

## **APPENDIX B**

### **PHASE 1A ARCHAEOLOGY DOCUMENTARY STUDY**



**Phase 1A Archaeological Documentary Study**

**Fresh Kills Park**

**Richmond County, New York**

**Prepared for:**

New York City Department of City Planning

and

New York City Department of Parks and Recreation

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## A. PROJECT OVERVIEW

AKRF, Inc. has been contracted to perform cultural resource services for a proposed development project. The project site is situated within 1,785 acres of the 2,200 acre Fresh Kills Landfill in Richmond County (Staten Island), New York (**Figure 1**). The project site covers the following New York City tax blocks and lots: Block 2520, Lot 1; Block 2600, Lots 100 (part) and 125; Block 2641, Lots 60 and 120; Block 2649, Lot 1; Block 2650, Lot 1; Block 2651, Lot 1; Block 2652, Lot 1; Block 2665, Lot 20; Block 2685, Lot 1; Block 2725, Lot 1; Block 5804, Lots 1, 325, 340, and 350; Block 5900, Lots 100 and 500; Block 5965, Lots 100 and 500; and Block 6169, Lots 37, 103, 101, and 200 (**Figure 2**).

The proposed project involves the conversion of the Fresh Kills Landfill into Fresh Kills Park, which would provide significant cultural, recreational, and environmental amenities including a wildlife habitat, hundreds of acres of land for both active and passive recreation, and improved local open space connectivity.

The Fresh Kills Park project site falls within five designated planning areas: the Confluence (100 acres), North Park (233 acres), South Park (425 acres), East Park (482 acres), and West Park (545 acres). Four landfill mounds are currently situated on the site: North Mound 3/4, South Mound 2/8, East Mound 6/7, and West Mound 1/9 (**Figure 3**). The North and South Mounds have already undergone closure and the East and West Mounds are in the process of final closure. These mounds represent the four main areas of the proposed park and will be united by a fifth area known as “the Confluence.” The planning objectives for these areas are summarized below.

- **The Confluence:** The Confluence is the area at the center of the site defined by the meeting of several creeks within the project area (Main Creek, Fresh Kills Creek, and Richmond Creek) which flow toward the Isle of Meadows and Arthur Kill. A loop road would be constructed to provide access to the three other park areas. The area will include a “signature” bridge and the large earthwork “sunken forest.” Larger parking areas, visitor and information centers, restaurants and event spaces would be constructed in this area, as well as park landscapes for a range of flexible uses. Most of the development proposed for the Confluence is located at the “Creek Landing” and the “Point.” These are large, flat, paved, bulkheaded landings once used for barge deliveries to the site. The 50-acre Point is a large, level waterfront area that would contain sports fields, event spaces, lawns, art works, and commercial facilities serving park users (i.e., restaurants). The Point is the preferred location for the development of the main park administrative center. Creek Landing, at the confluence of the two creeks, is planned as a concentration of waterfront and cultural activities on the northern side of the loop drive. The Creek Landing is scaled and oriented primarily toward family and community use with emphasis on ecological, educational and participatory water-related programs. This 20-acre area is designed to emphasize waterfront facilities, including a waterfront esplanade, canoe and boat launch, a restaurant, a visitor center, a restored wetland exhibit with boardwalk, fishing piers and overlooks, and a huge

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event lawn for gatherings, picnics, and sunbathing. It can also be used as a viewing area for fireworks and festivals.

- **East Park:** East Park is intended to be primarily a habitat restoration area with created and improved wetlands as well as lowland forest. A man-made berm and ponds on the east side of the east mound would provide a new wildlife habitat as well as hiking and walking trails, with an area for parking off Richmond Avenue. Along the top and sides of the former landfill mound, new habitat and forest areas would be created, with large meadows and open areas on top. A golf course is another possibility for this area of the proposed park. A major component of the East Mound is two critical roadway connections that would traverse the mound.
- **North Park:** The 233-acre North Park is bordered by the West Shore Expressway and the Travis neighborhood to the west, the William T. Davis Wildlife Refuge and Main Creek to the north and east, and the loop drive to the south. It is envisioned as a lightly programmed natural area that would extend the rich habitat provided by the adjacent refuge, improve a degraded edge of the refuge, and capitalize on one of the quietest and most sheltered areas at Fresh Kills. North Park vehicular access and parking is provided from both the Travis neighborhood entrance to the north for localized access and through a much larger central parking area at Creek Landing at the southern end.
- **South Park:** South Park will be characterized by active recreational spaces, including soccer fields, an equestrian facility, a mountain biking venue and a neighborhood park. South Park is unique in that it is a zone that contains both ample flat, non-wetland space for active recreational programming, close proximity to major roadway destinations, and a large area of natural woodland, encompassing, in addition to the 140-acre South Mound, 155 acres of dry lowland and 50 acres of wetland. The 38-acre strip in the lowland that lies between Arthur Kill Road and the West Shore Expressway would include tennis courts, sized to allow for programming of major United States Tennis Association (USTA) events, a special mountain bike venue, an indoor aquatic and/or track and field facility, the Owl Hollow soccer fields, and an equestrian center with stables, show ring, and bridle trails.
- **West Park:** The West Park (Mound 1/9) was the site of the September 11, 2001 recovery effort. For 10 months after the tragedy, a team of 16,000 investigators and recovery workers carefully screened and sifted through 1.2 million tons of debris from the World Trade Center to search for traces of the missing. Over 20,000 remains were recovered and brought to the medical examiner's office for identification. When all discernible remains and effects were recovered, the remaining material was placed in a 50-acre area on the West Mound and covered with clean soil. In recognition of the significant September 11, 2001 recovery effort that occurred on the site, a 9/11 monument is planned for West Park. A possible earthwork monument could be constructed at the location of the recovery area. From the top of the monument, visitors could have a 360-degree view of the City, the harbor, and the New Jersey coastline. At the northeast edge of the West Mound are major Department of Sanitation (DSNY) facilities and operations, both related to Fresh Kills closure and to local sanitation needs that will remain outside the Park area as currently proposed for mapping. This location could act as a satellite entrance for park usage, providing parking and entrance signage and a direct pedestrian connection across the West Shore Expressway and directly into South Park, providing regional bicycle and horse path connections.

In addition, vehicular circulation through the park would be facilitated by the construction of approximately seven miles of new park drives. This circulation plan includes a new vehicular bridge across Fresh Kills just west of the West Shore Expressway Bridge to provide circulation

and access to the western part of the park, and intersection improvements at Richmond Avenue and Richmond Hill Road and Richmond Avenue and Forest Hill Road (**Figure 3**). From a center loop road in the Confluence area, service roads would extend north and south along the West Shore Expressway to facilitate regional connectivity south and north. The goal of the Plan is to bring the largest focus of users to the center of the site from which all five park areas could be easily accessed. In addition, smaller scaled entrances with parking are planned in the north, south, and eastern parks to allow for neighborhood access at the edges of the park.

In addition to the proposed roadways, more than 20 miles of specially designed paths and trails for bicyclers, mountain bikers, horseback riders, pedestrians, and hikers would be constructed. Creek access would be accommodated via numerous docks and launches along the creeks, as well as a larger boat facility proposed for a site on Fresh Kills, west of the West Shore Expressway where potential ferry service access may be provided. Connections to the surrounding neighborhoods would be aided by numerous park entrances and two pedestrian overpasses, the first overpass crossing the West Shore Expressway at Muldoon Avenue and the second crossing Richmond Avenue in the area of Forest Hill Road, creating a seamless connection between Fresh Kills and the extended Greenbelt to the East.

## **B. RESEARCH GOALS AND METHODOLOGY**

The following Phase 1A Archaeological Documentary Study has been designed to satisfy the requirements of the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) and the New York City Landmarks Preservation Commission (LPC) and it follows the guidelines of the New York Archaeological Council (NYAC). The study documents the history of the proposed project site as well as its potential to yield archaeological resources including both precontact and historic cultural remains. This Study also documents the current conditions of the project site and previous cultural resource investigations which have taken place in the vicinity of the APE. In addition, the project's potential impacts to archaeological resources is evaluated and recommendations are made to determine methods of protecting and/or further studying those resources.

As part of the background research for this Phase 1A Archaeological Documentary Study, various primary and secondary resources were analyzed, including historic maps and atlases, historic deeds, historic photographs, newspaper articles, local histories, census records, historic directories, building records, and utilities installation records. Information was accessed at many repositories, including the Main Research Branch of the New York Public Library (including the Local History and Map Divisions), the New York City Municipal Archives, the archives of the Staten Island Institute of Arts and Science, the office of the Richmond County Clerk, the local history division of the Saint George branch of the New York Public Library, the Richmond County Topographical Bureau, and the New York City Department of Environmental Protection Bureau of Water and Sewers, among others. File searches were completed at LPC, OPRHP, and the New York State Museum (NYSM) and multiple site visits were conducted in October, 2006 and September, 2007.

Information regarding the construction methods of the landfill mounds and the locations of some utilities could not be accessed. This document includes in the appendices graphics depicting the locations of areas of potential archaeological sensitivity (**Figures 20 and 22**). Areas of historic sensitivity were identified by aligning current and historic maps using Geoinformation Systems (GIS) software to determine the locations of former structures. Digital versions of historic maps of the Fresh Kills area dating to 1844, 1853, 1874, 1891, and 1912 were used to identify the locations of former structures within the project area (other maps were referenced, but were not



accurate enough to be digitally referenced). Once digitally scaled to their stated bar scales, these maps were all registered to match the 2006 Staten Island shoreline and 3 of the oldest roads in the area, Arthur Kill Road to the south, Richmond Avenue to the east, and Victory Boulevard to the north. Both ArcGIS and Autocad Map were used to overlay and georeference the digital files. To bring the accuracy of the mapping to within 25 feet of actual location, maps were classified according to their quality, with Survey Maps (1874 and 1912) containing survey monuments and high quality building detail given a higher ranking over Road Maps (1844, 1853, 1891) that were less reliable for judging exact building locations.

Building outlines from all the digital versions of historic maps were traced to different color coded levels. A “best fit” building footprint was identified, which was often identical to that seen on the 1912 survey map, the most accurate. The best-fit footprint was then compared with ownership labels and building footprints seen on older, less accurate maps. For example, a building footprint visible on the 1844 survey would be adjusted to the footprint of a structure labeled “old brick foundation” on the 1912 map.

The maps were then overlaid with 2006 New York City Department of City Planning lot lines and “relic” lot lines were identified. An example of a relic lot line is a former country road now recognizable as a narrow lot (Site 2, as seen on **Table 5** and depicted in **Figure 20**, at Richmond Hill and Richmond Ave – now Lot 1 of Block 2520) or a former farm field fence now an odd angled lot line (Sites 22 and 23 – now southern edge of Lot 500 of Block 5965). Survey maps were then shifted slightly to register more accurately with 2006 lot lines, and the final historical building outlines were overlaid on a 2006 aerial photo to check for visible building remnants. In some cases recognizable building shapes allowed for exact overlays (Site 24).

Once a generalized footprint of each former structure within a property was identified, they were then surrounded by a 200 foot boundary; 50 feet to account for potential archaeological resources (i.e. domestic shaft features such as privies, cisterns, and wells) and 150 to compensate for the potential inaccuracy and distortion of historic maps. Topographic maps dating to 1912 were then compared with current topographical surveys to identify the amount of fill deposited upon the original ground surface as a result of landfilling and other development activities. These areas of sensitivity were then stratified according to the likelihood that intact remains are present and their potential to be impacted by the p[roject]. The criteria used to make such determinations are described in **Chapter VI**. \*

**A. GEOLOGY AND TOPOGRAPHY**

The northwestern half of Staten Island, including the project site, is found within a geographic bedrock region known as the Northern Piedmont Lowland Section, while the southeastern half is within the Atlantic Coastal Plain (Louis Berger & Associates, Inc. 2001a). The northwestern portion of Staten Island is composed of conglomerates, red sandstone, red shale, and diabase that dates to the Triassic and Jurassic periods, 245 to 208 million years ago. The southeastern section contains sandstone, shale, slate, and graywacke that dates to the Later Proterozoic Cambrian and Early Ordovician period, 570 to 505 million years ago (New York State Office for Technology [NYSOFT] 2004). The vicinity of the project site is composed mostly of swamp and marsh deposits with the Cretaceous Raritan formation to the south and Serpentine igneous rock, which may date to the Proterozoic, to the east (Reeds 1925).

The island's physical setting was shaped by massive glaciers of up to 1,000 feet thick that retreated from the area towards the end of the Pleistocene, which lasted from approximately 1.6 million to 10,000 years before present [BP]. There were four major glaciations which began approximately 17,000 years ago and affected New York City until roughly 12,000 years ago when the Wisconsin period—the last glacial period—came to an end. During the Wisconsin ice age, a glacial moraine traveled southwest across Staten Island, resulting in the separation of the Atlantic Coastal Plain (Reeds 1925).

The glacial movements also brought about the creation of hundreds of sand hills, or kames, throughout the New York City region, some of which reached heights of approximately one hundred feet. These hills were contrasted by many small streams, rivers, and lakes that were fed by the glacial runoff. The Arthur Kill, the large body of water that separates Staten Island from the eastern shores of New Jersey, began as a narrow stream (Louis Berger & Associates, Inc. 2001).

As temperatures increased and the ice melted, sea levels rose by approximately 300 feet. The coastlines were subsequently inundated by glacial melt-water and receded 60 to 90 feet, eventually separating Staten Island from the mainland (Louis Berger & Associates, Inc. 2001). The melting of the glaciers also caused the small water courses which were once found in the area to be transformed into swamps and marshlands. The Fresh Kills area was one of the largest marshy tracts in the New York City region, and most of the project site was characterized by tidal marsh (**Figures 4 through 6**).

The tidal marsh was punctuated by several "islands," including Lake's Island and Price's Island (**Figure 4**), which rose to a maximum elevation of more than 20 feet above mean sea level (MSL). Along the project site's eastern border, near present-day Richmond Avenue, the land gradually rose to heights of approximately 20 feet above MSL. In the southern portion of the project site, along Arthur Kill Road — shown on older maps as "Fresh Kills Road" — elevations rose to approximately 40 feet above MSL, with at least three 20 to 40 foot hills just south of the

end of the marshy tract (**Figure 7**). The elevations today are significantly different due to the large landfill mounds which now occupy the site and rise to levels of more than 100 feet above mean sea level.

## **B. PALEOENVIRONMENT**

Over 20,000 years ago, the Northeast was covered by a thick sheet of ice, the Wisconsin glacial sheet. The weight of the Wisconsin glacial sheet caused the Earth's crust to sink into the mantle and the outer continental shelf to rise (isostatic forebulge uplift) approximately 20,000 years ago (<http://3dparks.wr.usgs.gov/nyc/moraines/flandrian.htm>). This project site was likely affected by this rise. Once the glacial sheet had receded approximately 8,000 years ago, the Earth's crust rebounded and the forebulge area subsided. The project site was probably affected by this subsidence as well. It therefore can be assumed that elevations on the project site, which were between 0 and 5 feet above mean level in 1912, were likely several feet higher during much of the prehistoric period.

By approximately 11,000 years ago, the glacial sheet had sufficiently receded to allow for human habitation on Staten Island. As temperatures rose, new varieties of flora and fauna spread through the region and large open forests of spruce, fir, pine, and other tree species expanded across the Northeast, interspersed with open meadows and marshland. A wide variety of animal life could also be found, including large mammals such as mammoth, mastodon, caribou, musk ox, moose, as well as smaller mammals such as fox, beaver, hare, and many kinds of marine animals.

Climate changes continued to re-shape the environment of the Northeast. As the climate grew increasingly warmer, jack pine, fir, spruce and birch trees were replaced with hardwood forests of red and white pine, oak, and beech (Ritchie 1980). Furthermore, a decrease in glacial runoff resulted in the creation of small bodies of water such as lakes as well as, later on, low-lying marshes and swampy areas. By the Early Archaic period, beginning approximately 10,000 BP, there was "considerable environmental diversity, with a mosaic of wetlands, oak stands, and a variety of other plant resources...[making it]...an attractive and hospitable quarter for both human and animal populations" (Cantwell and Wall 2001: 53).

Warmer temperatures forced some of the herds of larger mammals to travel northward and caused many others to go extinct. The new surroundings attracted other animals such as rabbit, turkey, waterfowl, bear, turtle, and white-tailed deer. The expanded water courses became home to a variety of marine life, including many varieties of fish, clams, oysters, scallops, seals, and porpoises, among others (Cantwell and Wall 2001).

By 5,000 BP, sea levels were only a few meters away from their current levels (Hunter Research 1996) and the modern climate in the northeast was established by approximately 2000 BP (Louis Berger & Associates, Inc. 2001). By that time, the Native American population was flourishing in the area and had developed an intricate culture tied to the natural resources of the region (**see Chapter III**).

## **C. CURRENT CONDITIONS**

Both natural forces and the actions of humans have permanently changed the geographic landscape of Staten Island. Much of the coastline has been dramatically altered by landfilling and dock construction, although the coastline in the vicinity of the project site does not appear to have been altered significantly.

The project site is currently used for various purposes although it is no longer an active landfill. The Fresh Kills Landfill was gradually closed, beginning with the North Mound in 1992, the South Mound in 1993, and the East and West Mounds in 2001. The latter two mounds are currently in the process of final closure. The closing of a mound involves covering the waste with a layer of clean fill thick enough to “prevent leachate<sup>1</sup> generation from surface water filtration, provide slope stability, and provide long-term cover system integrity and erosion control” (Roy F. Weston of New York, Inc [RFWNY] 1994: 2.19).

The New York City Department of Sanitation (DSNY) has a variety of facilities on the site, including a leachate treatment plant, a gas recovery facility, and various vehicle maintenance centers (**Figure 3**). A large network of pipes is located beneath the landfill to collect leachate and gases generated by the decomposition of the waste material deposited at the landfill. The different sections of the landfill are connected by a series of primary and secondary roads.

The areas on either side of the Main Creek, between the North and East Mounds, are currently open sections known as Fresh Kills Park. The Isle of Meadows is undeveloped and is a bird sanctuary.

