfe's Pond is a large natural feature surrounded by wooded areas containing streams and freshwater wetlands which flow into the pond. Acme Pond, another large pond, lies to the north of Hylan Boulevard in an undeveloped section of the park.

Surrounding the undeveloped areas and park are residential and commercial structures, roads, and utility lines. A major community facility within this watershed is

Tottenville High School. The Richmond Parkway, Hylan Boulevard and the Staten Island Rapid Transit line are the major transportation corridors that pass through the watershed.

C. SWEET BROOK WATERSHED

This watershed is contiguous to the north end of the Wolfe's Pond Watershed, extends east-northeast and is also part of the Coastal Plain physiographic province. Its geology and soils are identical to that of its neighbor to the southwest.

The Sweet Brook Watershed covers an area of 1,870 acres. It contains about thirty-one acres of undeveloped Bluebelt property owned by New York City. The local topography is also flat to gently sloping, with little change in elevation.

Annadale Wedge Pond is the principal water source within the Sweet Brook Watershed. The land surrounding the pond is undeveloped, wooded, and contains unpaved roads; this property is part of NYCDEP's Bluebelt system. Water from Annadale Wedge Pond drains southeasterly toward the Richmond Parkway. Another stream originates just north of Grantwood Avenue, to the northeast of the pond, and flows and meanders southwesterly to Jefferson Boulevard and beyond to the Staten Island Rapid Transit Railroad.

Arthur Pond is located northeast of the juncture of Annadale Road and the Staten Island Rapid Transit Railroad. Although it is labeled as a pond on watershed maps, it is now a wetland area rather than a true pond.

The Sweet Brook Watershed is mostly developed; it contains residential and commercial structures, community facilities, roads and utilities. The Richmond Parkway and Staten Island Rapid Transit Railroad line pass through the watershed.

III. BACKGROUND RESEARCH: PREHISTORIC ARCHAEOLOGICAL RESOURCES

A. INTRODUCTION

Before European settlement, Native Americans occupied Staten Island for 10,000 years. Evidence of PaleoIndian occupation, the earliest occupants of the Island, has been found in Rossville and Kreisherville (Kraft 1977:6). These people were hunter-gatherers who occupied high, well-drained sites overlooking what is now the Arthur Kill.

Archaic Period (c. 8000 B.C.–1000 B.C.) hunters and gatherers consisted of small bands that occupied sites along the coast of Staten Island, its estuaries and streams, and inland areas. A large number of Archaic Period sites have been found in various environmental settings which suggests a seasonal pattern of migration in search of food and other resources. Typically, such sites are located on high ground overlooking watercourses.

During the Woodland Period (c. 1000 B.C.–1600 A.D.) of prehistory, Native American subsistence practices continued to be hunting, gathering and fishing. However, several important changes took place. Horticulture began during this period and later became well established with the cultivation of maize (corn), beans and squash. Clay pottery vessels replaced soapstone bowls, tobacco pipes and smoking were adopted, and the bow and arrow replaced the spear and javelin. The habitation sites of the Woodland Period Indians increased in size and permanence. A large number of Woodland Period archaeological sites have been found on Staten Island in a variety of environmental settings. A favored situation for occupation during this period was well-drained ground near stream drainages and coastal waterways.

The settlement of New Amsterdam (New York) by the Dutch in the early 1600s initiated the Contact-Early Historic Period between the Indians of Staten Island and the Europeans. A regular pattern of Indian-European trade developed and the Indians began to acquire European-made tools, ornaments, and other items of material culture. At the time of European contact, the Indians who inhabited Staten Island were Munsee speaking groups known as the Lenape or Delaware (Goddard 1978a, 1978b). Journal accounts by European explorers, settlers and travelers describe Indian settlements and lifeways. However, only a few Contact-Early Historic Period sites have been found on

Staten Island: at Wards Point, Old Place, Corsons Brook, Travis, New Springfield and PS 56 R (Boesch 1994:16; HP Inc. 1996).

Within the Wolfe's Pond and Sweet Brook watersheds, soil drainage is a major determinant of prehistoric site potential. Poorly drained swamps, bogs, and wetlands were productive hunting and gathering areas for the Indians but their poor drainage precluded settlement within them. However, well-drained terraces, knolls, or flat ground adjacent to poorly drained settings are likely site locations because they represent suitable living areas from which the resources of the watershed could have been exploited.

B. PREHISTORIC SITES IN THE PROJECT AREA

Background research indicates that several prehistoric sites were located within the project areas. These are documented sites that we describe here in order to provide a context for the area and to identify potential sites. Some of the early reported sites are vague with respect to their geographic location, and cultural remains that were found. Thus, it is often difficult to place them precisely on today's landscape. A summary of these sites for each watershed is presented below:

1. Wolfe's Pond Watershed

As early as 1909, a prehistoric site was recorded at the south end of Wolfe's Pond near its outlet to Raritan Bay (Boesch 1994:105). The site was described as a shell midden that dated to the Woodland Period, c. 1000 B.C. to 1600 A.D. In 1994, Eugene Boesch of the N.Y.C. Landmarks Preservation Commission stated that "at least part of the site probably remains intact."

Another prehistoric site was located at Wolfe's Pond Park near the northwestern side of Wolfe's Pond. This site lies to the east of Holton Avenue. Archaeological shovel tests were conducted in this area in 1984 that resulted in the recovery of lithic debitage or waste flakes, the discarded by-product of stone tool manufacturing or refurbishing activities by the Indians (Boesch 1994:113).

In general, that portion of the Wolfe's Pond Watershed lying between Hylan Boulevard and Raritan Bay has been characterized as highly sensitive for the presence of prehistoric resources by the New York City Landmarks Preservation Commission (Boesch 1994:22; U.S.G.S. Map).