**Table 1**  
**Soil Types in the Vicinity of the Project site**

<b>Name</b>	<b>Soil Horizon Depth (inches)</b>	<b>Color</b>	<b>Texture</b>	<b>Slope</b>	<b>Drainage</b>	<b>Landform</b>
Riverhead	Ap: 0-12 Bw: 12-27 BC1: 27-32 2BC2: 32-35 2C1: 35-40 2C2: 40-65	Brn StrBrn TBrn YBrn Brn VPIBrn	Sandy loam Sandy loam Loamy sand Gravelly loamy Sand Sand Coarse and medium sand with gravel	0-50%	Well-drained	Outwash plains, valley trains, beaches, and water-sorted moraines
<p><b>Notes:</b>                      Brn = Brown                      RBrn = Red Brown                      StrBrn = Strong Brown                      VdkGBrn = Very dark greenish brown                      VPIBrn = Very pale brown                      YBrn = Yellowish brown</p> <p><b>Source:</b>                      USDA Official Soil Series Descriptions, <a href="http://soils.usda.gov/technical/classification/osd/index.html">http://soils.usda.gov/technical/classification/osd/index.html</a>                      EDR Radius Map with GeoCheck: Fresh Kills Landfill-Arden Site, Inquiry #1457868.2s (2005)</p>						

## **D. PREVIOUSLY CONDUCTED CULTURAL RESOURCE INVESTIGATIONS**

Several previously conducted cultural resource studies within one mile of the project site (**Table 2**) indicate that the project site was situated within a region that is highly sensitive for prehistoric and, to a lesser extent, historic period archaeological resources. Archaeological sensitivity will be discussed in more detail in **Chapters III and IV**.

<sup>1</sup> Leachate refers to rain water that after falling onto the landfill is contaminated by the waste material.

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**Table 2**  
**Previously Conducted Cultural Resource Investigations Within One Mile of the Project site**

<b>Project Name</b>	<b>Location</b>	<b>Findings</b>	<b>Reference</b>
Preliminary Assessment of Cultural Resources, Arthur Kill Extension Howland Hook to Tufts Point	Along a 4.5 mile stretch of the Arthur Kill Coastline	Project site determined to have minimal potential for the recovery of precontact archaeological resources.	Eisenberg (1987)
Cultural Resource Reconnaissance of 700 MW Fossil Plant	Along the shores of the Arthur Kill and Little Fresh Kills, north of the Island of Meadows	Project site determined to be sensitive for the recovery of precontact archaeological resources.	Kardas and Larabee (Historic Sites Research (1987)
Stage 1B Archaeological Survey of the Mayflower Avenue Pump Station and Force Main of the Oakwood Beach Water Pollution Control Project	South side of Arthur Kill Road, approximately between Arden Avenue and Alverson Street	Project site determined to be sensitive for prehistoric and historic archaeological resources but those resources would not be affected by the proposed project.	Geismar (1985)
Archaeological Impact Report, Huguenot Village Section 5	Block 6025, Lot 1; Block 6026, Lot 1 (Old Blocks 6050, 6055)	Project site determined to have low sensitivity for the recovery of prehistoric or historic period archaeological resources.	Hershkowitz (1984)
Victory Boulevard Development (Phase 1A and 1B investigations)	Along Victory Boulevard, near the Travis neighborhood of Staten Island.	While the Phase 1A documentary study determined that the area had both precontact and historic sensitivity, the Phase 1B testing found no potentially significant archaeological resources within the site.	Greenhouse Consultants, Inc. (1988)
Stage 1 A and Stage 1B Cultural Resource Survey of the East Side Project	Near the northwest corner of Travis Avenue and Victory Boulevard	Project site was determined to have precontact sensitivity because two known sites were located within the project boundaries. However, Phase 1B testing uncovered only a small amount of precontact material and the site was determined to be not sensitive for significant archaeological resources.	Historic Conservation and Interpretation (1982 and 1983)
Documentary Study and Results of Test Excavations, 3450 Victory Boulevard	Block 2140, Lot 19	Site was determined to have low potential for the recovery of precontact archaeological resources but high potential for the recovery of historic (19th century) resources. No resources were recovered during archaeological testing.	Key Perspectives (1990 and 1991)
New York City Farm Colony Historical and Archaeological Sensitivity Evaluation	Near the southwest corner of Wallcott and Brielle Avenues	Project site determined to be sensitive for historic period archaeological resources.	Greenhouse Consultants, Inc, (1986)
New York City Correctional Facility: Phase 1A Cultural Resource Assessment, and Secondary Level of Study	North side of Arthur Kill Road, between Chemical Lane and Industrial Loop	Project site was determined to be sensitive for the recovery of precontact archaeological resources, including deeply-buried Paleo-Indian remains on the far west side. Secondary level study recommended archaeological trench excavations.	Louis Berger and Associates (1988 and 1989)

**Table 2 (cont'd)**

**Previously Conducted Cultural Resource Investigations Within One Mile of the Project site**

<b>Project Name</b>	<b>Location</b>	<b>Findings</b>	<b>Reference</b>
New York City Correctional Facility: Assessment of Archaeological Potential and Field Testing	North side of Arthur Kill Road, between Chemical Lane and Industrial Loop	Project site was determined to be sensitive for the recovery of precontact archaeological resources. Field testing encountered a Woodland-period Native American shell midden with lithics, ceramics, and faunal remains as well as a late-19th century feature.	Pickman (1991 and 1992)
Stage 1A and 1B Archaeological Surveys, Clay Pit Ponds State Park Preserve	Near southwest corner of Arthur Kill Road and Bloomingdale Road	Archaeological testing uncovered many prehistoric campsites in the areas of sand dunes.	Pickman and Yamin (1986)
Cultural Resource Reconnaissance, 5-30 Grille Court	Block 7120, Lots 160, 165, 170, 175, 180, 185	Project site determined to have potential for the recovery of precontact archaeological resources.	Historic Sites Research (1987)
Cultural Resources Investigation and Archaeological Test Excavations of the Melville Plaza Shopping Center Development Property	Southeast corner of Richmond Avenue and Richmond Hill Road	Determined that no significant archaeological resources would be impacted by the project.	Sheffield Archaeological Consultants (1995)
Stage 1A Archaeological/Historical Sensitivity Study of 1931 Richmond Ave	1931 Richmond Ave	Project site determined to have no potential for the recovery of precontact or historic archaeological resources.	Greenhouse Consultants, Inc (2000)
Stage 1A Archaeological/Historical Sensitivity Study and 1B Archaeological Testing, Block 5532, Lot 127	Block 5532, Lot 127	Phase 1A suggested that remains from 17th century French Huguenot Church may be present on site, 1B testing discovered no evidence of the church.	Greenhouse Consultants, Inc (2001)
Phase 1a Cultural Resource Survey and Phase 1B Archaeological Survey: Arthur Kill Power Plant Lateral	west side of Victory Boulevard, south of Edward Curry Avenue	Project site determined to have minimal potential for the recovery of precontact archaeological resources. Field testing uncovered no intact archaeological deposits and no impact of significant archaeological resources was expected.	Hunter Research (2001 and 1003)
<b>Sources:</b> LPC file search, Boesch (1994)			

\*

**A. INTRODUCTION**

Archaeologists have divided the time between the arrival of the first humans in northeastern North America and the arrival of Europeans more than 10,000 years later into three precontact periods: Paleo-Indian (11,000-10,000 BP), Archaic (10,000-2,700 BP), and Woodland (2,700 BP–AD 1500). These divisions are based on certain changes in environmental conditions, technological advancements, and cultural adaptations, which are observable in the archaeological record.

**B. PALEO-INDIAN PERIOD (11,000-10,000 BP)**

As mentioned in **Chapter II**, human populations did not inhabit the Northeast until the glaciers retreated some 11,000 years ago. These new occupants included Native American populations referred to as Paleo-Indians, the forbearers of the Delaware—also called the Lenape Indians—who would inhabit the land in later years.

The Paleo-Indians most likely exploited all the different resources provided by their environment. It has been suggested that they did not only actively hunt the large mammals that roamed about the region (mammoths, mastodons, etc.), but they also hunted and trapped smaller animals and supplemented their diet with fish and gathered plants (Cantwell and Wall 2001).

There was a very distinctive Paleo-Indian style of lithic technology, typified by fluted points. These were elaborately detailed stone projectile points that would have been used for a variety of functions, most notably for hunting. They were often made of high-quality imported chert, but were also known to have been crafted from local lithic materials. Other stone tools manufactured at this time included knives, scrapers, drills, and graters. Wood, ivory, and other materials were also used for the manufacture of composite tools, such as hunting spears.

Archaeological evidence suggests that the Paleo-Indians were highly mobile hunters and gatherers who lived in small groups of fewer than 50 individuals (Dincauze 2000) and did not maintain permanent campsites. In addition, most of the Paleo-Indian sites that have been investigated were located near water sources.

It is because of the close proximity of Paleo-Indian sites to the coastline that so few of them have been preserved in the New York City area. As the glaciers continued to melt, sea levels rose and much of what was once adjacent to the water line became submerged. Of the few Paleo-Indian sites that have been discovered in New York City, nearly all have been found on Staten Island, including the Port Mobile site. Like most precontact sites, this location is situated on high ground overlooking the water. Because of heavy disturbance in the area — it is currently an oil tank farm — the site has yielded nothing more than a collection of fluted points and other stone tools characteristic of the period (Ritchie 1980). Paleo-Indian artifacts were also found along the eroding shoreline 500 yards south of the Port Mobil site, closer to the project site (Ibid) and at the Cutting site in the Rossville section of Staten Island (AKRF, Inc. 2003).

### **C. ARCHAIC PERIOD (10,000-2,700 BP)**

The Archaic has been sub-divided into three chronological segments, based on trends identified in the archaeological record which reflect not only the ecological transformations that occurred during the Archaic, but the cultural changes as well. These have been termed the Early Archaic (10,000–8,000 BP), the Middle Archaic (8,000–6,000 BP) and the Late Archaic (6,000–2,700 BP) (Cantwell and Wall 2001). The Late Archaic is sometimes further divided to include the Terminal Archaic period (3,000-2,700 BP).

The aforementioned environmental transformations included the continued post-glacial warming trend, the extension of hardwood forests, and a decrease in glacial runoff which resulted in the creation of lakes and other small bodies of water. There was a subsequent migration of new animal and plant species into the area, while the herds of large mammals traveled north, eventually dying out. The new surroundings attracted smaller animals, such as rabbit, turkey, waterfowl, and white-tailed deer.

As the Archaic progressed and the number of plant and animal species inhabiting the area increased, the size of the human population did as well. Archaeological studies have shown that Archaic period sites were most often located near water sources. The abundance of food resources allowed the Archaic Native Americans to occupy individual sites on a permanent or semi-permanent basis, unlike their nomadic Paleo-Indian predecessors. These individuals migrated on a seasonal basis within specific territories and consistently returned to and reoccupied the same sites.

The arrival of new food sources allowed the human population to expand their subsistence strategies by developing new and different technologies that would allow such resources to be exploited. Perhaps the most important of these developments was the advent of fishing technology, which occurred during the Middle Archaic in response to an increasing dependence on the area's marine resources. The new technology included stone hooks and net sinkers. In addition, the influx of nut- and seed-bearing foliage resulted in the development of stone mortars and pestles as well as stone axes, used to process plant material.

In order to successfully hunt the smaller game animals that had established themselves in the region, narrower spear points and knives were manufactured, along with weighted spear throwers. Domestic technology was advanced as well, with the development of a wider variety of hide scrapers and, later in the period, the origin of bowls made from steatite or soapstone. Tools continued to be crafted in part from foreign lithic materials, indicating that there was consistent trade among Native American groups from various regions in North America throughout the Archaic.

Once again, as a result of rising sea levels and modern development of the area and the predominance of coniferous forests which generated a habitat ill-fit for human occupation (Boesch 1994), few Early Archaic sites have been identified in New York City. Most of those that have been identified are located on Staten Island, including Ward's Point, Richmond Hill, the H. F. Hollowell site, and the Old Place site. Sites such as Ward's Point—a domestic habitation location which due to lowered sea levels was originally inland—tend to be deep and stratified and have yielded stone tools related to cooking, woodworking, and hide processing. The many years of constant occupation caused the artifacts to be deeply buried under more recent debris deposits (Cantwell and Wall 2001). However, at the Old Place Site, the only artifacts which were discovered—stone tool assemblages—were found at relatively shallow depths of around 42 inches (3½ feet) (Ritchie 1980).



There are few Middle Archaic sites in the region as well. The majority of these tend to consist of large shell middens, which are often found near major water courses such as the Hudson River, although stone points have also been found in such locations. These sites were in great danger of obliteration because of their proximity to the shrinking coastlines.

Unlike the Early and Middle periods, many Late Archaic sites have been found throughout the New York City area including many in Staten Island. Late Archaic habitation sites are often found in areas of low elevation near water courses and temporary hunting sites are often located near sandy areas (Boesch 1994). Late Archaic sites identified in Staten Island include the Pottery Farm, Bowman's Brook, Smoking Point, Goodrich, Sandy Brook, Wort Farm, and Arlington Avenue sites, among others (Ibid).

In addition, many Terminal Archaic sites from all across the city have provided examples of what archaeologists call the Orient culture, which is characterized by long fishtail stone points and soapstone bowls. There have been extremely elaborate Orient burial sites found on eastern Long Island, but none have been identified on Staten Island. Orient-style fishtail points have been discovered along the shores of Charleston; it is assumed that they fell from eroding cliffs located nearby (Boesch 1994). In addition, most Richmond County sites dating to this period have been characterized by large shell middens (Louis Berger & Associates 2001).

#### **D. WOODLAND PERIOD (2,700 BP-AD 1500)**

The Woodland period represents a cultural revolution of sorts for the Northeast. During this time, Native Americans began to alter their way of life, focusing on a settled, agricultural lifestyle rather than one of nomadic hunting and gathering. Social rituals begin to become visible in the archaeological record at this time and there have been many elaborate human and canine burial sites identified from this period. The first evidence of smoking has also been found—stone pipes have been uncovered at Woodland sites—and it was at this time that pottery began to be produced.

In general, there was a greater emphasis placed on composite tools during the Woodland period. While stone scrapers, knives, and hammerstones were still in use, there was an increased use of bone, shell, and wood in tool making. Furthermore, the development of bows and arrows revolutionized hunting practices. Fishing continued to be important to the local economy and wooden boats and bone hooks were often utilized (Historical Perspectives, Inc. 2005). Many tools were still made from imported materials, indicating that the trade networks established earlier were still being maintained (Cantwell and Wall 2001).

Pottery was introduced into Native American society early in the Woodland period and by the time of European contact in the 1500s, well-crafted and elaborately decorated pottery was being manufactured. Similar to the Archaic period, the Woodland has been divided into Early, Middle, and Late sections, which differ mostly based on the style of pottery which was produced at that time. Woodland pottery had simple beginnings; the first examples were coil pots with pointed bases, which were made with grit temper. These were replaced during the Middle Woodland period by shell-tempered vessels bearing a variety of stamped and imprinted decorations. As the period drew to a close, the decorative aspect of the pottery was further augmented with the addition of intricate ornamental rims (Louis Berger Group 2004).

Woodland-era sites across North America indicate that there was an overall shift toward full-time agriculture and permanently settled villages. Archaic sites in New York City suggest that the Native Americans there continued to hunt and forage on a part-time basis. This was most likely due to the incredibly diverse environmental niches that could be found across the region

throughout the Woodland period (Cantwell and Wall 2001, Grumet 1995). Nevertheless, Woodland societies were considerably more sedentary than were their predecessors. There was, some farming of maize, beans, squash, and tobacco. The development of pottery, increasingly complex burial sites, and the presence of domesticated dogs are all consistent with sedentary societies that have a close association with a particular territory or piece of land.

Woodland sites, like those of the Paleo-Indian and Archaic periods, are usually found alongside water courses. They were often occupied for long periods of time, although there was still some seasonal migration that may have left them unoccupied for brief periods throughout the year.

One Woodland period archaeological site that has been identified on Staten Island is the Bowman's Brook site, located along the island's northwest coastline (**Figure 8 and Table 3**). That site yielded a type of incised pottery, which has since become known as the Bowman's Brook Phase. Sites with this particular type of pottery are most often located near tidal streams or coves and are usually associated with large shell middens and refuse pits, indicating long periods of occupation (Ritchie 1980). The Bowman's Brook site also contained several human and dog graves, as well as bundle burials (Cantwell and Wall 2001).

The Ward's Point site, located at the southernmost point of Staten Island, was also occupied during the Woodland period. Many Native American artifacts and elaborate burials with varied grave offerings have been uncovered there (Cantwell and Wall 2001).

## **E. CONTACT PERIOD (AD 1500-1700)**

The Woodland period ended with the arrival of the first Europeans in the early 1500s. At that time, a division of the Munsee Indians known as the Raritan occupied southern Staten Island (Bolton 1975). They entered the area towards the end of the Woodland period (Boesch 1994). They referred to Staten Island as "Aquehonga Manacknong," possibly meaning "haunted woods," "bushnet fishing place," or "the high bank fort place" (Grumet 1981: 2). The name may have also referred to the village settlement at Ward's Point (Ibid). In land transactions with the Europeans, the island was also referred to as "Matawucks" and "Eghquaous" (Boesch 1994).

Giovanni de Verazzano was the first European to view New York in 1524. However, Henry Hudson's expedition to New York in 1609 marked the true beginning of European occupation in the area, and subsequently marked the beginning of violent encounters with the Native Americans as well. Shortly after Hudson's men explored Staten Island, a skirmish ensued with the local Indians, resulting in the death of one of Hudson's crewmen.

Because of this incident, the Native Americans of Staten Island were extremely wary of Europeans. They even set up look-outs on tall hills in an effort to spot approaching ships so as to prevent such vessels from landing (Historical Records Survey 1942: xii). Although the land had been "sold" to the Europeans in 1630 (Grumet 1981), it was not until 1638 that a successful European colony, that of Olde Dorpe, could be established on the island, east of the project site. Violence between the Native Americans and the Europeans would cause this village to be burned down and rebuilt several times throughout the contact period.

With the introduction of European culture into the indigenous society, the way of life once maintained by the Native Americans was thoroughly and rapidly altered. European guns, cloth, kettles, glass beads, and alcohol soon became incorporated into the Native American economy. The Native Americans began to suffer from the side-effects of European colonization: disease, alcoholism, and warfare. As land in other parts of New York City was sold off to the Europeans, many displaced Native Americans relocated to Staten Island to the point where "the Raritan

consisted of a heterogenous assortment” of Native Americans from all over the New York metropolitan area (Grumet 1981: 45).

Native Americans at first maintained the village sites they had established near water sources. As their trade with European settlers intensified, they became increasingly sedentary. However, as the European population grew and required more land, the relationship between the two groups turned sour. Fierce wars broke out between the Dutch and the Indians. This was most intense during the early 1640s when Director-General William Kieft ordered many ferocious and unprovoked attacks on the Native population. While the Kieft war ended with a treaty signed in 1645, the Raritans did not agree to peace until 1649 (Grumet 1981).

The warfare was somewhat abated when Kieft was replaced by Peter Stuyvesant, who brought some stability to the area. However, the “Peach War” of 1655 caused more inter-cultural violence on Staten Island. After that war ended, the land was re-sold to the Dutch in 1657. The Native Americans were no match for the growing numbers of armed European settlers, and the natives agreed to sell what was left of their land on Staten Island in 1670, although some Native American villages remained until the early 20th century (Grumet 1981). In the land transaction recorded in 1670, the Native Americans sold all of their holdings on Staten Island in exchange for “four hundred fathom of wampum, thirty match coats, eight coats of dozens made up, thirty shirts, thirty kettles, twenty gunnes, a ffirkin of powder, sixty barres of lead, thirty axes, thirty howes, [and] fifty knives” (Bolton 1975: 73).

There are several Contact period archaeological sites that have been identified in New York City, including the aforementioned Ward’s Point site on Staten Island (Grumet 1995).

## **F. DOCUMENTED NATIVE AMERICAN ACTIVITY NEAR THE PROJECT SITE**

A review of the files at the LPC and OPRHP and of cultural resource surveys in the immediate vicinity showed that there are many archaeological sites within a one mile radius of the project site. In addition, LPC’s precontact sensitivity model indicates that the project site is situated in an area that is expected to be highly sensitive for Native American archaeological resources.

At least one large Native American village was located within the project site on “Lake’s Island,” a small section of land which was elevated above the marshland just east of the Isle of Meadows (**Figure 4**). This site is labeled site “A” in **Figure 8** and in **Table 3**. A Native American trail led to this spot along the line of present Arthur Kill Road (Grumet 1981 and Bolton 1922). Another village site was identified within the Isle of Meadows, labeled site “cc” in **Figure 8** and in **Table 3**. Although several historic maps identify this location as a marshland (**Figures 4** through **6**), the ca. 1911-1913 Richmond County topographical survey (**Figure 7d**) indicates that the central portion was composed of fast land.

Other village sites were located near Fresh Kills, including the Chelsea and Smoking Point sites (labeled sites “J” and “bb,” respectively, in **Figure 8** and in **Table 3**). These were also accessed by trails, although none of those trails appears to enter the project site. Grumet (1981) also indicates that a large plot of land cultivated by Native Americans was located immediately east of the project site, across Richmond Avenue. An additional site within the project site, site “B” in **Figure 8** and in **Table 3**, is identified by Boesch (1994) as the Price’s Island site located to the south of the Isle of Meadows within the West Mound. Historic maps show that Price’s Island was actually in the vicinity of the site labeled “D” in **Figure 8** and in **Table 3**, and Boesch’s identification of the site in the vicinity of the West Mound may be incorrect.

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A large number of precontact camp sites were also located within one mile of the project site. These were presumably used by Native Americans during hunting and fishing excursions when they exploited the varied resources provided by the wetland environment surrounding the Fresh Kills area.

In addition, at least 6 of the previously identified Native American archaeological sites in the vicinity of the project site were found to contain intentional human burials. Those sites are Corson’s Brook (site “E” in **Figure 8** and in **Table 3**), Chelsea (site “J”), Chelsea II (site “K”), New Springville (site “M”), Chemical Lane (site “aa”), and Smoking Point (site “bb”).

**Table 3**

**Previously Identified Precontact Archaeological Sites Within One Mile of the Project site**

Key to Fig 8	Site Name	Site #	Approximate Distance from Project Site	Time Period	Site Type
A	Lake’s Island	<u>NYSM:</u> 4625 <u>Parker:</u> ACP-RICH <u>SIAS:</u> STD-L <u>LPC:</u> 27	Within project site	Woodland	Small village and shell midden, largely destroyed by landfill construction
B	Price’s Meadow Island	<u>SIAS:</u> STD-PI <u>LPC:</u> 40	Within project site	Precontact	Indications of Native American activity
C	Benedict Creek, Fresh Kills	<u>SIAS:</u> STD-BC <u>LPC:</u> 110	Within project site	Precontact	Native American artifacts
D	Unnamed Site	<u>Parker:</u> ACP-RICH <u>NYSM:</u> 4626 <u>LPC:</u> 73	Within project site	Woodland	Small camp
E	Corson’s Brook	<u>LPC:</u> 31	1,500 feet	Woodland/Contact	Shell middens, Native American artifacts, and human burials
F	Unnamed site	<u>Parker:</u> ACP-RICH-9 <u>NYSM:</u> 4599 <u>LPC:</u> 72	500 feet	Precontact	Shell midden
G	Travis Site	<u>LPC:</u> 38	1,000 feet	Early Archaic to Contact	Native American artifacts; one of the largest sites on Staten Island
H	Long Neck North and Long Neck South	<u>SIAS:</u> STD-LN; STD-28-3 <u>NYSM:</u> 4598 <u>LPC:</u> 39	3,000 feet	Precontact	Small camps and shell middens
I	Neck Creek	<u>NYSM:</u> 4598 <u>LPC:</u> 80	3,500 feet	Precontact	Small camps; may be part of “H”
J	Chelsea	<u>OPRHP:</u> AO85-01-0135 <u>SIAS:</u> STD-20-3 <u>NYSM:</u> 746 and 4627 <u>LPC:</u> 71	3,500 feet	Late Archaic to Early Woodland	Village and human burials

**Table 3 (cont'd)**  
**Previously Identified Precontact Archaeological Sites Within One Mile of the Project site**

Key to Fig 8	Site Name	Site #	Approximate Distance from Project Site	Time Period	Site Type
K	Chelsea II	OPRHP: AO85-01-000625; AO85-01-0002634 Parker: ACP-RICH NYSM: 4627 and 9634 LPC: 70	5,000 feet	Precontact	Camps, stone tools, and human burials
L	Prall's Fever	SIAS: STD-PF LPC: C	5,280 feet	Precontact	General Native American artifacts recovered
M	New Springville	Parker: ACP-RICH-10 NYSM: 4600 LPC: 74	3,000 feet	Woodland-Contact	Campsite with shell middens and human burials; noted by Boesch (1994) as being relatively undisturbed
N	Ketchum Hill	LPC: 97	500 feet	Precontact	Large campsite with Native American artifacts
O	Old Mill Road	SIAS: STD-OM LPC: L	5,000 feet	Precontact	-----
P	Green Ridge	SIAS: STD-19-3 LPC: B	2,000 feet	Precontact	Native American artifacts
Q	Fiddler's Green	SIAS: STD-19-3 LPC: 79	1,500 feet	Precontact	Small campsite
R	Unnamed Site	SIAS: STD-CAB LPC: 113	<100 feet	Woodland	Small campsite
S	Cutting Site	LPC: 2	300 feet	Paleo-Indian-Woodland	Temporary hunting camp
T	Hammerstone Hill	SIAS: STD-6 NYSM: 30 RIC-6-AJA LPC: 4	2,000 feet	Woodland	Lithic debitage and ceramics; has been destroyed
U	Saint Luke's Cemetery	LPC: 3	2,000 feet	Archaic-Late Woodland	Evidence of occupation, lithic and ceramic debris
V	Sandy Ground	SIAS: STD-SH LPC: 5	3,500 feet	Archaic	Lithic material related to hunting and butchering; some activity areas may still remain
W	Unnamed Site	LPC: 56	3,000 feet	Late Woodland	Small campsite and shell midden
X	Rossville Campsite II	LPC: 21	3,500 feet	Woodland	Campsite
Y	Wort Farm	SIAS: STD-2-3 STD-R-2 STD-R-3 LPC: 11	3,500 feet	Late Archaic-Late Woodland	Large campsite with housing development
Z	Pottery Farm	NYSM: 30-RIC-16-AJA OPRHP: A085-01-0075 SIAS: STD-	5,000 feet	Late Archaic-Transitional-Middle/Late Woodland	Shell midden, stone tools and debitage, and large quantities of pottery

**Table 3 (cont'd)**

**Previously Identified Precontact Archaeological Sites Within One Mile of the Project site**

Key to Fig 8	Site Name	Site #	Approximate Distance from Project Site	Time Period	Site Type
		23-2 STD-CH LPC: 8			
aa	Chemical Lane	OPRHP: A085-01-0074 LPC: 7	5,280 feet	Archaic-Woodland	Lithic materials, ceramics, and human burials
bb	Smoking Point	OPRHP: A085-01-0076 SIIAS: STD-14-3 LPC: 6	5,500 feet	Paleo-Indian? – Late Archaic/Woodland	Stratified, permanent or semi-permanent village site including human burials
cc	Unnamed Site, Isle of Meadows	NYSM: 4602	Within project site	Early Precontact	Village and shell midden
dd	Unnamed Site	NYSM: 8382	3,500 feet	Precontact	Relics from dunes
ee	Unnamed Site	NYSM: 8502	4,000 feet	Precontact	Traces of Occupation
<p><b>Notes:</b>                      NYSM = New York State Museum                      LPC = New York City Landmarks Preservation Commission                      SIAAS = Staten Island Institute of Arts and Sciences                      OPRHP = New York State Office of Parks Recreation and Historic Preservation  <b>Sources:</b> Boesch (1994), Hunter Research (2001), Greenhouse Consultants, Inc. (2000), Bolton (1922)</p>					

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**A. INTRODUCTION: STATEN ISLAND HISTORY**

As discussed in Chapter III, bad relations between the Dutch and the Native Americans had prevented the formation of a successful European settlement on Staten Island until the late 1630s. Even afterwards, peaceful relations between the two groups were not established until after the British had seized the colony in 1664. Although the Dutch were able to re-take the colony, now known as New York, in 1673, they traded it back in 1674 for “the far more lucrative colony of Surinam” (Cantwell and Wall 2001: 181). New York would remain under British control for the next hundred years.

The exodus of the bulk of the Native American population beginning in 1670 made it easier for Staten Island to become a thriving part of the New York economy. Without a substantial Indian presence, there were no longer any obstacles blocking the settlement of the island and Richmond County was officially established in 1683. Rumors of the island having been won for New York from New Jersey by Captain Christopher Billopp in a sailboat race in 1687 are most likely false and there is no evidence to suggest that Staten Island was never considered to be a part of the New York colony (Botkin 1956).

Under British rule, Staten Island’s open farmland and vast coastline became essential for the production of agricultural products and collection of marine resources for export the city. The colony’s progress was both halted and facilitated in the mid-18th century during the French and Indian War, which concluded in 1763. Although the region experienced the economic side effects of war, thousands of British armed forces stationed throughout the New York City area brought money to the region while increasing its population. During this time, New Yorkers were not completely loyal to the English crown and goods were secretly (and illegally) traded to French colonies via Staten Island’s more secluded ports (Burrows and Wallace 1999).

Despite their conduct during the French and Indian War, most colonial New Yorkers remained loyal to the British during the Revolutionary War. Staten Island proved to be a key asset during the latter confrontation. In 1776, unsuccessful peace negotiations were held at Captain Billopp’s former house (now known as the “Conference House”) at the southern tip of Staten Island. The British continued to use Staten Island as a rudimentary home base due to its strategic location (Historical Records Survey 1942). It was sufficiently close to both New York and New Jersey that British soldiers could easily be dispatched in the event of an impending battle. And, reminiscent of the activities of the Raritan Indians, the island’s tall hills provided views essential to tracking ships approaching the city. However, the British troops caused a great deal of trouble by burning farms and homes and stealing from private citizens. This resulted in horrible and brutal living conditions for many of Staten Island’s civilians.

Even though New York City had remained loyal to the British during the war, the post-war conversion to the new American government was relatively smooth. Land which had been previously owned by British loyalists was divided and sold, which brought about a surge in

population and development in the outer boroughs, a trend which continued through the 19th century. In 1688, the island was officially divided into four townships, Castleton, Northfield, Southfield, and Westfield. The portion of the project site south of the Great Fresh Kills and Richmond Creek was part of Westfield while the area North of Richmond Creek was part of Northfield.

Between 1840 and 1880, the population of Staten Island nearly quadrupled. This surge was caused in part by the increasing population density in Manhattan, which drove many people to the outer boroughs. The region's prosperity caused the counties in the New York City region to become increasingly codependent, both economically and culturally. It was therefore suggested that the counties around New York Harbor be consolidated under the name New York City. Although there was some resistance from some Staten Island residents, it officially became a borough of New York City on New Year's Day, 1898.

As part of the city proper, Staten Island flourished throughout the 20th century. Increased mass transit connected all the boroughs and allowed more people to live outside of Manhattan while still having access to the city's varied resources. The remainder of the 20th century saw continued growth and increasing population density throughout Staten Island.

## **B. 17TH CENTURY SITE HISTORY**

One of the earliest known maps depicting Staten Island is Vinckeboon's 1639 "Manatus Map" (**Figure 9**). While this map shows the modern boroughs of Manhattan and Brooklyn as having multiple plantations—known to the Dutch as *bouweries*—and other settlements, only one farm was located on Staten Island, that of David Pietersen de Vries, along the island's northeast coast (Kouwenhoven 1972). As discussed previously, Native American resistance made it very difficult for the Europeans to settle the island. However, after the exodus of Native Americans from Staten Island in 1670, settlements gradually grew there. The name "Fresh Kills" appears in land papers as early as 1676 (Morris 1900).

The generally marshy character of the project site might also have affected Europeans' desire to settle there. The Skene map of old Dutch grants (not pictured), published in 1907, indicates that most of the property immediately south of the project site was granted in 1680 while much of the land east of the project site was granted in either 1677 or 1694. Much of this land was granted to Englishmen (Roy F. Weston of New York, Inc [RFWNY] 1994) although in the late 17th century, many French Huguenots were living in the area (Leng and Davis 1929). In the mid-17th century, "there [were] probably...one or two [houses] at Fresh Kill" (Clute 1877: 31). This number was augmented in 1661 when the Huguenots moved into the area (Ibid). A French Huguenot Church and cemetery were built in the late 1600s in the vicinity of modern Arthur Kill Road. The church was demolished in the early 18th century and its exact location has not been identified, although it was probably located east of the intersection of Arthur Kill Road and Richmond Avenue; immediately east of the APE and outside of its boundaries (Greenhouse 2000). Graves from this little cemetery were present as late as the 1880s, and it was noted that graves from this cemetery were disturbed when buildings were constructed there in the 1920s (Salmon 2006).

The Skene map (not illustrated) shows that within the project site, the fast land (the original ground surface, as opposed to landfill) in the south of Fresh Kills and west of the West Shore Expressway, 80 acres were granted to Edward Antill in 1686 and 88 acres were granted to William Douglas in 1685. Francis Chartier, Josiah Cresson, Peter Cresson, and John Hendrickson are also noted as having been in possession of property in that area, although they did not receive official patents. In



addition, the area known as “Lake’s Island” and two small sections of marshland near the northern extension of Main Creek are noted as having been granted to “F. Vincent” in 1708. John and Francis Vincent were both landowners in Staten Island (Leng and Davis 1929) although neither appears in a local census recorded in 1706, suggesting that they may have leased the property to others. A John and Francis Vanhoe were included in that census, although their young ages, 20 and 18 years, respectively, indicate that they were not the same individuals as the Vincents.

### C. 18TH CENTURY SITE HISTORY

The earliest 18th century maps of Staten Island are imprecise. The 1733 Popple map (**Figure 10**), shows that the settlement of Richmondtown, then known as “Cuckold’s Town,” was located to the east of the Fresh Kills. However, the map does not give any indication of settlements in the Fresh Kills area itself. No maps indicate that structures were located near the project site until 1776, when the similarly imprecise Des Barres map was published (**Figure 11**). That map shows several structures surrounding the marshland; however, its inaccuracy prevents the clear determination of the location of these structures, although one may have been located in the Lake’s Island area and three or four others may have been located along a precursor to Arthur Kill Road, along the southern border of the project site.

Fresh Kills played a significant role in Staten Island’s history during the Revolutionary War. As previously mentioned, Staten Island was a key asset for the British military and Fresh Kills was a major access point to the island’s inner settlements. The British feared that General George Washington would try to capture the island for the Americans (Clute 1877). Throughout the war, American raiding parties crossed the Kills several times. In 1777, Americans sneaked onto the island via the waters of Fresh Kills and made it all the way to Saint Andrew’s Church in Richmondtown, taking military and civilian prisoners along the way (Leng and Davis 1929). Although they forced the British to retreat, the Americans were ultimately overpowered and retreated via Fresh Kills Road, hiding in fields and thickets along the way (Morris 1900). In another incident, American soldiers landed on Staten Island in the area between the Blazing Star Ferry and “Burnt Island” (the Isle of Meadows), within the project site.

The British tried to secretly store warships in the Kills, but American soldiers were able to destroy some during one of their raids (Morris 1900). The Fresh Kills area, which was previously known as “Marshland,” was “an important military post during the whole of the occupancy of Staten Island by the British, and a redoubt was located near the Old House by the Mill” (Ibid: 219, Leng and Davis 1929). This might have been the mill located near the southeast corner of the project site (labeled “11” in **Appendix A**) or a mill depicted along the Fresh Kill on the 1797 Sprung and Connor map of Staten Island (not pictured) to the southeast of the area formerly known as Lake’s Island. No military fortifications or encampments are labeled as such in the vicinity of the project site on McMillen’s “Map of Staten Island during the Revolution” (**Figure 12**), although the map illustrates several unidentified structures within the APE, including one on Lake’s Island, near the mill seen on the 1797 map. It is not clear, however, if one of these unidentified structures was this redoubt.

The mill mentioned above was important to the Staten Island community as it was “centrally located” at a time when Captain Billopp’s property monopolized the majority of southern Staten Island (Leng and Davis 1929: 209). During the late 18th century, Fresh Kills became a hub of commercial activity because it was fairly easy to transport goods via boat within the many waterways that traversed the area (Ibid). The mill appears to have been owned at one point by two men named Bedell and Micheau, who owned a local store that sold, among other things,

gunpowder to soldiers during the war (Ibid). In addition to the unidentified structures, McMillen’s map depicts several family homes that were situated within the project site towards the late 18th century: that of C. Mesheau, in the current location of the West Mound, the DeLest home, also in the vicinity of the West Mound, the home of Lazirieur, in the vicinity of the South Mound, and the home of D. Seaman, near the northwest corner of modern Arthur Kills Road and Richmond Avenue.