2. Sweet Brook Watershed

A prehistoric site called "Woods of Arden" was recorded in 1896 by the Natural Science Association of Staten Island (Boesch 1994:118). The NYC Landmarks Preservation Commission's map of prehistoric sites locates this site in an area to the east of Arden Avenue on the south side of Amboy Road. However, this prehistoric site location is probably in error. Reginald P. Bolton (1922:195) indicated that the site was located "south of the Woods of Arden at the mouth of the Great Kills." Bolton (Ibid 234) describes the Woods of Arden site as "on the shore" near the mouth of the Great Kills but it was not "extensive."

IV. BACKGROUND RESEARCH: HISTORICAL RESOURCES

Although nearby Manhattan saw settlement by the Dutch at New Amsterdam in the first half of the seventeenth century, Staten Island remained Indian land. Michael DePauw sought to colonize the island in the 1630s, but failed and sold his interests to the Dutch West India Company. A settlement established in 1638 by Peter DeVries was destroyed by Indians and a 1639 settlement led by Cornelius Merlyn saw the same fate (Morris 1898:29).

When the British won New Amsterdam from the Dutch in 1664, few colonists lived on Staten Island. The English moved quickly to settle the island. The Skene 1907 map recreating early English land grants on Staten Island includes surnames like Tice, Scidmore, Cole, Pew, Holmes and Shotwell in the southeastern area of the island that concerns this project.

Labadenist missionaries Jasper Dankers and Peter Sluyter visited the island in 1679, reporting that "there are now about a hundred families on the island of which the English contribute the least portion and the Dutch and French divide between them about equally, the greater portion" (Dankers & Sluyter 1867:142). The settlers, then, were not the patentees, but Dutch who remained after the English takeover and Huguenot French who sought religious freedom in the New World.

The 1933 Loring McMillan composite map of Staten Island during the years 1775 to 1783 lists residents, not landowners, and here we see the early ethnicity carried into this later century and the creation of the United States. Names in and near the project area are Perine, Latourette, Journeay, Menee, Van Duyne, Cole, Segen and Merseau.

British forces gained control of Staten Island early in the Revolutionary War and held it throughout the war. Many families saw British and Hessian officers quartered with them. The British presence led to the making of a number of maps during this period. These provide a view of the state of development of the South Richmond area at this period.

Two maps are especially interesting. The 1781 Taylor and Skinner map, a British map in the British Museum, provides geographical features, roads and houses. Wolfe's Pond is just a small finger inlet piercing the shoreline. Amboy Road and Annadale Road

appear, unnamed, as major roads, as does Huguenot Street. Buildings dot the sides of these roads within the project area.

The French map, "Plan No. 31 du Camp Anglo-Hessois dans Staten Island, de New York, 1780-1783" appears less accurate in shape and distances. It was an attempt to record where the British had military presence on the Island. This map, however, names residents of the houses indicated and was probably made with the help of local informants. This appears to be the map from which Loring McMillan took the resident names noted above. Two forges are also noted on Amboy Road. Few geographical features are noted. Wolfe's Pond is not indicated, although the A. Manee house west of it is shown. (This house is still extant, but is outside the project area.)

A post-Revolutionary map of Staten Island provides a similar picture of South Richmond, with a few new details. On the 1797 "New and Correct Map of Richmond County," Annadale is represented on Amboy Road by the tavern, "The Sign of the Ship." Wolfe's Pond, unnamed, is shown to have a natural origin, pinched off at the shoreline by natural barriers to the sea. The area is built up with more than forty buildings present.

The 1797 map also shows the early versions of several other major South Richmond roads. The road that is today Annadale Road leaves early Amboy Road on an angle at the site of the Sign of the Ship Tavern and runs toward Richmondtown. An earlier version of Huguenot Street runs northwest from Amboy Road, passing the early Stony Brook Huguenot church and cemetery on what is now Woodrow Avenue. Portions of each of these roads fall into the project area.

Few maps exist depicting Staten Island in the early years of the 19th century. During this period farming and fishing continued to be the primary activities in southeastern Staten Island. Small village centers grew up around local industries such as forges and grist mills. Oysters had long been important to the economy and when the natural bounty began to wane, measures were taken to control and replenish the oyster beds. Seed beds were cultivated in the near shore waters off Prince's Bay with young oysters brought in and planted from Virginia. The beds flourished and the neighborhood southwest of the project area provided jobs and wealth to the South Shore, as the region from Great Kills to Billop's Point came to be called.

In the second half of the 19th century, the development of a railroad from Stapleton to Tottenville set a new blueprint for development on the South Shore. The railroad opened in 1860 and the stations became village centers. Huguenot, Annadale

and Eltingville, the three villages in which the project area is located, were all named and created by the Staten Island Railroad. Each was part of an earlier neighborhood on one of the main roads, but the placement of the train stations created new village centers. Annadale was named for Anna S. Seguire, whose family invested heavily in the new railroad (Leng & Davis 1930:337). Eltingville was named for the Elting family who had come to Staten Island from Newburgh, New York, earlier in the 19th century (Ibid: 338, 895). The Post Office at Eltingville continued to be called South Side until 1872 in spite of the new name. In 1872, the Post Office name was changed to Sea Side, creating a third name for this area.

Several areas got place names from an unrealized 1883 plan to build a railroad linking the north and south shores. Algernon, an area in Eltingville, was to be the name of the southern terminal station, after Algernon S. Johnston (Ibid: 337).

In 1898, Staten Island became part of New York City, with the borough hall set at St. George on the northern shore. In the past century, this most rural of New York's five boroughs has urbanized as development filled former farmlands. Some open space on the Island has been reclaimed by the extensive green belt and blue belt projects, but it is not uncommon to find oneself walking in the woods on the traces of paved streets and poured sidewalks for subdivisions laid out, but never built.

Historic Archaeological Sites and Historic Structures within the Wolfe's Pond and Sweet Brook Watersheds

While Staten Island boasts many historic sites and structures, few of them are listed on the city, state or national registers of historic places. No 18th century structures, indicated on the Revolutionary War era maps, have been identified and placed on any registers.

Four historic resources are located adjacent to but outside the Wolfe's Pond watershed. They can be located, by the corresponding number, on Figure 4B.