The area continued to grow towards the end of the war. The area to the north of the Fresh Kills is described as being “well settled” on the 1781 Lodge map (not pictured). This map also describes the Isle of Meadows and nearby Prall’s Island as “islands only at high water.” Finally, this map places several structures along the southern edge of the marsh, the easternmost of which is labeled “Stillwell’s Mills,” although it is unclear if this is within the project site or just east of it. During this time, the Fresh Kills area evolved into a true community that was described as a group of people who “seldom went into the city and had a wholesome dread of its dark ways” (Leng and Davis 1929: 1002). The aforementioned 1797 map of Staten Island also depicts more structures along Arthur Kill Road than are depicted on McMillen’s map; however the map’s inaccuracy prevents the exact location of these structures from being determined.

Because Staten Island became an agricultural center during the 18th century (RFWNY 1994), it is likely that the land adjacent to the marshes was used as cultivated farmland. The marshes at Fresh Kills were also extremely valuable to Staten Island farmers, as they provided salt hay for livestock, which was a major cash crop during the 18th and early 19th centuries (New York City Department of City Planning [DCP] n.d.).

## **D. 19TH AND 20TH CENTURIES: SITE HISTORY**

Throughout the 19th and 20th centuries, the Fresh Kills area became increasingly developed. An inventory and map of the structures present within the APE during this time period is presented in **Appendix A** and **Figure 20**.<sup>1</sup> Because the blocks and lots within the Fresh Kills Park project site remained relatively consistent throughout much of the Historic Period, individual properties were analyzed and any changes in the development of such properties has been included in the inventory. The structures described in **Appendix A** can also be seen on **Figures 13** through **19**.

One of the most significant developments within the project site during the 19th century was the construction of the Fresh Kills Bridge, which allowed people to cross the western side of Staten Island without having to go out of their way to travel around the marshland. The bridge was built in the vicinity of the modern Richmond Avenue in 1851 by the Plank Road Company and is first visible on the 1853 Butler map (**Figure 14**) (Leng and Davis 1930). The Bridge was sold to Jacob Garretson in 1856 but over the next few decades it deteriorated and it was condemned in 1880. A new bridge was later constructed on the spot; it opened in 1896. In 1931, another new bridge was completed at a cost of \$570,000 (*New York Times* [NYT] 10/30/1931), although by the late 1940s, another was proposed for a cost of \$3,000,000 (*Staten Island Advance* [SIA] 8/16/48).

Throughout the late 19th and early 20th centuries, many of the farms and domestic residences which had characterized the Fresh Kills area were replaced with commercial buildings. Because the marshy areas provided a great deal of moist clay, many brick yards were constructed in the

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<sup>1</sup> **Figure 20** includes approximated areas where structures were once located. The exact locations of the historic structures presented in **Appendix A** are depicted on historic maps (**Figures 4** through **19**).

area south of the Fresh Kill and Richmond Creek, in the vicinity of the modern West and South Mounds. The first of these brick yards appear on the 1872 Dripps map (not pictured). Of the two brick manufacturers depicted on that map, the first was located in the area immediately south of the Isle of Meadows within the property of “Wood and Keenan,” although no structures are depicted in or near the area labeled as a brick yard. No brick yard is depicted on the 1874 Beers atlas (**Figure 15c**), which also depicts the property as belonging to “Wood and Keenan” and shows two structures not seen on the earlier map which may have been associated with the brickworks. The other brickyard, known as “Butler’s Brick Yard,” was located about a mile northwest of the intersection of Arthur Kill Road and the former Fresh Kills Bridge (in the vicinity of modern Richmond Avenue). The 1874 Beers atlas (**Figure 15b**) shows that J. Butler still owned the property and although it does not specifically label the property as a brickyard, a “brick kiln,” was located in the area. The 1887 Beers atlas (**Figure 16**) depicts the Butler property but with no structures,

The 1898 Robinson atlas (**Figure 17a**) indicates that two additional brickworks, the New York Anderson Pressed Brick Company and Robert Colgate Brick Manufactory, were operating along the western side of the project site at that time. Both brick yards contained railroad tracks that stretched all the way to the Arthur Kill Shoreline, presumably to load bricks onto cargo ships. Just south of these brick yards, the E.P. Benedict Artificial Granite Company was also in operation within the project site. By 1907, both the Anderson and Colgate brick companies appear to have been consolidated into the Rossville Brick Company, while the Wood and Keenan property noted above was now the property of the Richmond Brick Company (**Figure 18**). These three brick yards also appear on the 1917 Bromley atlas (**Figure 19b**), which labels the former Butler brick yard as “Dunn and Dolan Brick MFY (vacant).”

The 1898 atlas is also the first to depict Meadow Road, a small stretch of road that ran north-south along the periphery of the marshland in the southern portion of what is now the East Mound and connected to what is now Richmond Avenue via another small road, Meadow Lane. These small roads continue to appear on maps until at least 1917 (**Figure 19f**). No traces of Meadow Road or Meadow Lane are visible today.

The 1917 atlas also shows that a garbage disposal plant had been established within the project site on Lake’s Island. The garbage disposal plant was originally meant to be located on nearby Prall’s Island. However, during a 1916 real estate dispute in which fifteen armed men took control of Prall’s Island and prevented it from becoming a landfill, the location of the dump was moved to Lake’s Island (*NYT* 5/24/1916). Community members heavily protested the establishment of the plant, with most citizens proclaiming that it would violate public health laws and attract “rats as big as bulldogs” (*NYT* 7/14/1916: 20). Nevertheless, the garbage plant was approved and ultimately constructed in the area at a cost of \$1,000,000 (*Ibid*). The landfill was not governed by today’s sanitary and environmental standards. In 1918, in an attempt to determine if the foul odors emanating from the plant were generated by the landfill itself or from the unloaded barges, the Commissioner of the Department of Street Cleaning, the precursor to the Department of Sanitation, ordered that fifteen unloaded barges of garbage be dumped at sea (*NYT* 6/29/1918).<sup>1</sup>

Talk of transforming the Fresh Kills area into a full-scale urban landfill increased in the 1920s and 1930s. The location was naturally conducive to such purposes because barges carrying solid waste

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<sup>1</sup> Ocean dumping would not be banned until 1934 (RFWNY 1994).

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from the across the City could be transported directly to the landfill via its network of creeks and waterways (RFWNY 1994). Newspapers carried stories about the proposed landfill, spear-headed by City Construction Coordinator Robert Moses, as early as 1938. As with the Lake's Island plant, the proposed Fresh Kills Landfill was met with harsh criticism from Staten Island's citizens and community activists, who felt that it would be a "potential health menace and an annoying source of disagreeable odors" (*SIA* 6/29/1946). The city defended their proposal by pronouncing the Fresh Kills area as a "great, green waste" (*NYT* 7/10/1946: 25) and promised to "take a swampy area full of mosquitoes and odors no better than those from refuse and transform it into fertile soil that can be made into beautiful parks" (*NYT* 2/18/1949: 44).

The city moved forward with its plan to place a light layer of fill over the marshes (*SIA* 7/5/1946) and using dirt generated by the cutting down of the tall hills surrounding the site (*SIA* 12/10/1946). Other materials were used as fill, including dirt excavated during the construction of roads, subways, and buildings, clean sand, and raw garbage (RFWNY 1994). The land was obtained through condemnation (*SIA* 12/19/1946), which is supported by historic deeds (**Appendix B**) that show that the Treasurer of the City of New York took control of many of the tax blocks within the APE on February 25, 1953 and immediately granted them to the City.

The City's original intention was to operate the landfill for no more than two years (*SIA* 1/31/1947), after which time the land would be suitable for industrial development, open park space, and even an airport (*SIA* 12/10/1946). Dubbed "Operation Fresh Kills," the city intended to "reclaim" more than 1,800 acres of former wetlands over the course of a decade using twenty percent of New York City's daily garbage as fill (*NYT* 2/18/1949: 44). However, the City pushed back the landfill's anticipated closure several times throughout the 20th century. The landfill's acreage kept increasing as more and more solid waste was brought in from throughout New York City. In the mid 1950s, the sheer volume of trucks carting dirt to be used as fill and cover material at the Landfill were leaving trails of dust and debris all across Staten Island (*SIA* 9/9/1955). In 1952, the Landfill's area was doubled (*SIA* 9/17/1952) and additional underwater land was acquired five years later so that landfilling could continue. At that time, the creeks and waterways making up Fresh Kills were dredged and widened and the bulkheads lining them were straightened not only to improve conditions at the landfill itself, but to better prepare the site for future industrial development (*SIA* 8/23/1957).

As the mid-20th century continued, other major development projects took place within the landfill. Beginning in the 1950s and lasting through the mid-1970s, the West Shore Expressway was constructed through the center of the project site. The Expressway is one of Staten Island's main thoroughfares, running between the Outerbridge Crossing to the south and the Staten Island Expressway and Goethals Bridge to the north. The road had been planned since 1947 (*NYT* 2/22/1967) but the final section, between Arthur Kill Road and Victory Boulevard, directly through the APE, was not opened until 1976 (*NYT* 12/13/1976). The West Shore Expressway is not part of the project site and it separates the West Mound of the landfill from the remainder of the site.

By the late-20th century, Fresh Kills had become the largest landfill in the world and was the principal recipient for New York City's domestic refuse. At its peak, Fresh Kills received as much as 29,000 tons of trash per day. While the City had a number of operating landfills in the latter half of the 20th century, many were closed as new landfill and environmental regulations came into effect. Throughout the 1970s, Fresh Kills Landfill was plagued by money problems and suffered from neglect, threatening its future (RFWNY 1994). However, these issues were

resolved and by 1991, Fresh Kills was New York City's only operating landfill receiving residential garbage.

Increasing sanitary and environmental concerns led to the gradual closing of the Fresh Kills Landfill. Although the natural clay beds beneath the site provided some containment, the landfill lacked a liner to prevent toxic substances from seeping into Staten Island's natural resources. In addition, the Fresh Kills Landfill had never been issued a state permit and only operated under a Consent Order. Its overall acreage was reduced in the late 1980s and the North Mound was closed in November, 1992 as was The South Mound in June, 1993 (Ibid). In 1996, a state law required the landfill to close by December 31, 2001, and the last barge of garbage was received on the site on March 22, 2001. Landfill closure subsequently moved forward pursuant to a DEC-approved Closure Plan and consent order. After the World Trade Center attacks on September 11, 2001, the consent order closing the landfill was temporarily amended by the Governor to suspend the City's obligation to cease the acceptance of solid waste material at Fresh Kills so that the landfill could handle materials from the World Trade Center site. No other materials were brought to Fresh Kills during this temporary suspension of the closure. Today, much of the site is a highly engineered complex of man-made infrastructure and artificial landscape (discussed further in **Chapter V**).

## **E. HISTORIC PERIOD ARCHAEOLOGICAL RESOURCES WITHIN ONE MILE OF THE PROJECT SITE**

There are several previously identified archaeological sites in the vicinity of the project site (**Table 4**). The project site is not located in a New York City Landmark or State or National Register (S/NR) Historic District nor does it contain structures that have been listed on or have been determined eligible for listing on the S/NR. The Blazing Star Burial Ground (also known as the Sleight Family Cemetery or Rossville Burial Ground), which is located within the project site, is both a National and New York City Landmark (for a more detailed discussion, see below). In addition, the resources located at the site of the World Trade Center recovery effort on Mound 1/9 may also be considered to be significant historic resources (see below).

### **HISTORIC CEMETERIES WITHIN THE PROJECT SITE**

There are more than twenty historic burial places that currently are or formerly were located within a one mile radius of the Fresh Kills Park project site. Two of these, the Blazing Star Burial Ground (Sleight Family Cemetery) and the Morgan Family Cemetery, are situated within the APE. These cemeteries are described in greater detail below.

#### *BLAZING STAR BURIAL GROUND (SLEIGHT FAMILY CEMETERY)*

The Blazing Star Burial Ground, also known as the Sleight Family Cemetery, is located on a low hill on the north side of Arthur Kill Road in the southernmost portion of the project site (see **Figure 20**). North and west of the cemetery is the marshy shore of the Arthur Kill. The cemetery was named a New York City Landmark in 1968 and approximately 44 gravestones remain on site today. In 1889, William T. Davis, then Staten Island Historian, transcribed the standing headstones which dated between 1751 and 1825 (**Appendix C-1**) although burials continued as late as 1865 (Salmon 2006).

**Table 4**  
**Previously Identified Historic Sites in the Vicinity of the Project Site**

Site Name	Site Number / Landmark Status	Approximate Distance from APE	Time Period	Site Type	Additional Reference
Blazing Star Burial Ground	New York City Landmark	Within the APE	18th and 19th centuries	Private family and, later, public community cemetery	Davis (1889) Inskeep (2000) Salmon (2006)
Morgan Family Burial Ground	-----	Within the APE	18th and 19th centuries	Private family cemetery	Davis (1889) Inskeep (2000) Salmon (2006)
Sandy Ground Historic Archaeological District	National Register Historic District	.75 miles (3,960 miles)	19th century	Early African-American community	RFWNY 1996
Shipwrecks	OPRHP Site # A08501.002601 -A08501.002703	.04 miles (200 feet)	unknown	Wrecked vessels	Panamerican Consultants, Inc. (1999)
Mayflower Avenue Pump Station and Force Main of the Oakwood Beach Water Pollution Control Project	CEQR: 86-157R	.02-.1 miles (100-500 feet)	Historic	Project site determined to be sensitive for historic archaeological resources	Geismar (1985)
New York City Farm Colony	CEQR: 85-327R	1.9 miles (10,000 feet)	20th Century	Pauper's Farmland and potter's field	Greenhouse Consultants, Inc. (1986)
<b>Note:</b> See Table 2 for previously conducted archaeological investigations within 1 mile of the APE.					
<b>Sources:</b> RFWNY (1996), New York City Landmarks Preservation Commission (2004)					

The Blazing Star Burial Ground might have originated as a private family cemetery, but as the neighborhood grew it soon became public and is now one of the oldest community burial grounds in New York City. The gravestones not only mark the graves of early settlers of Staten Island, but they also represent some of the earliest remaining gravestones in New York. Half of the headstones belonged to members of the Sleight (also spelled Slaght and Slaight) family (Salmon 2006). However, many of the founding families of Staten Island are represented in the burial ground, including the Winants, Sleights, Seguines, Oakleys, Parlees, Coles, LaForges, Perrines, and Poillons.

The Blazing Star Burial Ground is currently under the jurisdiction of the New York City Department of Parks and Recreation.

**MORGAN FAMILY CEMETERY**

The Morgan Family cemetery is depicted on the 1917 Bromley Atlas of Staten Island (**Figure 19**) in the vicinity of mound 1/9. This cemetery was located near the former Morgan mansion in the Greenridge section of Staten Island with stones dating between 1795 and 1865 (Davis 1889, **Appendix C-2**), although other sources report stones dating as late as 1888 (Salmon 2006). John Morgan had applied for land in the Fresh Kills area in 1680 (Leng and Davis 1929).

The cemetery was obliterated in 1954 to facilitate the expansion of the Fresh Kills landfill. Public notices ran in the *New York Times* during the first week in July, 1954, stating that the City had acquired “additional real property in the vicinity of Fresh Kill Creek (sic)...for a Marine Unloading Plant” and that “heirs at law and Next of Kin of Charles Morgan,” the remainder of those interred at the cemetery, and the “Fulton Improvement Company” had 10 days to “remove the graves, headstones, and other appurtenances” of the graveyard or the city would “remove the said cemetery and appurtenances” at the heirs’ expense (*NYT* 7/1/1954: p. 28). The property was obtained by the city because the owner, a “corporation,” had “let it go for taxes” (*NYT* 7/7/1954: p. 18).

Lawyers employed by the city “held the beliefs that no remains would be found in the graves” (Salmon 2006: 111) and a “diligent search...failed to uncover any living descendants” (*NYT* 7/7/1954: p. 18). A newspaper article published in the *New York Times* at the time claimed that no bodies remained in the graveyard, although the source of this information is unknown (Ibid). Community groups attempted to halt the destruction by “tractors [waiting] to turn over the...graveyard” (Salmon 2006: 111). Nevertheless, the “Sanitation Department...leveled the ground and knocked over the headstones” (Ibid). It is unclear if the remains were removed to another location or if the landfill was constructed on top of the remains.

#### **SEPTEMBER 11, 2001 MATERIALS**

As discussed in Chapter 1 “Project Description,” Fresh Kills Landfill closed in March 2001 but was allowed to be reopened for the purposes of receiving materials from the World Trade Center site after the attacks of September 11, 2001. Materials associated with September 11, 2001 were placed within an approximately 50-acre portion of the top of Landfill Section 1/9 and were covered with clean soil (Field Operations 2006). In a letter dated April 18, 2008, OPRHP determined that the September 11, 2001 materials at Fresh Kills are not eligible for the S/NR.

#### **WRECKED VESSELS**

There are multiple locations within the project site where sunken vessels are visible on current and historic aerial photographs of the Fresh Kills area. The locations of these vessels are identified on **Figures 20** and **22**.

A large collection of sunken vessels is located near the southwestern corner of the project site (“V1” on **Figures 20** and **22**). Some of these vessels are located in the waters along the shore west of the West Mound and appear to be situated within the project site. Nautical charts dating from the 1970s to the present depict both visible and submerged sunken vessels in this area, which are situated in waters adjacent to a marine salvage yard. The vessels were previously documented by Panamerican Consultants, Inc. (*Cultural Resources Survey, New York Harbor Collection and Removal of Drift Project, Arthur Kill, New York Reach; Arthur Kill, New Jersey Reach; and Kill Van Kull, New York Reach*, prepared for U.S. Army Corps of Engineers, 1999). Panamerican Consultants concluded that most of the vessels in this location were associated with the marine salvage yard established there in the mid-twentieth century and were not historically significant. However, the report documented two historically significant vessels, identified as “Vessel 12” and “Vessel 13;” both wooden-hulled, inclined engine, double-ended ferries abandoned circa 1932. Due to its state of relative deterioration, Vessel 13 was not recommended for further investigation or protection. However, Vessel 12 was recommended for recordation and the recovery of its inclined engine and frame. No further work has been done on Vessel 12

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since the time of this report (Lynn Rakos, ACOE, personal communication, December 14, 2007).