1. Abraham Manee House, 509 Seguire Avenue, a NYC Landmark and considered eligible for the State and/or National Register of Historic Places.
2. Joseph H. Seguire House, 440 Seguire Avenue, a NYC Landmark and listed on the State and/or National Register of Historic Places.

3. Memorial Church of the Huguenots, 5475 Amboy Road, is a NYC Landmark designed in 1924 by Ernest Flagg and considered eligible for the State and/or National Register of Historic Places.
4. Woodrow Methodist Church, an 1842 structure at 1101 Woodrow Road, is a NYC Landmark and also listed on the State and/or National Register of Historic Places.

Proposed sewer installations in the streets in the vicinity of the Manee and Seguine House were already analyzed in the adjacent watershed study, *The Blue Heron, Arbutus Creek, and Lemon Creek/Sandy Brook Watershed Drainage Plans FEIS*, NYCDEP, September 1998. In addition, there are no sewer installations or BMP sites that would affect the two church landmark sites.

The Preservation League of Staten Island has identified an additional historic resource in the Sweet Brook Watershed, noted as Historic Resources number 2 on Figure 5B. "Little Woods of Arden House," is a frame structure at 4746 Amboy Road, east of Blue Heron Park, and west of Arden Road. It is in a residential neighborhood, its possibly historic yard areas carefully removed from any proposed actions.

Only one National Register structure is present in the total, combined watersheds project area, noted as Historic Resources number 1 on Figure 5B. St. Alban's Episcopal Church and Rectory at 76 St. Alban's Place dates to 1860. The church is a prime example of the Carpenters' Gothic Style with board and batten vertical siding and many examples of wooden tracery (Willensky and White 1988:50). No sewer work is planned along the streets near this structure so the work will have no impact on this site.

Only one outside site is truly contiguous to an area of planned work. The White Dental factory site is just outside the Wolfe's Pond watershed at the outlet of the pond. Joseph and Stephen Seguine erected a factory here at the shore on Seguine's Point in 1860. Their first enterprise was the extraction of palm nut oil. Failure in this business led them to try candlemaking. Later they rented the factory to William Tweed who made sewer and drain pipes. In 1865, the Seguine brothers sold the factory to Algernon Johnston, who set up a dental manufacturing plant. This plant was acquired by the S.S. White Dental Company of Philadelphia (Morris 1989 11:99, 472). By 1887 the White Dental plant employed 200 men and was the site of the first successful liquefaction of nitrous oxide in the United States (Bayles 1887: 740). In 1930, 686 people worked in the plant (Leng & Davis 1930:640).

Today the industrial plant has been razed and the site is undergoing hazardous waste cleanup.

Foundations near White Dental and near or within the area to be impacted by BMP WP3 appear to be unrelated to White Dental. A local informant told of several cottages – two big houses and three small bungalows – that existed here at the shoreline in the 1920s and 1930s. They were part of a summer colony centered on the building currently known as Anderson's Annex Tavern Restaurant. Owner Thelma Danielson is a daughter of the original owners. The resort included a camping area that extended north to Wilbur Street and included a cow pasture that was inundated in an earlier expansion of Wolfe's Pond. Mrs. Danielson reportedly has photographs of this area taken when these buildings were standing (McMann 1998). For a detailed description of the history of the parcel with the foundation remains, see the appendix.

Finally, one area to be impacted is called on the construction maps the Annadale Wedge Pond. This appears to be an old sand and gravel quarry. We checked historic maps and accounts for any indication that this quarry had an early origin. It does not appear on any historic maps and is not mentioned in the extensive discussion Leng and Davis present on quarries and other geological resources such as peat bogs. We conclude that this quarry is of 20th century origin. Its proximity to the Richmond Parkway and its location amidst a grid of paved paper streets suggest that it may have originated as a gravel source for the building of the Parkway.

In summary, we have found no historic sites or buildings that will be impacted by the work planned for this project.

V. FIELD INVESTIGATIONS

A. INTRODUCTION

The Wolfe's Pond and Sweet Brook Watersheds were subject to intensive field inspections. Fieldwork included pedestrian surveys of undeveloped land and "paper" or unpaved streets in areas of potential impact, and vehicular surveys of the roads within the project areas. In particular, the field investigation focused on the storm and sanitary sewer line routes and the locations of "Best Management Practices" sites that are being planned to control and cleanse storm water runoff. Field investigation included the examination of potential prehistoric and historic period archaeological resources.

The proposed storm water and sanitary sewer network will be constructed within existing paved roadways and unpaved paper streets (Allee King Rosen & Fleming, Inc. 1998a, b). The storm water BMPs will be constructed within New York City owned land including parkland, Bluebelt properties, street rights-of-way, and one New York State Department of Transportation right-of-way. All of the proposed BMPs were examined and are described and assessed. The archaeological sensitivity, i.e., the potential for containing evidence of prehistoric (Indian) or historic cultural resources, of each area is rated as LOW, MEDIUM, or HIGH.

B. WOLFE'S POND WATERSHED

WP-1:

This BMP is located between the east bound lanes of Richmond Parkway and Drumgoole Road East in the area just north of Vernon Avenues on the west and Woodhull Avenue on the east. An extended detention basin of two acres is planned for this site.

The proposed site is a depression lying between the parkway and Drumgoole Road which contains a small stream and adjacent wetland. Water flows southerly from this area through a culvert under Drumgoole Road East. The site is generally wooded and undisturbed. Landscape disturbance is clearly evident along each roadside and on the easterly side of the depressed area. On the north, along Richmond Parkway, the land has been graded and is grass covered for a width of about fifty feet. On the south, along Drumgoole Road East, roadside grading extends for about ten feet in toward the proposed basin site. The land to the east has been graded, shaped and is presently an open field. The land on the western edge of the BMP appears to be undisturbed.

This area has MEDIUM potential for containing evidence of prehistoric occupation.

WP-2:

A wetland system extending over two acres is planned for an area located south of the intersection of Chisholm Avenue and Eylandt Street. A New York City school building is located on the north side of Eylandt Street near the BMP site.