Additional sunken vessels are present at the base and western branch of the crescent-shaped northern end of the Main Creek (“V2” and “V3” on **Figures 20** and **22**). These vessels, which appear to be barges, are not depicted on historic or current nautical charts and little is known about them. Additional sunken vessels are located within Richmond Creek, between the South and East Mounds (“V4” on **Figures 20** and **22**). These vessels are depicted on current USGS maps and on nautical charts dating from the 1970s to the present, which indicate the presence of both submerged and visible sunken vessels in the area. It is possible, given the proximity of these barges to the waterfront property of the former Dunn and Dolan Brick Manufactory (**Figure 19c**) that these potential barges were associated with the brickworks. \*



## **Chapter V: Existing Subsurface Disturbance and Infrastructure**

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Previous environmental analyses of the Fresh Kills Landfill (RFDNY 1994 and 1996) determined that the recovery of archaeological resources within the boundaries of the landfill was “not feasible as no natural soil horizons remain in most areas due to landfilling operations” (RFDNY 1994: 3-33). While many portions of the project site would have been disturbed as a result of landfill construction and use, disturbance cannot be documented in all areas of the site and in some cases, archaeological resources may in fact be protected by the layers of refuse that were subsequently deposited on top of them. It is therefore possible that archaeological resources dating to either the precontact or historic periods could survive within the site. The following section summarizes areas where known disturbance has occurred within the project site.

### **UTILITY DISTURBANCE**

Three of the roads surrounding Fresh Kills Landfill, Arthur Kill Road, the West Shore Expressway, and Richmond Avenue, contain utility lines which in specific locations connect to various landfill facilities located within the project site (these facilities are depicted on **Figure 3**). The landfill also has its own intricate infrastructure used to contain hazardous liquids and gasses. The landfill’s existing infrastructure is summarized below. A plan of the Landfill’s subsurface utilities can be seen on **Figure 21**.

### *LEACHATE AND LANDFILL GAS COLLECTION*

The majority of the existing infrastructure within the project site is associated with the collection and treatment of methane gas and leachate (**Figure 21**). Methane gas is produced by the decomposition of refuse and leachate is naturally occurring contaminated water generated “when water percolates through the refuse/fill layer of the landfill...[and]...dissolves soluble substances found in the refuse/fill layer and transports them away” (RFDNY 1996: GL-11). A leachate collection and containment system was constructed within the Fresh Kills Landfill in the late 1990s in conjunction with the landfill’s closing. Three-foot thick containment walls buried to depths of 10 to 55 feet below the ground surface surround each landfill mound (Ibid). Leachate is funneled into collection drains, collection wells, and force mains before being transferred to a “buried pipeline” which then transports it to a treatment center at the southern end of the West Mound (RFDNY 1994: 2-5). A force main also transports leachate north via the West Shore Expressway and then east to a leachate pumping station located on the East Mound (RFDNY 1996). After treatment, the treated water is discharged into the Arthur Kill (RFDNY 1994). Temporary drainage features including drainage culverts, vegetation, and swales have been constructed within the landfill in an attempt to minimize leachate production (RFDNY 1996).

An extensive network of landfill gas collection pipes is located throughout each landfill mound to collect the methane gas produced by the decomposition of refuse. Three “flaring” stations located on the West, North, and South Mounds were originally used to release methane.

However, methane is now collected and transported to the Landfill Gas Recovery Facility along Muldoon Avenue within the West Mound. The methane is then “harnessed and used as a utility source” (Field Operations 2006: 12). The landfill gas collection pipes are located approximately 4 feet below grade (Stier, personal communication 2007) although they may be only as deep as 18 inches (RFWNY 1994). Vertical pipes connect to the network of methane lines to allow venting above the surface of the landfill’s final cover (Ibid). Such vertical pipes are situated throughout the landfill (**Photograph 11**).

#### *WATER*

Several water mains are located within the project site. A 12-inch water main connects Plant No.1 to a larger line beneath the West Shore Expressway (RFWNY 1996). There are several additional 8-inch water mains within the project site. One extends south from Victory Boulevard along the West Shore Expressway Service Road and connects to Plant No. 2 on the North Mound. Another connects the Leachate Treatment Plant with a larger water line beneath the West Shore Expressway (Ibid). Current utility maps of the landfill (**Figure 21**) depict additional water mains of various sizes (ranging from 8 to 20 inches in diameter) that run through the four mounds as part of a fire suppression system. Water mains are generally installed at depths of approximately 5 feet below ground surface.

In addition, groundwater monitoring wells are situated at many locations throughout the Fresh Kills Landfill.

#### *SANITARY AND STORMWATER SEWERS*

Records on file at the Staten Island office of the Department of Environmental Protection (DEP) Bureau of Water and Sewers show that the “Fresh Kills Interceptor Sewer” currently runs to the south and east of the project site. A branch of this sewer was installed beneath Richmond Avenue in 1978 and another in Arthur Kill Road in 1981. In general, sanitary sewers are installed at depths of approximately 8 to 10 feet below ground surface. DEP records also show that both branches are surrounded by “trap channels” and/or “trap ditches.”

Both Plants No. 1 and 2 are connected to sanitary sewers. Wastewater from Plant No. 1 is held in tanks and then emptied into the Fresh Kills Interceptor Sewer by a commercial hauler via a manhole located near the intersection of Arthur Kill Road and the West Shore Expressway (RFWNY 1996). Plant No. 2 is serviced by a sanitary sewage force main beneath a West Shore Expressway Service Road that leads north to Victory Boulevard (Ibid).

Stormwater management devices such as diversion swales, pipe downchutes, and sedimentation basins were proposed for the landfill site in the mid-1990s (RFWNY 1994). Emergency spillways lined with riprap were also constructed (Ibid). One such basin is located to the north of the North Mound (**Photograph 4**) and additional basins are depicted on **Figure 22**.

#### *NATURAL GAS, ELECTRICITY, AND TELECOMMUNICATIONS LINES*

The Fresh Kills Landfill is also serviced by electricity, natural gas, and telecommunications lines. Such utility lines are generally installed at depths of 2 to 3 feet below grade. A 20-inch gas line connects a line beneath Veterans Road West, a service road of the West Shore Expressway, to the leachate treatment facility on the West Mound (RFWNY 1996). Electricity is provided to Plant No. 1 via a dual 33kV line beneath the roadbed of Muldoon Avenue (Ibid). Additional electric, gas, and telecommunications lines are located beneath the roadbed of the West Shore

Expressway between Muldoon Avenue and Plant No. 1 (Ibid) and connections presumably exist between these lines and various landfill facilities.

#### *UNDERGROUND STORAGE TANKS AND HAZARDOUS MATERIALS*

In addition to the septic tanks mentioned above, diesel tanks are also present in the vicinity of Plant No. 1 (RFWNY 1996). Within the complex of buildings within Plant No. 1 there are more than 20 aboveground and underground heating oil storage tanks ranging in size from 275 to 2,000 gallons (Weston Solutions 2007a). There are also multiple floor drains, oil drums, transformers, and groundwater monitoring wells throughout the complex (Ibid). Plant No. 2 also contains a variety of above- and underground storage tanks which store a variety of fuels, including diesel, heating oil, waste oil, hoist oil, and motor oil (Weston Solutions 2007b). The complex also has a variety of transformers, groundwater monitoring wells, an oil and water separator, catch basins, and outfalls (Ibid).

Historic Sanborn Insurance Maps indicate that gasoline and fuel oil tanks were also present within the property of an early- to mid-20th century asphalt plant in the southeastern portion of the project site, near the northwest corner of Arthur Kill Road and Richmond Avenue. Gasoline tanks associated with a mid-20th century gasoline filling station formerly located to the west of Richmond Avenue opposite Richmond Hill Road, in the north-eastern corner of the project site, were also observed on Sanborn maps.

Hazardous materials analyses of the property show that numerous hazardous materials spills have occurred throughout the project site (Toxics Targeting 2007). Most of these tend to be in the vicinity of Plant Nos. 1 and 2, although others occurred within manholes, substations, or transformer vaults located along the roadways bordering the project site (Ibid). Furthermore, the South Mound is identified in such analyses as containing both inactive and hazardous waste disposal sites, a chemical storage facility, wastewater discharge, a hazardous waste generator, an enforcement docket facility, a solid waste facility, an air release facility, and a petroleum bulk storage facility (Ibid).

#### **TWENTIETH CENTURY TOPOGRAPHICAL CHANGES**

A comparison of historic and current topographical maps was undertaken to identify the portions of the Fresh Kills project site that had experienced significant changes in elevation since landfilling operations began in the mid-20th century. Topographical survey maps of the area dating between 1911 and 1913, which show pre-landfill elevations in 2-foot contour lines throughout the site, served as a baseline. These maps were compared to current topographical maps with 1-foot contour lines, to create a topographical model showing quantities of cutting and filling that occurred during the mid- and late 20th century. Included in this report as **Figure 22**, this comparison map assists in identifying areas that have been disturbed and/or buried under varying quantities of landfill.

The comparison of topographical maps indicated that the main landfill mounds (the North, South, East, and West Mounds), constructed of massive amounts of fill, rise fairly steeply, and occupy the majority of what was historically fast land in the project site. Furthermore, increases in elevation are evident in immediate proximity to the West Shore Expressway, which was constructed on elevated embankments and a viaduct spanning the Great Fresh Kills through the project site from the 1950s through the 1970s. Other portions of the project site, however, appear to have remained the same or similar to their pre-landfill topography. These areas are generally located along the peripheries of the site, in proximity to roadways such as Richmond Road and

Arthur Kill Road. Banks or linear mounds rising 5 and 20 feet higher than ca. 1913 elevations were evident along roadways in areas that otherwise maintained roughly constant elevations. Along waterways, such as Great Fresh Kills, Richmond Creek, and Main Creek, elevations also appeared to remain similar to their ca. 1913 levels. While many areas received varying levels of landfill since ca. 1913, very few areas appeared to have decreased in elevation since ca. 1913. The limited areas in which elevation decreases appeared to have occurred were generally found in roadside locations or in the locations of basins associated with the landfill's leachate systems.

## **20TH CENTURY ROADWAYS**

The West Shore Expressway, constructed in the mid-20th century, was one of the last major highway projects in New York City, linking the Staten Island Expressway (I-278), the Goethals Bridge, and the Outerbridge Crossing. This roadway runs roughly southwest-northeast through the center of the Fresh Kills project site, separating the West and South Mounds and bordering the North Mound to the west. The four-lane expressway features a central grassy median throughout most of the project site, as well as a wide shoulder and parallel service roads. The expressway runs on an embankment through much of the project site, and crosses Fresh Kills Creek on a viaduct.

With the exception of Muldoon Avenue, which runs northwest-southeast through the West Mound between Arthur Kill Road and Plant No. 1, few roads are situated within the project site. Muldoon Avenue appears as a dirt road on a topographic map dating to 1912 (**Figure 7g**). It is currently a paved road measuring approximately 40 to 45 feet in width, but which varies along its length.

Numerous service roads have been constructed within the project site in order to facilitate landfill operations. These roads are depicted on **Figure 22** and, in general, tend to border the individual landfill mounds, providing access to the tops of the mounds. Most of the service roads appear to be paved.

The elevations of Richmond Avenue, the eastern boundary of the project site, and Arthur Kill Road, the southern boundary, do not appear to have been significantly altered since the early 20th century. However, various utilities have been installed beneath both roadbeds.

## **20TH CENTURY BUILDINGS**

Numerous buildings were constructed within the project site during the 20th century, most of which were associated with landfill operations or other industries which were formerly located within the project site. Additional 20th century buildings which are no longer present within the project site are visible on historic aerial photographs, although little is known about these structures or the amount of disturbance which may have been generated during their construction. Many of these structures appear to have been relatively small and associated with the landfill. However, one structure, constructed before 1955 and demolished between 1974 and 1978, was situated approximately 1500 feet west of the intersection of Arthur Kill Road and Richmond Avenue (in the vicinity of property 10 in Appendix A). The footprint of this structure is visible in current aerial photographs. Extant structures and mid- to late-20th century structures which are not depicted on historic or current maps area illustrated on **Figure 22**. \*

**A. CONCLUSIONS**

As part of the background research for this Phase 1A Archaeological Documentary Study, various primary and secondary resources were analyzed, including historic maps and atlases, historic deeds, historic photographs, newspaper articles, local histories, census records, historic directories, building records, and utility installation records. The information provided by these sources was analyzed to reach the following conclusions.

**PRECONTACT SENSITIVITY ASSESSMENT**

Before European contact, the Fresh Kills area of Staten Island was an important hunting, fishing, and habitation location for the local Raritan Indians who resided there. Five Native American sites have been identified within the boundaries of the project site. These sites included two villages, a small camp, and two locations where precontact artifacts were identified. At least 26 additional Native American sites have been identified within one mile of the project site, including several campsites and shell middens. The entire project site is situated within a region where undisturbed areas are determined to be highly sensitive for the recovery of precontact archaeological resources (Boesch 1994).

In general, Native American habitation sites on Staten Island dating to all periods of occupation are most often found in proximity to “well-drained areas near streams or wetlands” and areas of high elevation (Boesch 1994: 9). Most sites are located along the coast near water courses. In addition, Late Archaic sites have been identified mostly in low-lying areas near water courses and marshes, while temporary camping sites during the Late Archaic were commonly found on sandy knolls (Ibid). Historic maps indicate that the project site was composed of large tracts of marshland punctuated by many small lakes and streams. The marshy areas were bordered by elevated land that rose to heights of more than 40 feet above mean sea level near the southern portion of the project site along Arthur Kill Road.

Precontact sites are generally not found within marshy areas, which were not conducive to Native American habitation. Of the two sites identified in **Chapter III** which may have been located within marshland areas, one, site “B,” appears to have been identified in the wrong location on LPC predictive models (Boesch 1994) and the other, site “cc,” on the Isle of Meadows, may have contained a greater amount of fast land than is shown on late-19th century topographic maps.

The precontact sensitivity of project sites in New York City is generally evaluated by the presence of level slopes, vicinity to water courses, presence of well-drained soils, and proximity to previously identified precontact archaeological sites. Because portions of the Fresh Kills Park project site are located in the immediate vicinity of all of these, those portions of the project site could have been utilized by Native Americans not only for village sites, but for temporary hunting, processing, or camping locations as well. It is possible that archaeological resources related to those activities, including stone tools and debitage, faunal remains, shell middens, fire-

cracked rocks, and other artifacts associated with temporary camp sites may be located in the project site.

However, Native American archaeological sites are generally found at shallow depths and are therefore highly susceptible to disturbance. Native American archaeological resources situated within the areas now occupied by landfill mounds (within the boundaries of the leachate walls seen on **Figure 21**) were likely disturbed by landfill activities. In other areas of the site, precontact archaeological resources were most likely disturbed by the installation of utilities and leachate basins and the construction of roads and buildings and as a result of landscape alteration associated with the construction and maintenance of the landfill. Therefore, only undisturbed portions of the project site which are located outside of the leachate walls are determined to have sensitivity for the recovery of archaeological resources dating to the precontact period. In the areas outside of the leachate walls, precontact archaeological resources would be expected at depths extending to approximately 5 feet below the original ground surface. The amount of fill that has been deposited on the pre-landfill (ca. 1912) ground surface, which is assumed to have been relatively similar to the original ground surface, is depicted in **Figure 22**. Precontact archaeological resources may be affected if the proposed project will impact depths at or below the ca. 1912 ground surface. **Figure 23** provides the approximate extent of areas sensitive for the presence of precontact resources.

## **HISTORIC SENSITIVITY ASSESSMENT**

Fresh Kills' network of interconnected waterways and marshlands and proximity to the Arthur Kill and New Jersey coastline caused it to become a tactical stronghold during the Revolutionary War and, later, an important commercial and industrial location. Although the majority of the project site was composed of marshland, historic maps dating to the late 18th and early 19th centuries show that structures were located on the elevated "islands" that rose out of the marshes in various locations as well as along the dry land that bordered the roads on the perimeter of the site. By the time of the Revolutionary War, several families maintained large farms within the project site and other areas were likely used for the farming of salt hay. Two early cemeteries were located within the project site: the Blazing Star Burial Ground, established in the mid-18th century along Arthur Kill Road in the southernmost portion of the project site, and the Morgan Family Cemetery, established in the late 19th century in an area now occupied by the West Mound of the Fresh Kills Landfill.

Although during the 17th, 18th, and early to mid-19th centuries the Fresh Kills region had been used for agricultural purposes, the area's rich clay beds made it an ideal location for brickworks, many of which were established within the project site in the late 19th and early 20th centuries. Most of these featured their own railroad tracks, which transported the bricks to barges located within the nearby water courses.

In 1916, a garbage disposal plant was constructed within the project site on an elevated portion of ground formerly known as "Lake's Island" that is now the location of the Fresh Kills Landfill Plant No. 1. In the decades that followed, it was decided that the Fresh Kills area should become the location of a full-scale urban landfill which could service the entire City of New York. The community protested, but in 1948, dumping began at the newly established Fresh Kills Landfill. The use of the area as a landfill was initially not expected to last for more than two years, however, dumping continued at the site until the late 20th century and additional land was continually added to its acreage. As transportation technology improved, the waterways within the Kills were dredged and widened while the West Shore Expressway was constructed through

the center, connecting the Outerbridge Crossing to the south with the Staten Island Expressway and Goethals Bridge to the north. The landfill was closed gradually in the last decades of the 20th century and received its last load of garbage in 2001. The landfill was temporarily re-opened later that year as part of the World Trade Center recovery effort, at which time materials from the World Trade Center site were deposited on the West Mound.

Through a comparison of historic maps dating to the 17th, 18th, 19th, and 20th centuries, 30 areas that were formerly the locations of historic residential or industrial structures (historic properties, such as brickworks, mills, and blacksmith shops) dating mainly to the 19th century were identified in the APE, largely concentrated along Arthur Kill and Richmond Roads. Archaeological resources that may result from these types of occupation include domestic shaft features (including privy pits, wells, and cisterns) and structural remains. These 30 areas, as well as 2 cemeteries and 4 clusters of submerged vessels are listed and described in Table 5 below; a detailed inventory of each historic structure with map references is provided in Appendix A. The location of each historic property, including the georeferenced location of the map-identified buildings formerly located in each area and a 200-foot buffer to account for possible associated features and map inaccuracies, is depicted on **Figure 20**, with larger scale views of the project site provided in **Figures 20A through 20C**.