The landscape at this proposed BMP site is highly disturbed. A large diameter metal pipe extends southerly from beneath Chisholm Avenue to an open drainage ditch

that channels the water into a wetland. The landscape is generally low, wet and wooded. Extensive grading and landfilling has taken place along both Chisholm Avenue and Eylandt Street. Several large earth piles are present in the wooded area south of Eylandt Street.

This BMP site has LOW potential for containing evidence of prehistoric occupation.

WP-3:

This BMP is located at the southern end of Wolfe's Pond. Plans call for stabilizing the weir and constructing a low-flow system at the existing concrete weir at the southern end of Wolfe Pond (FIGURE 3).

The proposed site is flat, wooded, and is covered with dense underbrush. A foundation of a dwelling is visible in this area. The foundation consists of poured concrete walls, twelve inches thick and measuring eighteen feet by eighteen feet. A lip on top of the wall suggests that a frame structure was seated on the foundation. According to a local resident, three summer bungalows and two large houses were once located along the shore of Raritan Bay to the east of Holton Street (McMann, personal communication, 1998). Documentary research was conducted on the historic foundation remains that appear to be from a frame structure built between ca.1910 and ca.1917. See the appendix.

A prehistoric site, a shell midden, has previously been identified at the south end of Wolfe's Pond (see Section III of this report).

This BMP site is generally undisturbed and has HIGH potential for containing evidence of prehistoric and historic period occupation.

ADDISON AVENUE AND ALBOURNE AVENUE EXTENSION:

These roads do not exist; they are presumably proposed streets. Their location is shown on the Wolfe's Pond Watershed map as lying between Woodhull Avenue on the east, and a stream on the west that extends north-south between Drumgoole Road East and Amboy Road (Allee King Rosen & Fleming, Inc. 1998a, b). Both sanitary sewers and storm sewers are planned within these streets.

The landscape between Woodhull Avenue and the unnamed stream is flat to gently sloping from north to south, and wooded. Roadside areas are highly disturbed, i.e., along Drumgoole Road East, Woodhull Avenue, and Amboy Road. A concrete retaining

wall and culvert are located at the south end of the stream where it goes beneath Amboy Road. However, the interior portion of this property, to the east of the stream, is undisturbed. This zone has HIGH potential for containing evidence of prehistoric occupation.

MAXWELL AVENUE:

This street does not exist; it is presumably a proposed street. Its location is shown as extending south of Hylan Boulevard between Irvington Street on the east and Cornelia Avenue on the west. The installation of a storm water sewer line is planned for Maxwell Avenue (Allee King Rosen & Fleming, Inc. 1998a).

This area is wooded and undeveloped. A small wetland area borders the south side of Hylan Boulevard. The landscape slopes from south to north. An unnamed prehistoric site was previously located where the Bernstein Intermediate School now stands, some 200 meters (642 feet) to the east of proposed Maxwell Avenue. The area of the proposed sanitary sewer is undisturbed and has MEDIUM potential for containing evidence of prehistoric occupation.



FIGURE 3: The south end of Wolfe's Pond, the proposed location of BMP WP-4. View looking southwest. (E.J. Lenik photographer 1998.)

C. SWEET BROOK WATERSHED

SB-1:

This proposed BMP is located on the north side of Annadale Wedge Pond. Annadale Wedge Pond lies between Heenan Avenue on the west, Stafford Avenue on the north, Belfield Avenue on the east and Ramona Avenue on the south. An extended detention area covering two acres is proposed for this site.

Annadale Wedge Pond is a deep pit that appears to be the result of soil mining activity. There is a drain pipe at the northwest corner of the pond through which water flows into the pond. The bottom of the pond is a low marshy area and water exits from the pond through a drain pipe at its south end. The pond was once enclosed by a ten foot high chain link fence, however most of the fence has been torn down, but some portions remain standing. The land bordering the edge of the pond is highly disturbed for twenty-five feet and more in some places. Unpaved "paper" streets extend toward the pond from several directions.

The landscape is wooded and undisturbed at the north end of the pond, beyond the twenty-five foot perimeter of the pond. This undisturbed zone has MEDIUM potential for containing evidence of prehistoric occupation.

SB-2:

This proposed BMP extends along a stream bed that flows between Drumgoole Road East and Detroit Avenue. The restoration of this stream is planned and the work will impact about two acres of land along the stream.

The landscape in the area between Drumgoole Road East and Ionia Avenue is disturbed. Extensive landfilling has taken place within this zone. The vegetation present here is typical of disturbed places. This zone has LOW potential for containing evidence of prehistoric occupation.

The landscape between Ionia Avenue and Edgegrove Avenue is wooded and mostly undisturbed. Roadside areas, however, are disturbed. An undisturbed zone between the two streets has MEDIUM potential for containing evidence of prehistoric occupation. The land between Edgegrove Avenue and Detroit Avenue is wooded and mostly undisturbed. Some soil piles are present within this area. The undisturbed zone

along the stream has MEDIUM potential for containing evidence of prehistoric occupation.

SB-3:

This proposed BMP extends between Jefferson Boulevard and Detroit Avenue. The "re-creation" of a stream is planned in this area and the work will impact about two acres of land along the stream.

This area is low and marshy. The stream channel is filled with sediments that have washed in from adjacent higher areas. There is extensive roadside disturbance at the junction of the stream and Jefferson Boulevard. This site has LOW potential for containing evidence of prehistoric occupation.

SB-4:

This BMP site is situated on a stream that flows between Arden Avenue on the north and Jefferson Boulevard on the south. An outlet stilling basin is planned at the end of the paved roadway at the north end of Ionia Avenue.

The proposed site is presently private land. The landscape in this area is disturbed. It has been graded, landscaped and a garage stands next to the stream. This site has LOW potential for containing evidence of prehistoric occupation.