**Table 5  
Summary of Historic Resources**

Site # from Appendix A and Figures 20 and 22	Potential Resources Identified in Appendix A	Elevation Change since 1912	Documented Disturbance	Potential for Archaeological Resources
1	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 20+ feet higher	Locations of former structures now covered by landfill mound. If archaeological resources survived landfill activities, they would be at depths of 20 feet or more below the present ground surface. Resources closer to the shore, which are at elevations that are closer to the pre-landfill conditions may have been affected by the dredging and widening of the Main Creek.	No: The majority of the area is under more than 20 feet of landfill, will not be impacted by the project, and would have been disturbed during landfill site preparation.
2	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 10 feet higher	Large structure visible on the location observed in aerial photographs (1955 through 2007) but appears to have been demolished; not known if structure contained a basement. Smaller buildings seen on current surveys. Area is now paved.	Yes: Historic archaeological resources may still be present in this location beginning at a depth of 0 to 10 feet below the paved ground surface.
3	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 20 feet higher	Utility maps show gas vent trench and leachate containment basin in this location.	Yes: Archaeological resources may still be present beginning at depths of 0 to 20 feet below the ground surface, except in immediate vicinity of gas vent trench and leachate basin.

**Table 5 (cont'd)**  
**Summary of Historic Resources**

Site # from Appendix A and Figures 20 and 22	Potential Resources Identified in Appendix A	Elevation Change since 1912	Documented Disturbance	Potential for Archaeological Resources
4	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 20 feet higher	Partially covered by landfill mound, possibly disturbed by construction of leachate containment wall and collection basins.	Yes: archaeological resources may still be present beginning at depths of 0 to 20 feet below the ground surface, except in immediate vicinity of leachate wall and leachate collection basins.
5	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 20+ feet higher	Richmond Road has been widened and slopes alongside Richmond Avenue have been considerably altered; area is partially covered by landfill mound; portions of area were possibly disturbed by construction of leachate containment wall and collection basins.	Yes: archaeological resources may still be present at depths of 0 to 5 feet except in immediate vicinity of leachate wall and leachate basins, and along Richmond Avenue. Some historic period resources would have been disturbed by the widening of Richmond Avenue.
6	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 20 feet higher	Partially covered by raised leachate control basins.	Yes: Archaeological resources may still be present beginning at depths of 0 to 5 feet below ground surface. No sensitivity in immediate vicinity of leachate control basin.
7	Structural remnants of coal yard	Between 0 and 20 feet higher	Slopes altered considerably, now occupied by 3 elevated roads constructed on embankments.	No: Any resources present likely disturbed by road construction.
8	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 20 feet higher	Slopes altered considerably, now occupied by 3 elevated roads constructed on embankments.	No: Any resources present likely disturbed by road construction.
9	Structural remnants and domestic shaft features associated with 19th and early 20th century domestic and commercial occupation	Between 0 and 10 feet higher	Possible channel dredging and widening.	Yes: Archaeological resources may still be present beginning at depths of 0 to 10 feet below ground surface.
10	Structural remnants of 19th century blacksmith shop	Between 0 and 10 feet higher	None.	Yes: Archaeological resources may still be present beginning at depths of 0 to 10 feet below ground surface.
11	Structural remnants of 19th century grist mill and other buildings and potential shaft features	Between 0 and 10 feet higher	Possibly partially disturbed by construction of now-demolished building.	Yes: Archaeological resources may still be present beginning at depths of 0 to 10 feet below ground surface.



**Chapter VI: Conclusions and Recommendations**

**Table 5 (cont'd)  
Summary of Historic Resources**

<b>Site # from Appendix A and Figures 20 and 22</b>	<b>Potential Resources Identified in Appendix A</b>	<b>Elevation Change since 1912</b>	<b>Documented Disturbance</b>	<b>Potential for Archaeological Resources</b>
12	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 10 feet higher	None.	Yes: Archaeological resources may still be present beginning at depths of 0 to 10 feet below ground surface.
13	Structural remnants and domestic shaft features associated with late 19th and early 20th century occupation	Between 0 and 5 feet higher	None.	Yes: Archaeological resources may still be present beginning at depths of 0 to 10 feet below ground surface.
14	Structural remnants of late 19th and early century brick manufactory	Between 0 and 20+ feet higher	Mostly covered by landfill mound, also disturbed by channel dredging and widening and construction of leachate containment wall.	Yes: Archaeological resources are likely present and intact along the waterfront and possibly in the western portion of this property where elevations have changed by less than 20 feet since ca. 1912.
15	Structural remnants and domestic shaft features associated with late 19th century occupation	Between 0 and 20+ feet higher	Possibly disturbed by construction of landfill mound and leachate containment wall.	Yes: Archaeological resources may still be present beginning at depths of 0 to 5 feet below ground surface, except in immediate vicinity of leachate wall and where elevations have increased by more than 20 feet since ca. 1912.
16	Structural remnants and domestic shaft features associated with late 19th century occupation	Between 5 feet lower and 20 feet higher	Slopes are considerably different, may have been disturbed by construction of leachate containment wall and construction of banked earth around adjacent property.	No: Any resources present likely disturbed by construction of landfill mound, leachate wall, and construction of bank on adjacent property.
17	Structural remnants and domestic shaft features associated with 19th and early 20th century domestic and institutional occupation	Between 5 feet lower and 20 feet higher	Area appears to have been graded 0 to 5 feet, now occupied by leachate collection basin, may also have been impacted by the construction of the leachate containment wall.	No: Any resources present likely disturbed by construction of landfill mound, leachate wall, and leachate basin.
18	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	20+ feet higher	Now occupied by large landfill mound.	No: Any resources present likely disturbed by construction of landfill mound, and construction of West Shore Expressway.

**Table 5 (cont'd)**  
**Summary of Historic Resources**

Site # from Appendix A and Figures 20 and 22	Potential Resources Identified in Appendix A	Elevation Change since 1912	Documented Disturbance	Potential for Archaeological Resources
19	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 5 feet higher (portion within project site only)	None (portion within project site only).	Yes: Archaeological resources may still be present in the southern area of the property beginning at depths of 0 to 5 feet below ground surface along Arthur Kill Road.
20	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 to 5 feet higher	Former location of Lake's Island garbage disposal plant, this area is now the site of landfill Plant No. 1, has been disturbed by the installation of utilities and underground storage tanks.	No: Any resources present likely disturbed by construction of garbage disposal plant and landfill Plant No. 1 and utility construction.
21	Structural remnants and domestic shaft features associated with 19th domestic occupation and late 19th and early 20th century brick manufactory	Northern portion of property between 0 and 20+ feet higher, southern portion (near Arthur Kill Road) mostly 0 to 5 feet higher although portions are 0 to 5 feet lower.	Northern areas are likely largely disturbed by construction of landfill mound and leachate containment wall. Slopes are considerably altered in portion along Arthur Kill Road, area contains landfill gas and groundwater monitoring wells. This area was determined to have no archaeological sensitivity as part of the Owl Hollow Park Environmental Assessment Statement (AKRF, Inc. 2007).	Yes: Archaeological resources may be present in shoreline areas where current elevation has changed by less than 20 feet since ca. 1912.
22	Structural remnants and domestic shaft features associated with 19th domestic occupation and late 19th and early 20th century brick manufactory	20+ feet higher	Now occupied by large landfill mound.	No: Any archaeological resources which might have survived the preparation of the site for use as a landfill would be buried beneath more than 150 feet of refuse.
23	Structural remnants and domestic shaft features associated with 19th domestic occupation and late 19th and early 20th century brick manufactory	20+ feet higher	Now occupied by large landfill mound.	No: Any archaeological resources which might have survived the preparation of the site for use as a landfill would be buried beneath more than 150 feet of refuse.
24	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Northwest portion: between 0 to 5 feet lower; Southeast portion: between 0 to 5 feet higher	Slopes are considerably different and some grading is evident within this area.	Yes: Archaeological resources may be present beginning at 0 to 5 feet below ground surface near Arthur Kill Road and may be present in other portions of the property, although 0-5 feet of grading appears to have occurred in this area.

**Chapter VI: Conclusions and Recommendations**

**Table 5 (cont'd)  
Summary of Historic Resources**

Site # from Appendix A and Figures 20 and 22	Potential Resources Identified in Appendix A	Elevation Change since 1912	Documented Disturbance	Potential for Archaeological Resources
25	Structural remnants and domestic shaft features associated with 19th and early 20th century residential and commercial occupation	Northern area: 20+ feet higher; Southern area: between 0 and 5 feet higher	Northern area: Now occupied by large landfill mound; Southern area: None.	Yes: Archaeological resources may be present beginning at 0 to 5 feet below ground surface near Arthur Kill Road and may be present in other portions of the property, although 0-5 feet of grading appears to have occurred in this area.
26	Structural remnants and domestic shaft features associated with early 19th occupation	Between 0 and 5 feet higher	None.	Yes: Archaeological resources may be present beginning at 0 to 5 feet below ground surface.
27	Structural remnants and domestic shaft features associated with mid-19th occupation	Between 0 and 5 feet higher	None.	Yes: Archaeological resources associated with the home located just outside the project site may be present beginning at 0 to 5 feet below ground surface.
28	Structural remnants and domestic shaft features associated with 19th occupation	Between 0 and 5 feet higher	May have been disturbed in connection with the construction of the West Shore Expressway and associated service roads. Slopes have been altered and large structure constructed in vicinity.	No: Any archaeological resources were likely disturbed by construction of West Shore Expressway and adjacent building.
29	Structural remnants and domestic shaft features associated with 19th and early 20th century occupation	Between 0 and 20 feet higher	Slopes have been altered, partially occupied by large landfill mound, may also have been disturbed by construction of Leachate Recovery Facility and associated utilities.	Yes: Archaeological resources may be present beginning at depths of 0 to 5 feet below ground surface.
30	Structural remnants and domestic shaft features associated with early 20th century occupation	Between 0 and 5 feet higher	None.	Yes: Archaeological resources may be present beginning at depths of 0 to 5 feet below ground surface.
Morgan Family Cemetery	Human remains	20+ feet higher	Cemetery appears to have been disturbed during construction of landfill and is now buried beneath more than 150 feet of refuse.	No: Any human remains which might have survived the preparation of the site for use as a landfill would be buried beneath more than 150 feet of refuse.
Blazing Star Cemetery	Human remains	None	None.	Yes: Human remains still present below ground surface.
Vessel Remains (V1)	N/A	N/A	N/A	Significance of double-ended ferry remains (identified as "Vessel 12" in Panamerican Consultants, 1999) to be reevaluated. Other vessels in V1 cluster require no further evaluation.
Vessel Remains (V2)	N/A	N/A	N/A	Vessel significance to be evaluated
Vessel Remains (V3)	N/A	N/A	N/A	Vessel significance to be evaluated
Vessel Remains (V4)	N/A	N/A	N/A	Vessel significance to be evaluated
<b>Notes:</b> Locations of historic properties have been approximated. For specific locations of historic structures, see <b>Figures 13</b> through <b>19</b> .				
<b>Sources:</b> Current topographic data provided by Field Operations (2007) and historic topographic data obtained from the <i>Borough of Richmond Topographical Survey (1907-1913)</i> .				

As a result of 20th century disturbance including the installation of utilities and landscape alteration in connection with the construction of landfill mounds and roads, the potential for these areas to contain intact historic period archaeological resources varies throughout the project site. **Figure 21** provides the location of the Fresh Kills Landfill Environmental Control Infrastructure. Construction of this system, as well as the leachate wall and leachate collection basins that encircle the landfill mounds, would have destroyed archaeological resources located in those areas. Alterations of the project site's elevations were determined through comparison of 1912 and 2007 topographical information (**Figure 22**). As can be seen on this figure, although much of the project site is covered by over 20 feet of landfill, certain areas are covered by significantly less and some areas currently have a lower elevation than they did in 1912.

Therefore, it has been determined that only some or portions of some of the identified historic properties have the potential to contain intact archaeological resources that may be impacted by the proposed action. These areas are indicated on **Figure 20** and **Figures 20A** through **20C** with a solid fill. The remaining areas have either been significantly disturbed or are buried under significant quantities of landfill. Table 5 below provides a list of each property, a description of possible resources, the change in elevation of the area since 1912, a description of documented disturbances, and a statement of whether or not the project has the potential to impact the resource.

## **B. RECOMMENDATIONS**

As project plans develop, it is recommended that individual construction projects be reviewed by archaeologists to determine if each project could potentially impact portions of the project site determined to be sensitive for precontact or historic period archaeological resources at the depths identified in **Table 5** and seen on **Figures 20, 20A-C, and Figure 23**. If it is determined that impacts to sensitive levels are possible, further investigation including Phase 1B archaeological testing is recommended to identify the presence or absence of archaeological resources within that area of the project.

If it is determined that the proposed project would impact the sunken vessels identified as V2 through V4 on **Figures 20** and **22**, further investigation should be undertaken to determine the historic significance of the vessels. As discussed in **Chapter IV**, the cluster of sunken vessels identified as V1 on **Figures 20** and **22** was analyzed by Panamerican Consultants, Inc. in 1999, and it was determined at that time that a single vessel, identified in that report as Vessel 12, should be recorded and that its inclined engine and frame be recovered. Because this vessel may have deteriorated since the time of this recommendation (Lynn Rakos, ACOE, personal communication, December 14, 2007), a reevaluation of its integrity and historic significance is recommended. Panamerican Consultants evaluated the other vessels located in the V1 cluster of sunken vessels, and recommended no work. Therefore, no additional investigation or recordation of the other vessels located in V1 would be required. \*

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## **Fresh Kills Park – Phase 1A Archaeological Documentary Study**

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## **Fresh Kills Park – Phase 1A Archaeological Documentary Study**

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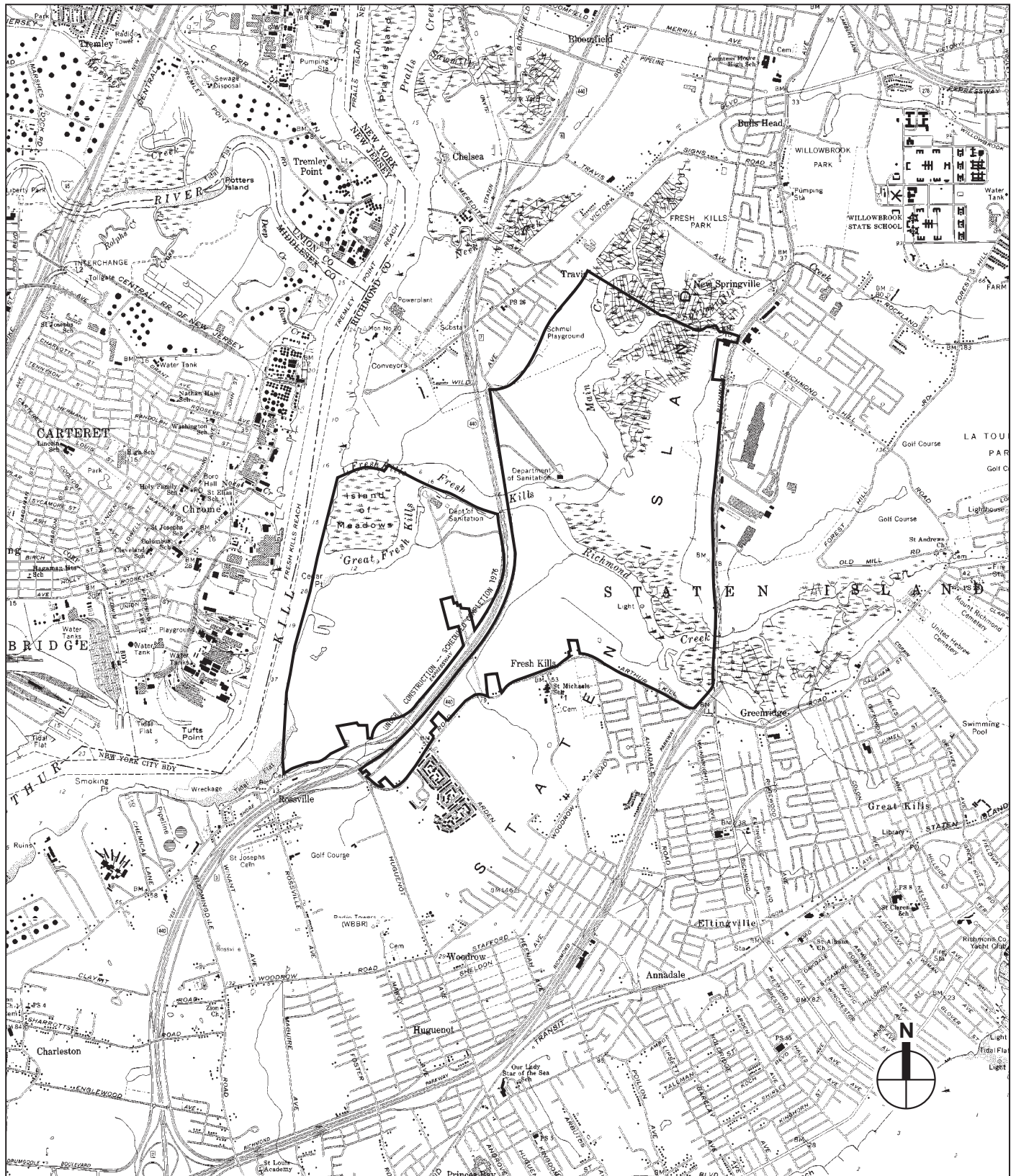
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\*