IONIA AVENUE CULVERT:

The installation of a new culvert is planned at a stream crossing on Ionia Avenue, between Albe Avenue and Jefferson Boulevard. At the present time, Ionia Avenue is not a through-street in this area. The stream crossing is highly disturbed and has NO archaeological potential.

EDGE GROVE AVENUE CULVERT:

A replacement culvert is planned at a stream crossing on Edgegrove Avenue, located between Albe Avenue and Jefferson Boulevard. At the present time, there are two corrugated metal pipes that channel the water underneath the road. The landscape on both sides of the road is highly disturbed. Soil moving, landfilling and dumping has taken place here. This site has NO archaeological potential.

DETROIT AVENUE CULVERT:

A new culvert is planned at the stream crossing on Detroit Avenue, located to the east of Albe Avenue. The landscape on both sides of the road is disturbed; i.e. graded and landfilled for about ten feet. This locus has NO archaeological potential.

ARTHUR POND AREA:

A wetland known as Arthur Pond is situated in an area bounded by Annadale Road on the west, Lorraine Avenue on the north and east, and the Staten Island Rapid Transit Railroad on the south. The installation of storm water sewers is planned along three "paper" or nonexisting streets within this triangular plot of land. The "paper" streets are Posen Street which runs parallel to the railroad line, Barb Street which runs southeasterly from the corner of Annadale Road and Lorraine Avenue to Posen Street, and Endview Street which also runs southeast from Lorraine Avenue to Posen Street (Allee King Rosen & Fleming, Inc. 1998a).

Commercial buildings extend along Annadale Road, and the land immediately behind these structures is highly disturbed. A drainage ditch, recently excavated by all appearances, borders the southwest side of Lorraine Avenue. Landscape disturbance along all roadside areas is commonplace. However, the interior portion of this plot of land is wooded and generally undisturbed. This zone has MEDIUM potential for containing evidence of prehistoric occupation.

GRANTWOOD AVENUE

An extension of Grantwood Avenue between Ionia Avenue on the east and Drumgoole Road East on the west is a flat, wooded area and mostly undisturbed, except at each end. The installation of a storm water sewer line is planned for this location. This undisturbed zone has MEDIUM potential for containing evidence of prehistoric occupation.

D. PEDESTRIAN SURVEY OF DOCUMENTED PREHISTORIC SITES

There are two recorded prehistoric sites located within the Wolfe's Pond Watershed. There is one previously documented prehistoric site located within the Sweet Brook Watershed. Our field inspection of these sites indicates the following:

- Wolfe's Pond Prehistoric Site. No surface evidence of this reported shell midden was found. However, its location was described as being at "the south end of Wolfe's Pond near its outlet" (Boesch 1994:105). A BMP, WP-3, is planned for this location and may impact this reported site.
- Lithic debitage, i.e. waste flakes from toolmaking activity, was reportedly found on the east side of Holten Avenue, opposite Keating Street during an archaeological investigation in 1984 (Boesch 1994:113). No sewer construction work is planned for this area, and the site will not be impacted.
- Woods of Arden Prehistoric Site. This previously reported site was supposedly located in an area bounded by Amboy Road on the north, Ross Lane on the east, Oakdale Street on the south and Arden Avenue on the west. Native American artifacts were reportedly found here in 1896 (Boesch 1994:118). This area is now extensively developed and has LOW archaeological potential. Furthermore, we believe that the site location as shown in the LPC files is incorrect. The Woods of Arden site is located on the shore near the mouth of Great Kills and is well outside the current project area.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. PREHISTORIC ARCHAEOLOGICAL SITES

Documentary research revealed evidence of three recorded prehistoric occupation sites within the two watershed areas that make up the project area. Our field reconnaissance indicates that only one of these sites, the Wolfe's Pond Prehistoric Site, may be impacted by work planned for this project area.

Several sections of the project area have been designated by the New York City Landmarks Preservation Commission as having moderate or high sensitivity for prehistoric resources. Historic and current land use, however, has rendered significant portions of the project area, such as paved streets and their infrastructure and highly developed residential, commercial and community areas extremely low in archaeological potential or sensitivity. Environmental features such as wetlands also have low archaeological potential.

In the course of our observation of the landscape of areas to be impacted by the proposed construction work, we have located several sites with moderate or high archaeological sensitivity. These areas are apparently undisturbed, relatively level and near fresh water resources. We conclude that the following areas have potential for containing evidence of prehistoric occupation and should be archaeologically tested prior to the start of construction activity. A Phase 1B investigation involving archaeological testing is recommended in the following areas, which are indicated, by the corresponding number on Figures 4A and 5A.

Wolfe's Pond Watershed, Figure 4A

1. WP-1: MEDIUM SENSITIVITY for prehistoric resources
2. WP-3: HIGH SENSITIVITY for prehistoric and historic resources
3. Addison Avenue: HIGH SENSITIVITY for prehistoric resources within an undisturbed area lying between Drumgoole Road East on the north, Woodhull Avenue on the east, Amboy Road on the south and a stream on the west. Addison Avenue does not exist at the present time.
4. Maxwell Avenue: MEDIUM SENSITIVITY for prehistoric resources. This street does not exist at the present time.

Sweet Brook Watershed, Figure 5A

1. SB-1: An undisturbed area at the north end of Annadale Wedge Pond had **MEDIUM SENSITIVITY** for prehistoric resources
- 2a. SB-2: An undisturbed area lying between Ionia Avenue and Edgegrove Avenue has **MEDIUM SENSITIVITY** for prehistoric resources
- 2b. SB-2: An undisturbed area lying between Edgegrove Avenue and Detroit Avenue has **MEDIUM SENSITIVITY** for prehistoric resources
3. Arthur Pond: A section of undisturbed land lying between Lorraine Avenue on the north and east, the Staten Island Rapid Transit Railroad on the south and Annadale Road on the west has **MEDIUM SENSITIVITY** for prehistoric resources
4. Grantwood Avenue: The undisturbed section lying between Ionia Avenue on the east and Drumgoole Road East on the west has **MEDIUM SENSITIVITY** for prehistoric resources.