# Figures

11.1907

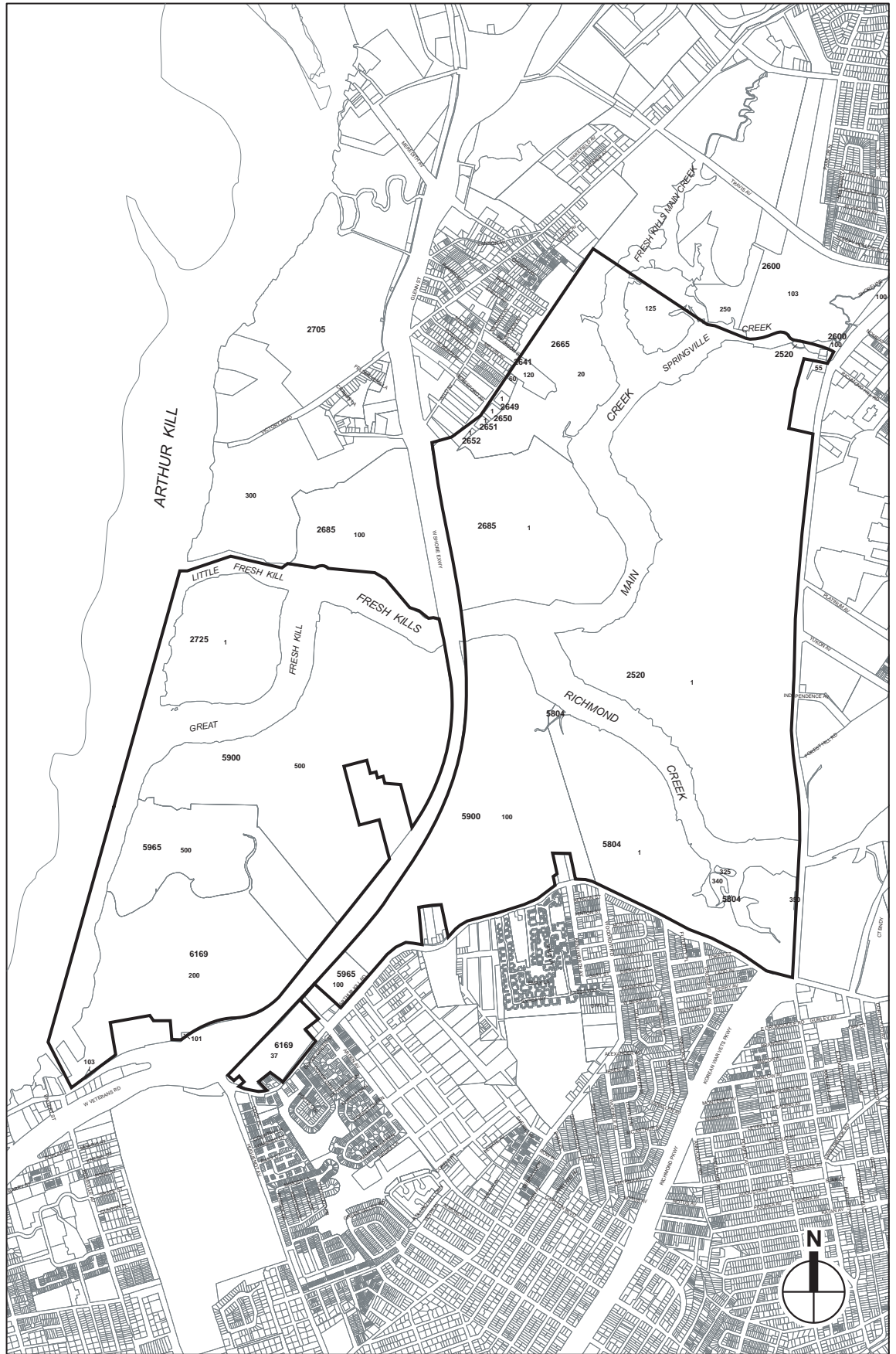


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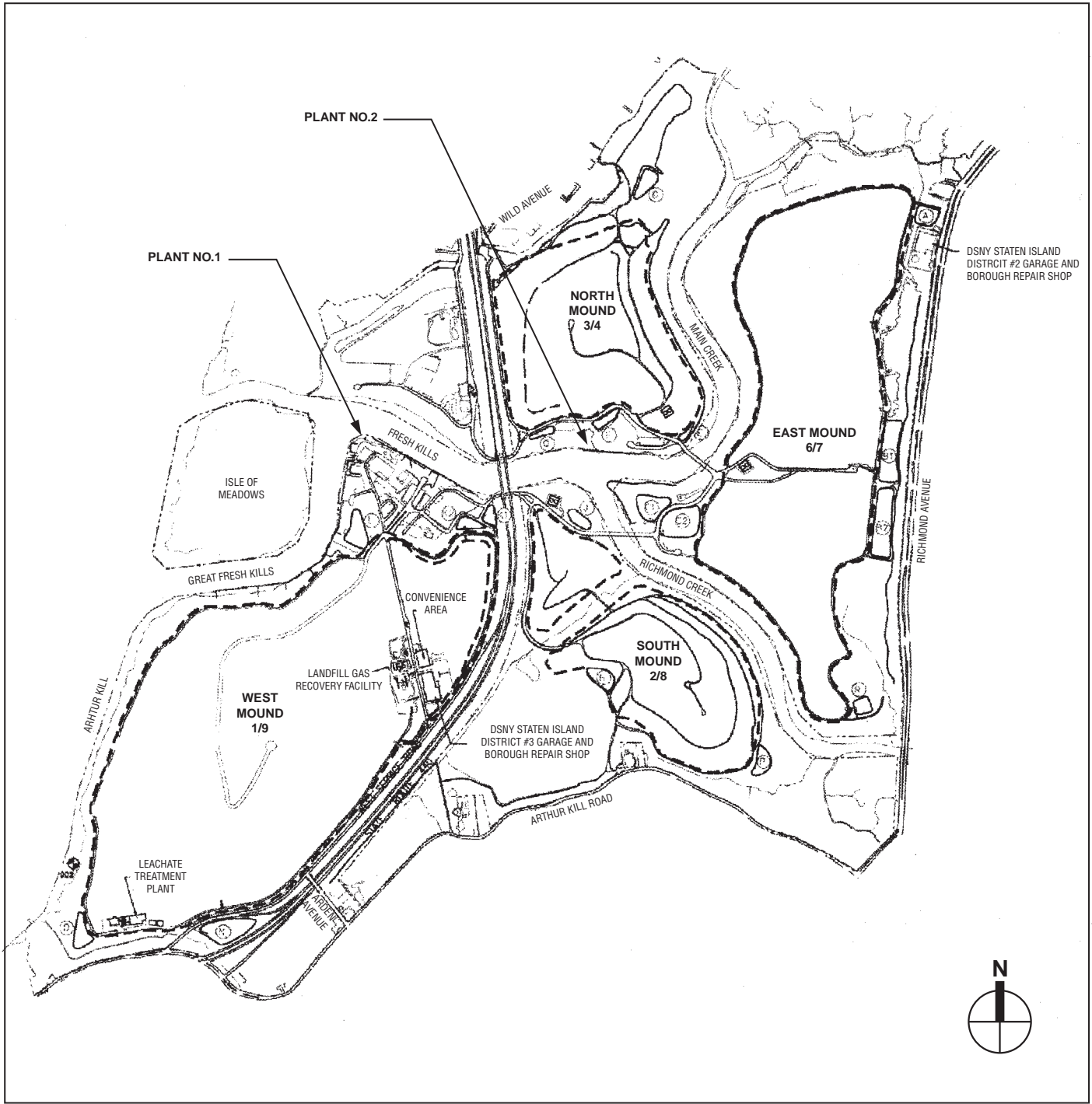


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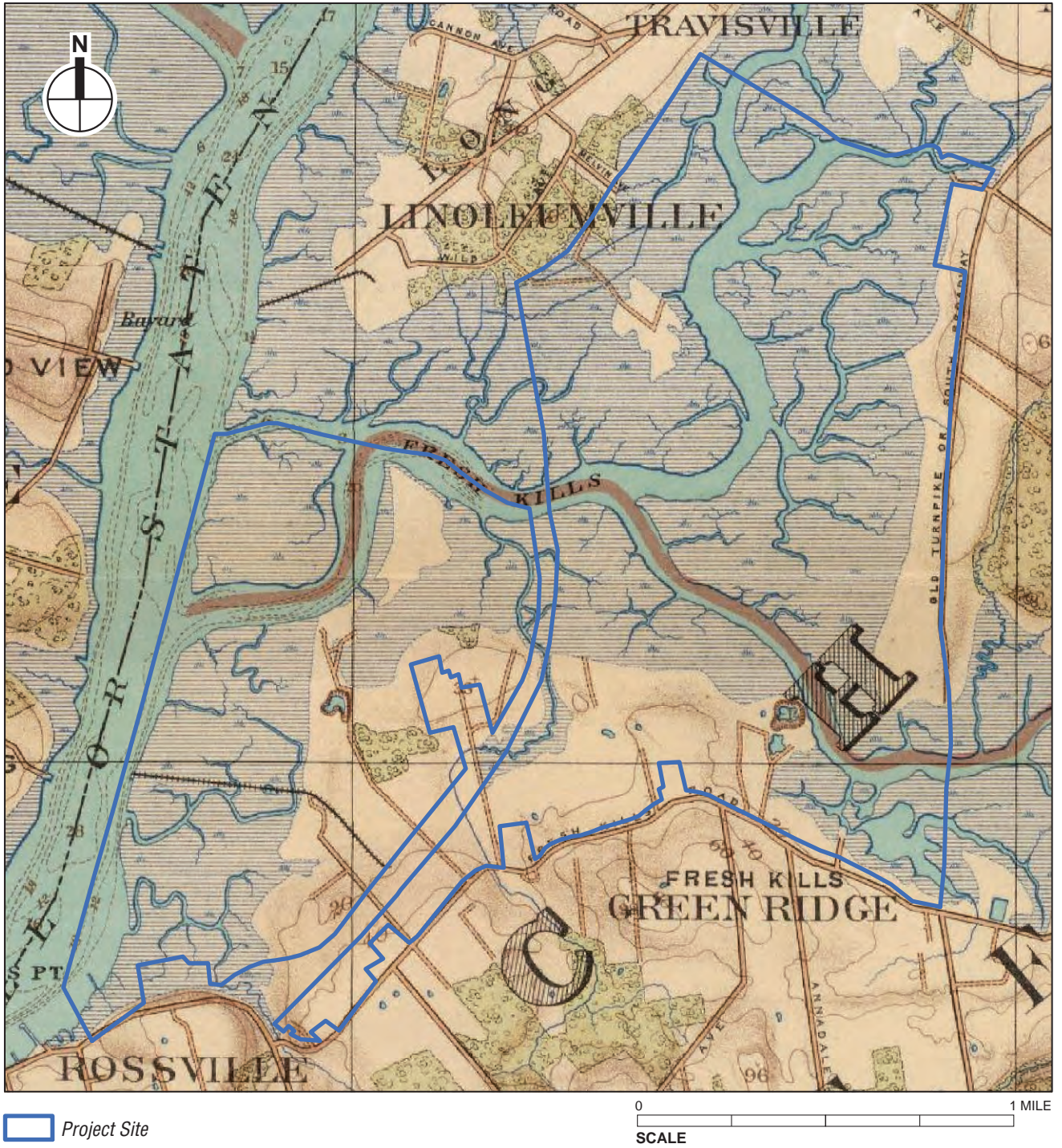
□ Fresh Kills Project Site

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Fresh Kills Landfill,  
Existing Site Conditions  
**Figure 3**

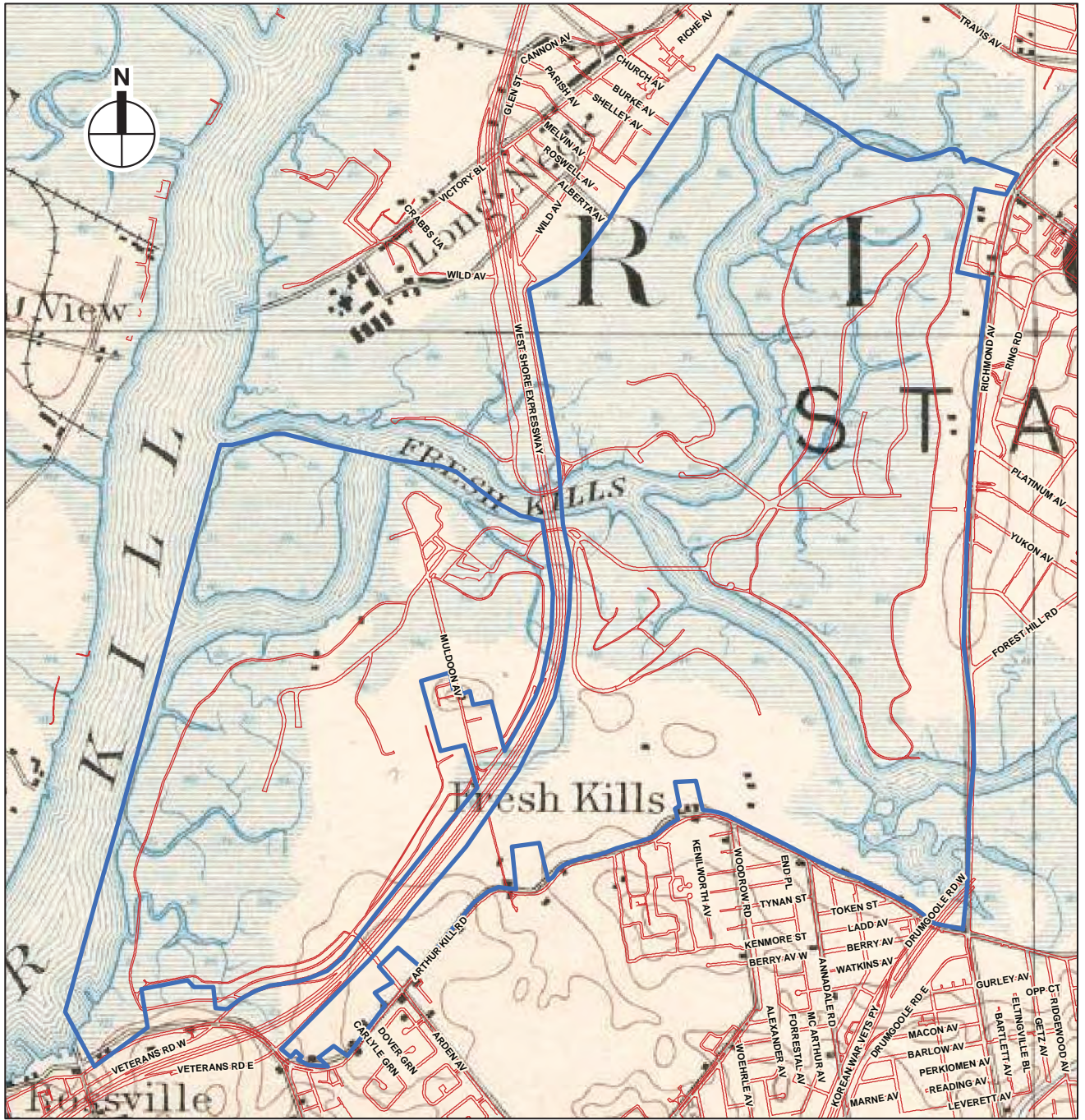




City and County of New York.  
J. Bien and C. Vermule, 1891

Figure 4





Project Site  
 Modern Street Lines  
 (Source: NYC Dept of Information Technology and Telecommunications)

0 1 MILE  
SCALE

United States Geological Survey:  
 New Jersey - New York,  
 Staten Island Sheet, 1891  
**Figure 5**