B. HISTORIC PERIOD ARCHAEOLOGICAL RESOURCES

One historic structure, St. Alban's Episcopal Church, is listed in the New York City Landmarks Preservation Commission's 1992 GUIDE (Dolkart 1992:232). This National Register structure, built in 1865, is located at 76 St. Alban's Place within the Sweet Brook Watershed. No sewer work is planned near this structure, therefore, the current project will have no impact, direct or indirect, upon this cultural resource. A second structure, the "Little Woods of Arden House" on Amboy Road has been determined eligible for landmark recognition. No sewer work is planned near this structure, therefore, the current project will have no impact, direct or indirect, upon this cultural resource or any possible associated yard features.

One potential historic period archaeological site was found within the project area. A concrete foundation, probably the remains of a dwelling, is located at the south end of Wolfe's Pond at the proposed Best Management Practice site designated as WP-3. This site will likely be impacted by the proposed construction work. (A prehistoric occupation site was previously identified in this area as well.) The foundation probably dates to the first two decades of the twentieth century and has **HIGH SENSITIVITY** for containing historic period archaeological resources. Therefore, a Phase 1B investigation is recommended for this location.

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Appendix

Foundation Remains, WP3

Site History

Research into the documentary record of the concrete foundation remains [12" thick] at the southern edge of Wolfe Pond, identified during the pedestrian survey in the area of the proposed WP3, has confirmed the informant's description of early twentieth century, small [18' x 18'] frame residences. See the following site photograph. A variety of sources were investigated, including: census data, historic atlases, directories, block and lot building files¹, Landmarks' files² and conveyance records.

The WP3 site is now in tax Block 6596 Lot 1. However, earlier municipal divisions and designations listed the WP3 site as being part of Block 6663 (no lot). This property was part of the lands "commonly known" as the English crown grant to Lancaster Symes. [The grant is supposedly described in full detail on an indenture from 3/18/1929, but this document was not located.] The Sequine family purchased the land from the Manee family in the 18th century and held it until after the Civil War when it was sold to the Johnston Brothers. [The Johnston Brothers' industrial enterprise is described in the text of this report.]

Whether the Johnston purchase of Sequine's Point included the east side of Holton Avenue/Algernon Street and south of the outlet is problematical.³ According to the Beers' atlas of 1874, the outlet area south of the pond may have been part of T. Winsor's 100-acre plot. By 1881, when the Johnston Brothers filed a subdivision plan, the project parcel corresponding to the foundation remains is not included in their plotted proposal.

Tracing the land parcel at the Wolfe Pond outlet through historical maps does not reveal structural elements that correspond to the identified concrete foundation until ca. 1910. (See the following list of maps corresponding to: 1859, 1874, 1887, 1890, 1898, 1907, 1910, and 1917.) However, there are two distinct land plots south of the outlet and east of Holton Avenue in 1881. The property adjacent to Holton Avenue/Algernon Street, and which approximately corresponds to the location of the foundation remains, is not associated with an individual but the larger parcel to the east is listed as the property of Mary A. Jobes.

There is a structure on the east side of what is now referred to as Holton Avenue, at roughly the intersection of Purdy Place and the pond outlet, in 1887. The map, attached to this appendix is not, however, presented in great detail. The structure is associated with a

¹ There were no Buildings Department Block and Lot Folders for this parcel.

² J. Geismar's 1985 study on file with the NYC Landmarks Preservation Commission, *An Archaeological Assessment of the Muss Waterfront Housing Development Project, Prince's Bay, Staten Island, New York*, includes the southern Wolfe Pond outlet area and can be used as a supplement to this appendix.

³ Holton Avenue was known, earlier, as Algernon Street.

J. Gregory. The footprint of this "Gregory" structure and a possible outbuilding abutting the outlet are more well defined on the subsequent 1898 Robinson map, but there is no individual associated with the lot [103' x 120' x 44' x ?] by the later date. Also on the 1898 map, a Seymour Case is associated with the more substantial property/house east of the outlet intersection with Holton Avenue. Historically, the more easterly Case and the Gregory parcels are separated by a narrow vacant lot. The Case complex [272' frontage on the waterfront] which can be followed on the 1898 - 1934 maps, does not appear to correspond to the foundation remains identified in the field. It appears likely that the earlier Jobs designation corresponds to the later Case complex.

There are numerous and very confusing land transactions and transfers of property in the neighborhood, particularly in the 1920s. The most interesting that included the project site, the pond, and property east and west of the project site was the transfer from the Symes Foundation, Inc. to Trinity University Preliminary Organizing Committee, Inc., apparently trying to start a college (Liber 694 p. 348; Nov. 29, 1929).

Research on both Gregory and Case was conducted in Staten Island directories from the last of the 19th and the first of the 20th centuries. The following pertinent entries were located:

- 1888 no Case listed
no Gregory listed
- 1889 no Case listed
Gregory, Joseph, cooper h. Burgher Av. n Castleton Ave. WNB
- 1892 Seymour Case, inspector h Main n Wash Pl., Tottenville
Joseph Gregory, cooper h Richmond, WNB
- 1893 Case, Seymour, inspector, Main n Washington Av. Tott[enville]
Gregory, Joseph, laborer, Bay View Beach, P[rince's] B[ay]
- 1897 Case, Seymour, dental worker, Main, Tott
Gregory, Joseph, cooper, Franklin W[est] N[ew] B[righton]
- 1898 Case, Seymour v. Pres. Princes Bay Ave., PB. Home Tottenville
no Gregory listed
- 1899 Case, Seymour, v pres, Princes Bay Av, PB, h 47 Main, Tottvle
Gregory, Joseph, cooper, h 18 John WNB
- 1900 Case, Seymour, v pres, Princes Bay Av, PB, h 51 Main, Tottvle
Gregory, Joseph, cooper h 13 Caroline WNB

- 1903 Case, Seymour , superintendent, 51 Main, Tottvle
Gregory, Joseph, cooper h 18 John WNB
- 1906 No listing for Case and/or Gregory
- 1912 Case, Seymour, manager 53 Bentley, Tottvle
Gregory, Joseph, not listed

Unfortunately, further map reviews did not uncover any additional names to research that would be associated with the structural remains. The maps do not show house numbers either, apparently there were none, because they do not appear in the censuses, the maps or the directories.

The project area was noted in the 1900 and 1910 censuses, but - once again, no house numbers, or even an indication as to whether the census taker was heading east or west - and any household related to the property could not be identified. Attempts to cross reference directories with the census was unsuccessful. The directories also don't say which end of the street the resident is on.

Joseph Gregory appears in Staten Island in the 1870 census, in Westfield (the town that Prince's Bay is in), but that is considerably before the project site dwellings appear to have been built, and then he'd only be 14 years old. Perhaps the 1870 entry is for his father. Gregory is not in the 1880 Soundex, so he could not be located in the 1880 census. Although Gregory is off the project site by 1900 (Caroline Street), he is listed in that census, as follows:

- Gregory, Joseph White Male head of household b. 1856, age 44, married 11yrs, born Ohio, parents born in England, cooper, 1 mo. Unemployed in 1900, rents house, reads and writes.
- Gregory, Kate White, Female, wife, b.1867, age 33, 4 children, 1 living, born Ireland, parents born England, Ireland, came to US in 1885
- Gregory, Jennie White, Female, daughter, b. 1892, age 7
- Winkelman, Mary White, Female, boarder, b. 1870, age 30, born Germany, parents born Germany, came to US 1892, servant (not in this household though), reads and writes.
- Tute, Thomas W. White, Male, boarder, b. 1852, 48, Married? 20yrs? Born Iowa, parents born Iowa, laborer, reads and writes.

Case was not listed in the 1870 census, and could not be found in the 1880 Soundex. Like Gregory, Case appears in the 1900 census, but at 51 Main Street:

- Case, Seymour White, Male, head, b. 1850, age 49, married 20 yrs., born CT, parents born CT and Mass. Occupation: Supt. Inst. Dept. (?), reads and writes

Case, Nellie E.	White, female, b. 1850, age 49, married 20 yrs., 2 children, 1 living, born CT, parents born CT, reads and writes
Biddle, Lulu	White, female, step-daughter, b. 1873, age 26, single, born CT, parents born CT, reads and writes.

There are no directories, censuses, or conveyances that can be directly traced to either individual. Case, at least, can be linked through employment to the S.S. White business, directly to the southwest of the Wolfe Pond outlet. The 1910 map clearly delineates lot lines that correspond to what could be considered Gregory and Case properties: frame structures south and east of the S.S. White concrete sluice gates, pumping station, and water gates.

It is the 1917 Sanborn that includes what apparently corresponds to the small concrete foundation remains identified during the pedestrian survey. On the 1917 plate are two frame, one story residences immediately to the east of the Holten Avenue⁴ roadbed, south of the outlet, and west of the older, Gregory (?) structure. This arrangement of at least three, frame and water-oriented residences corresponds to the informant's description of the summer colony neighborhood in the 1920s and 1930s. Although the NYC Parks Department map includes the frame structures on a 1934 map of the area, by the 1936 Sanborn, the land is empty parkland.

The foundation remains, noted in the pedestrian survey as having supported a frame super structure, were apparently short lived, ca. 1917 - 1934, and not associated with the earliest residences of the neighborhood or the subsequent S.S. White dental company enterprise. However, it is possible that the 20th century feature, noted in the survey, is in the approximate location of the ca. 1889 "Gregory" building.

⁴ Various spellings of Holton/Holten were noted.

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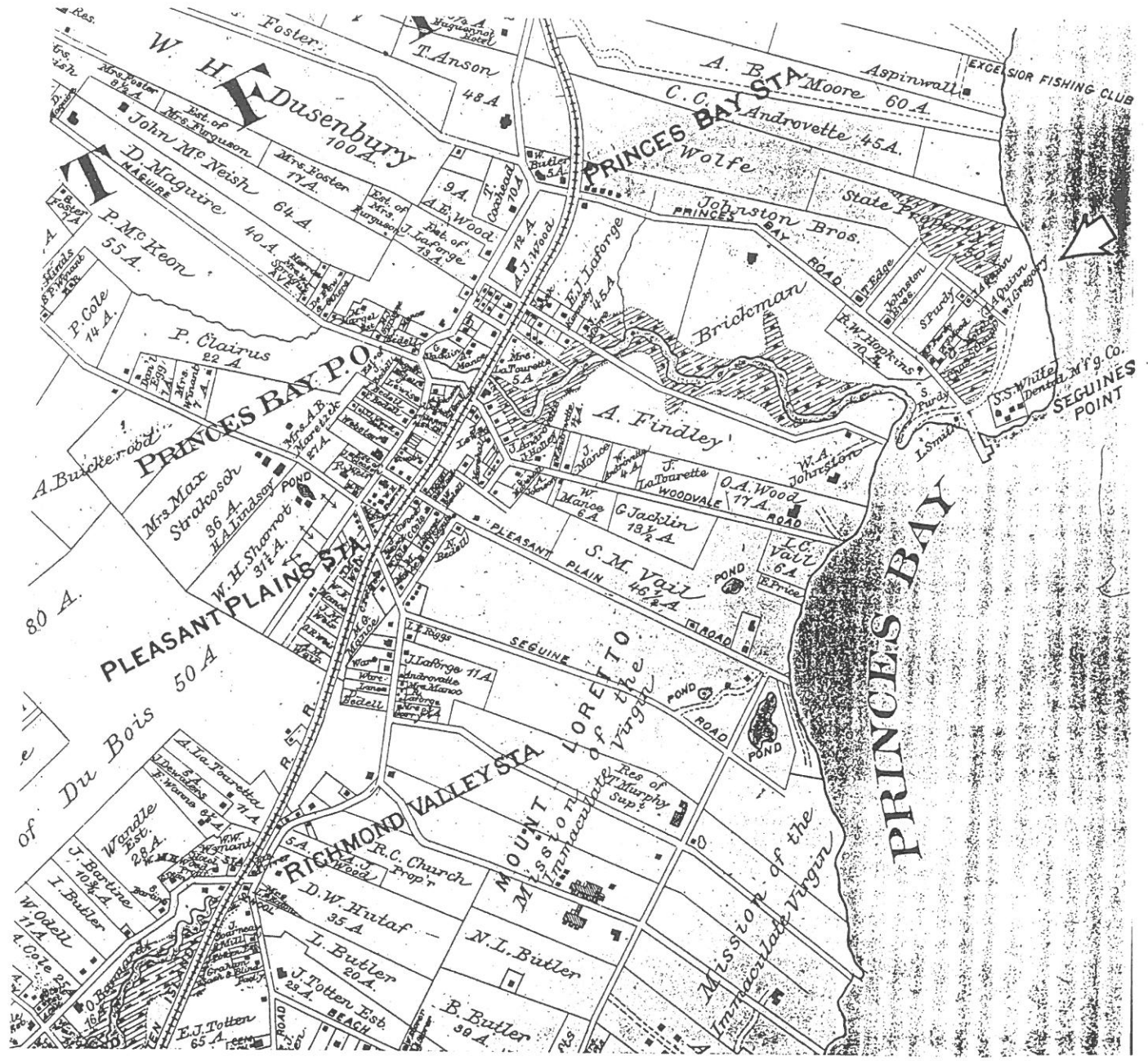
Appendix Photograph



Appendix 1
Beers Map 1887 Depicting J. Gregory Home

Source: J.B. Beers and Company Map, 1887
(Staten Island Institute of Arts and Sciences)

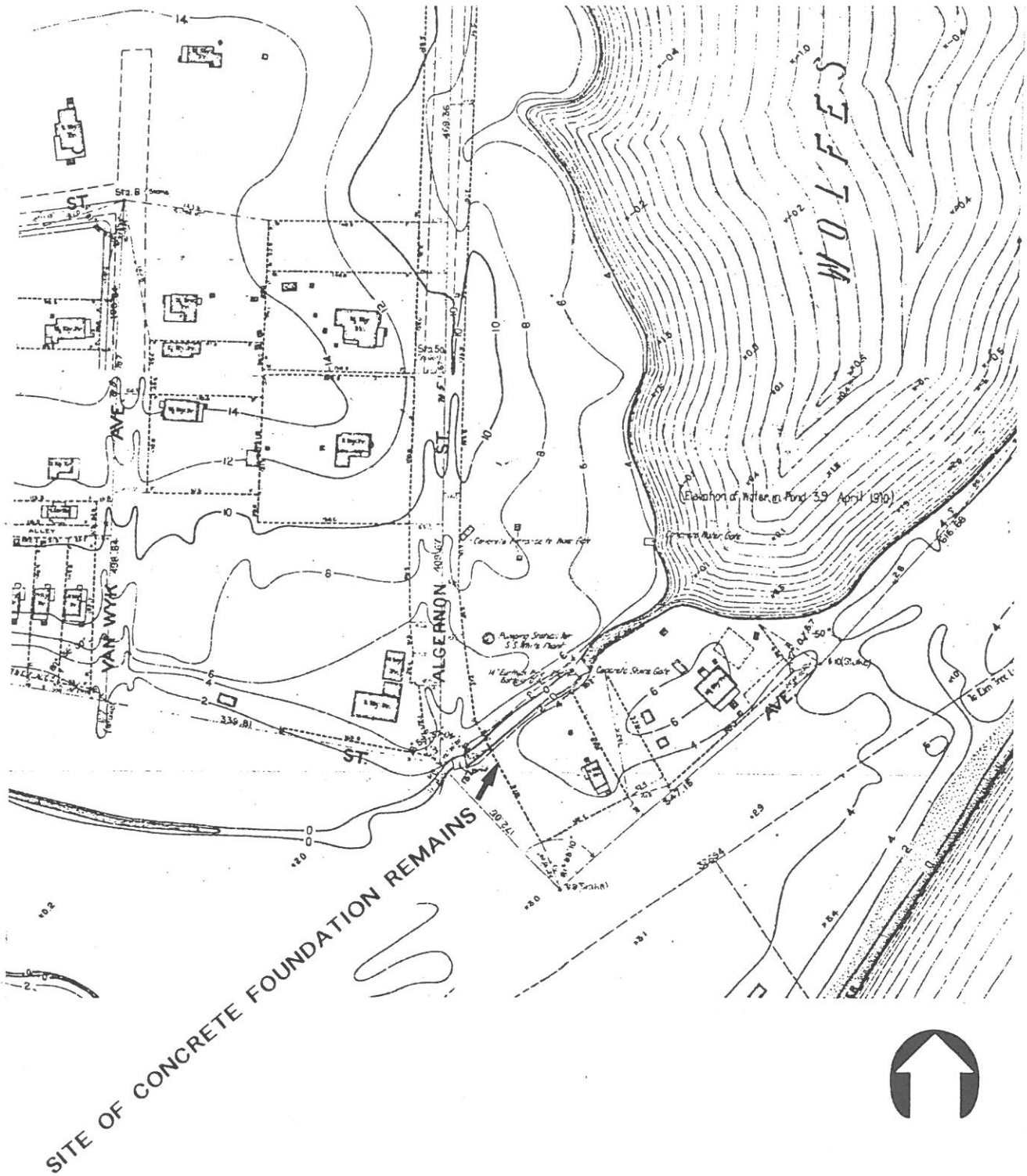
Scale: None



Appendix 2
Richmond Borough Map, 1910
Depicting the Location of Area of Concrete
Foundation Remains

Source: Topographic Survey: Sheet 95
Richmond Borough Map, 1910
(Borough President's Office)

Scale: None



Appendix 3
Sanborn Map, 1917
Depicting the Location of Concrete
Foundation Remains

Source: Sanborn Insurance Map, 1917
Scale: None