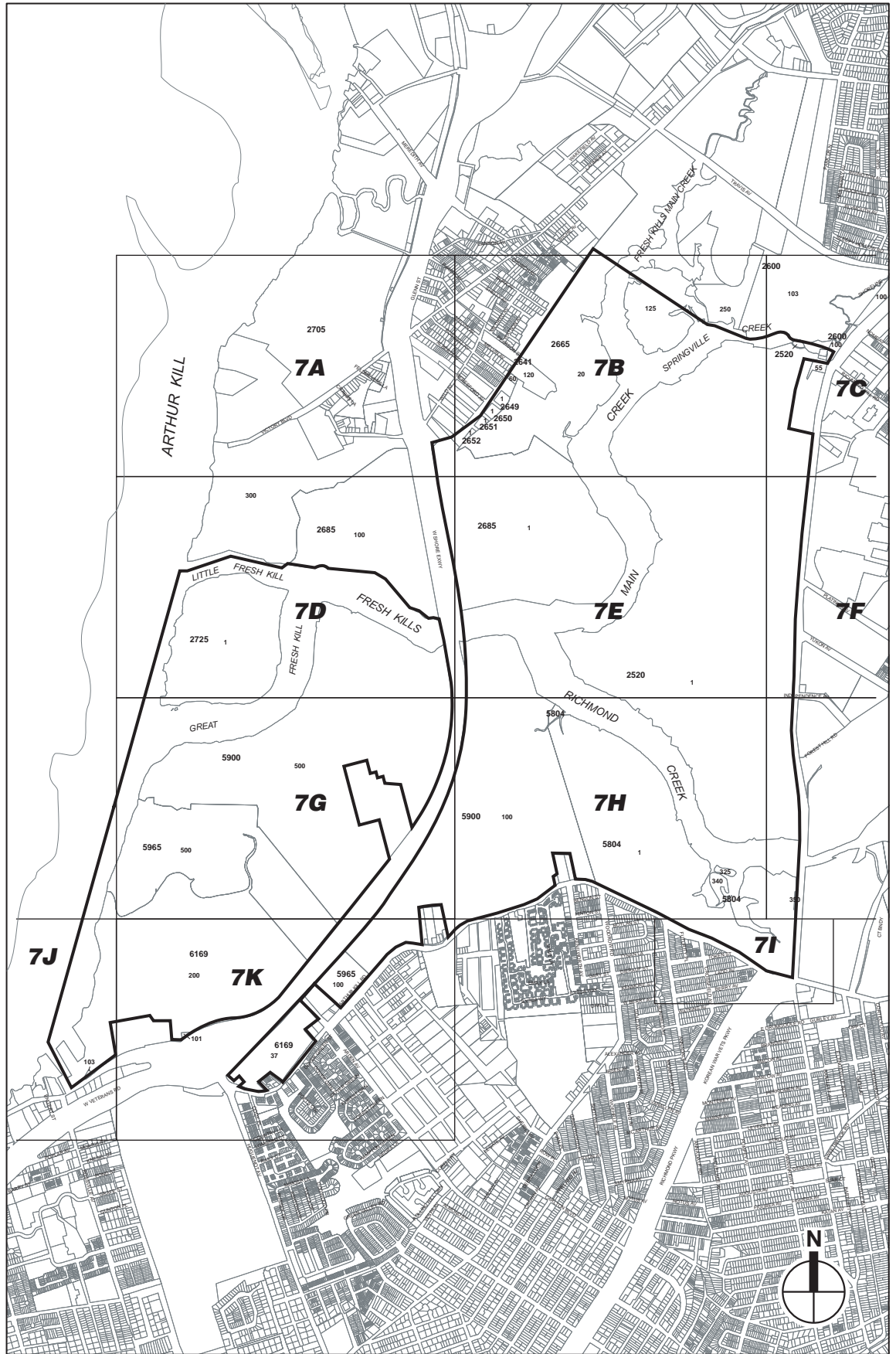




Project Site  
 Modern Street Lines  
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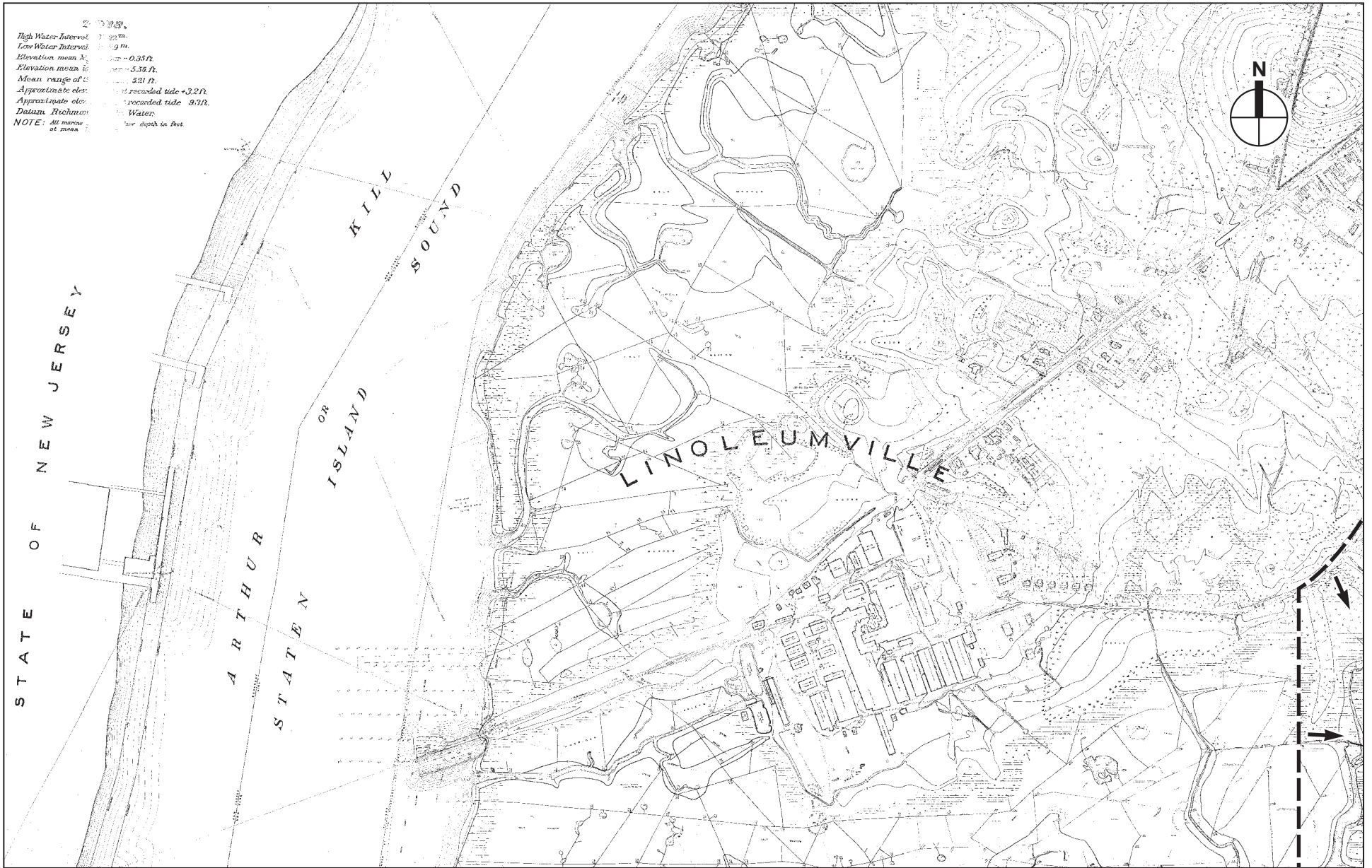
United States Geological Survey:  
 New Jersey - New York, Staten Island Sheet, 1898

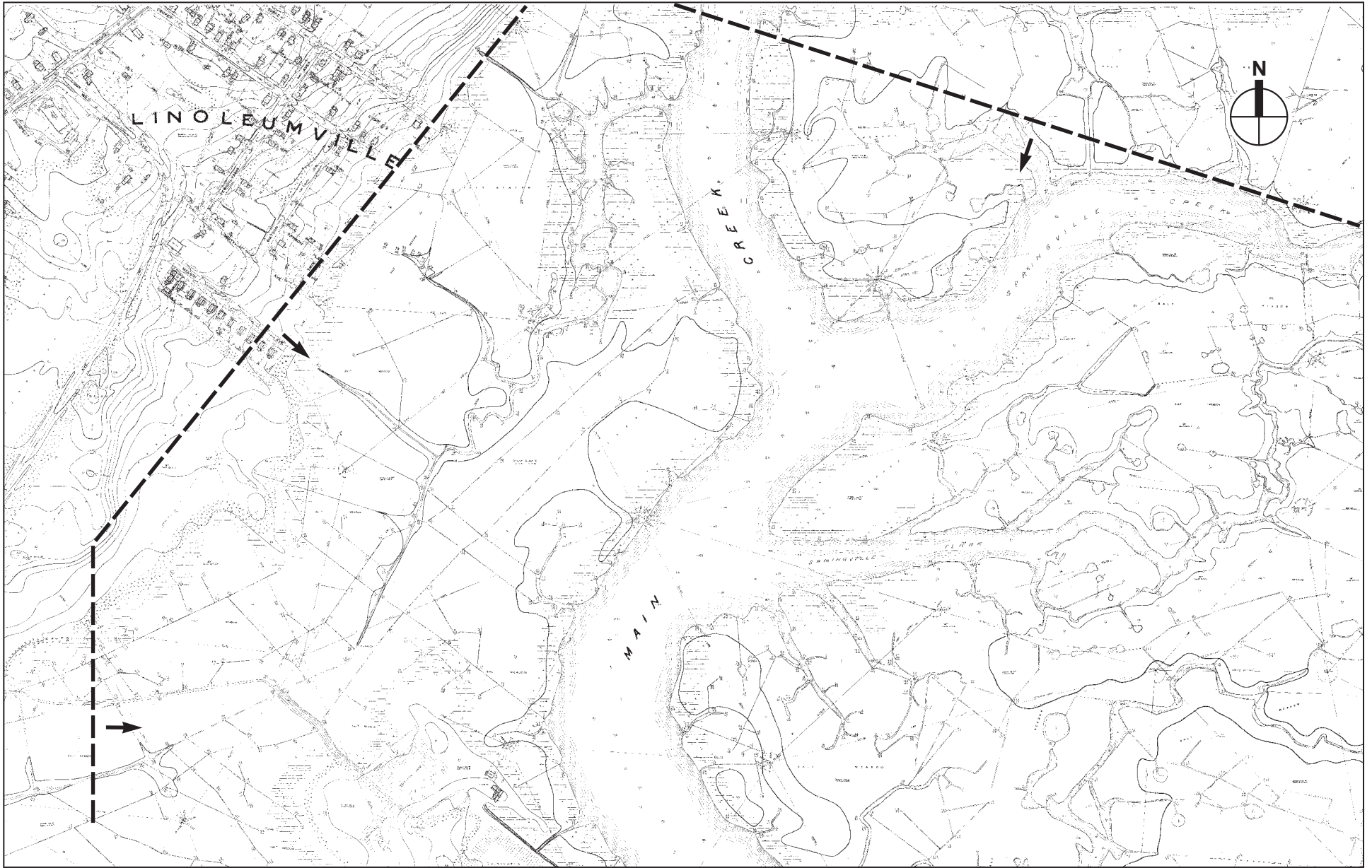




 Fresh Kills Project Site

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SCALE





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SCALE

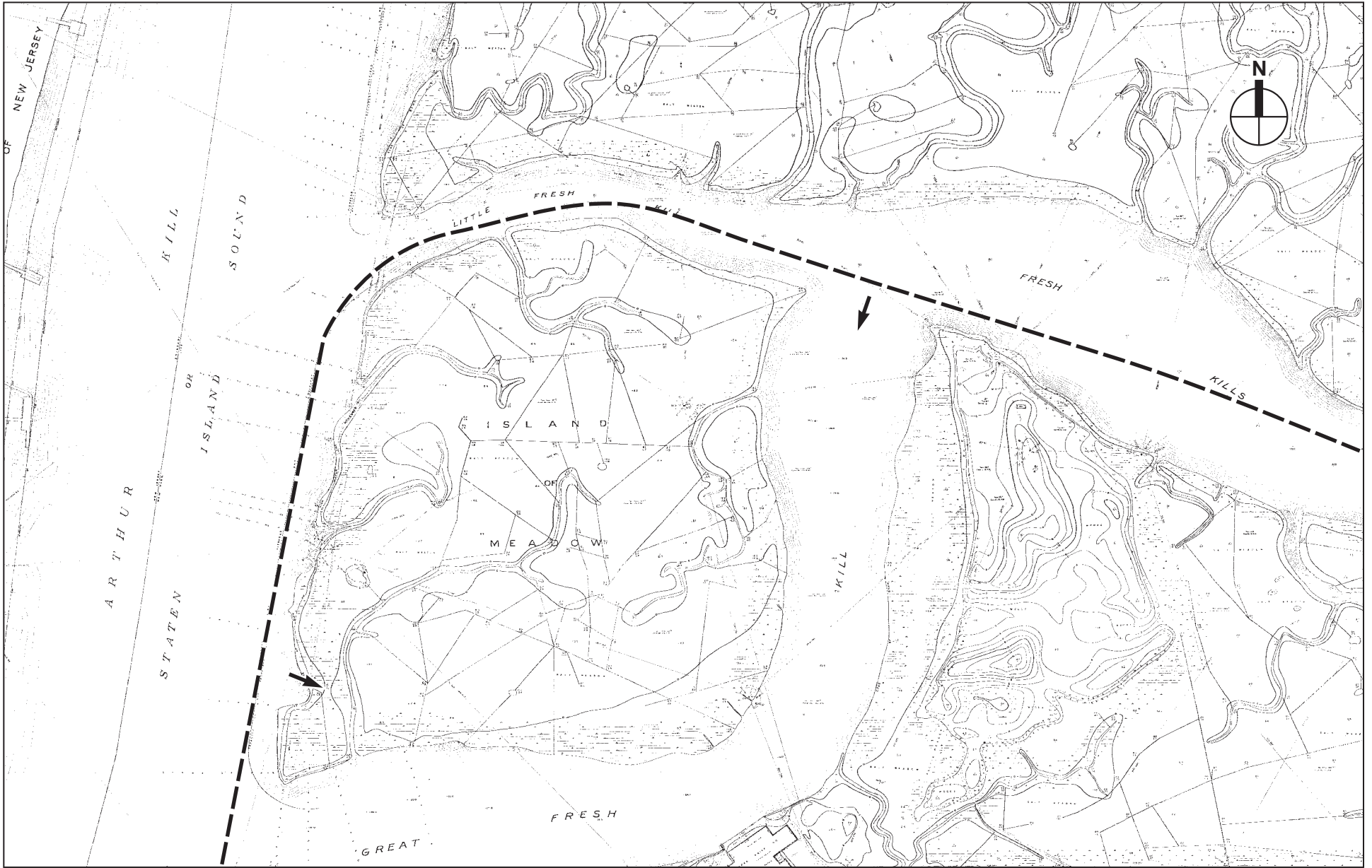
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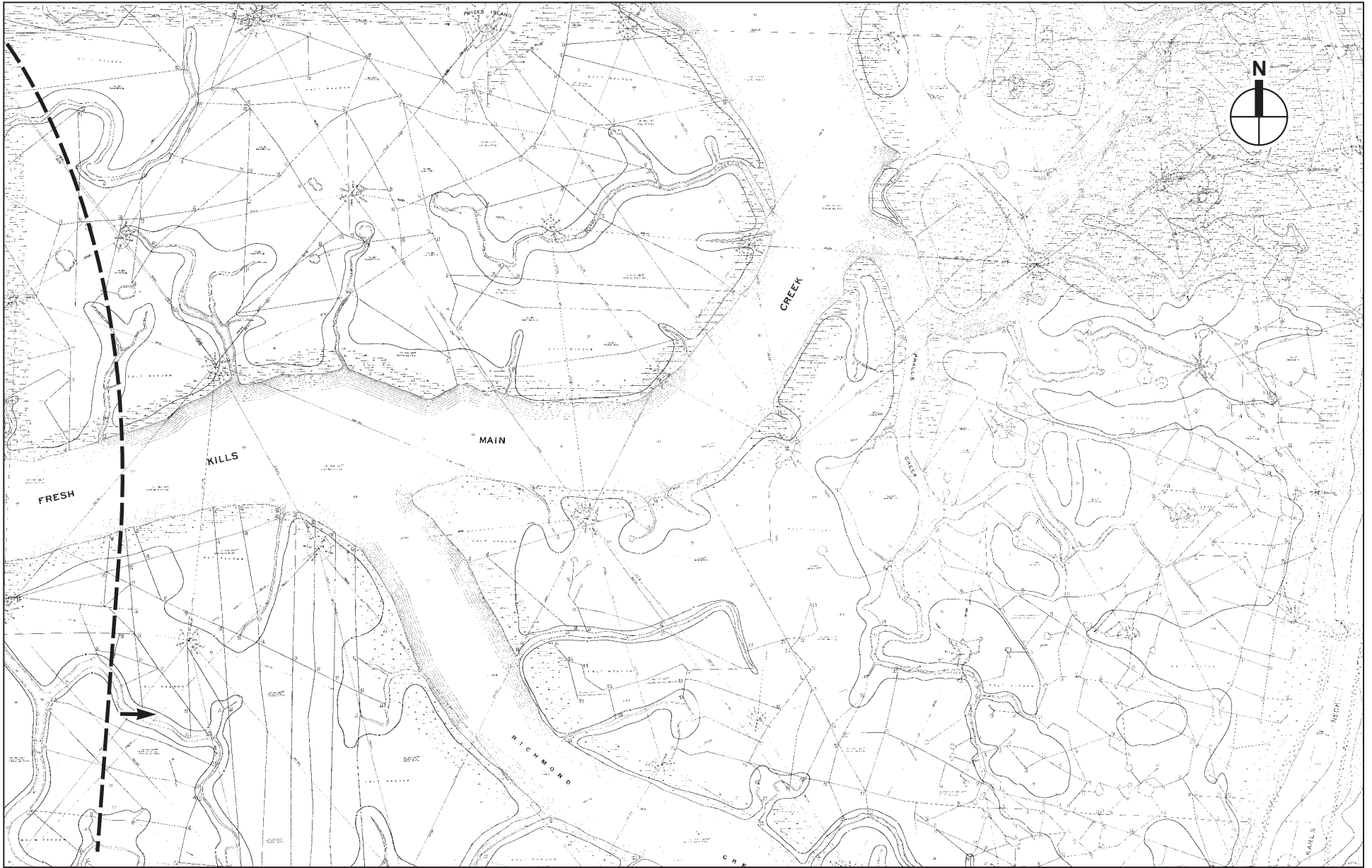


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SCALE

--- Approximate Project Site



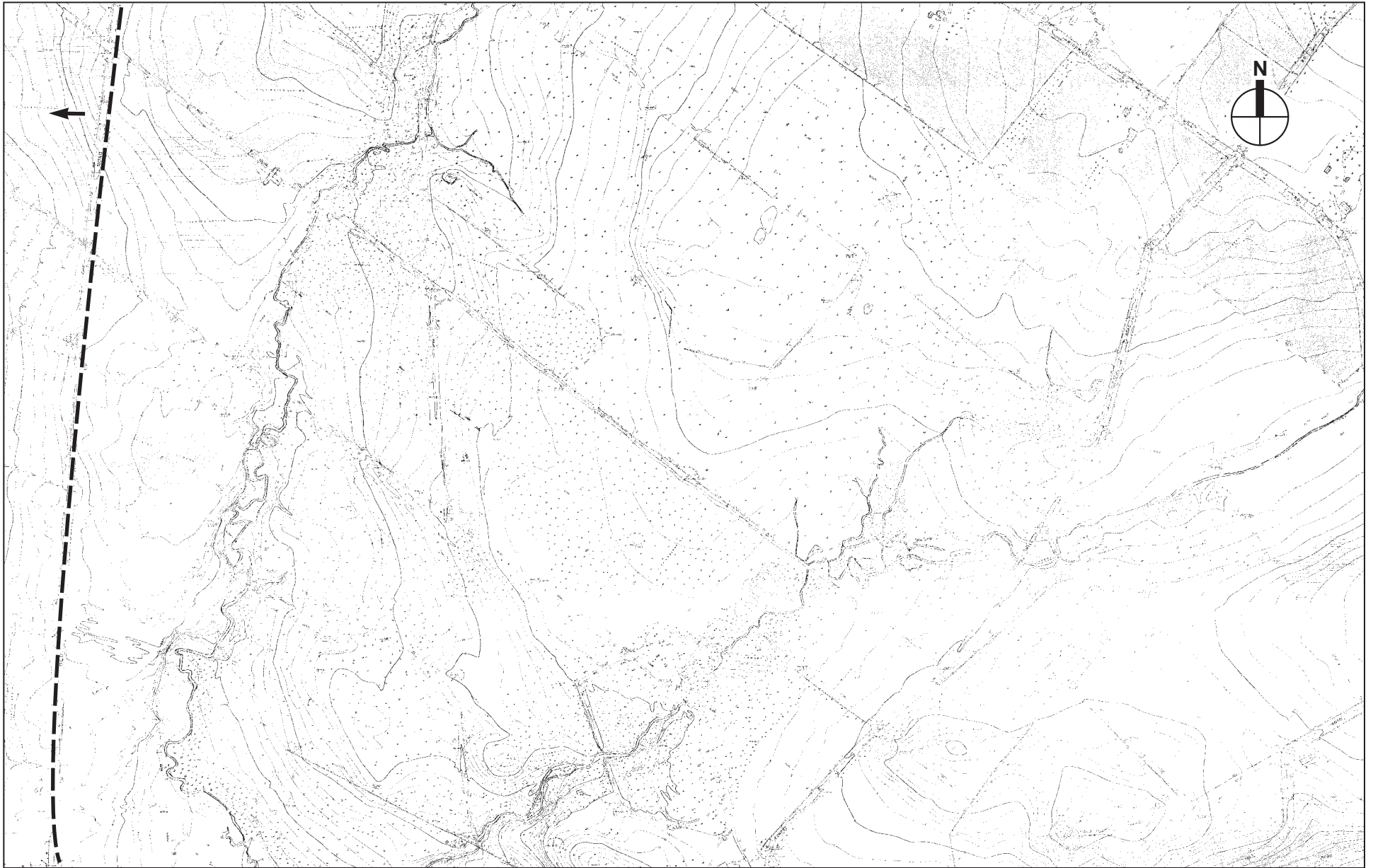
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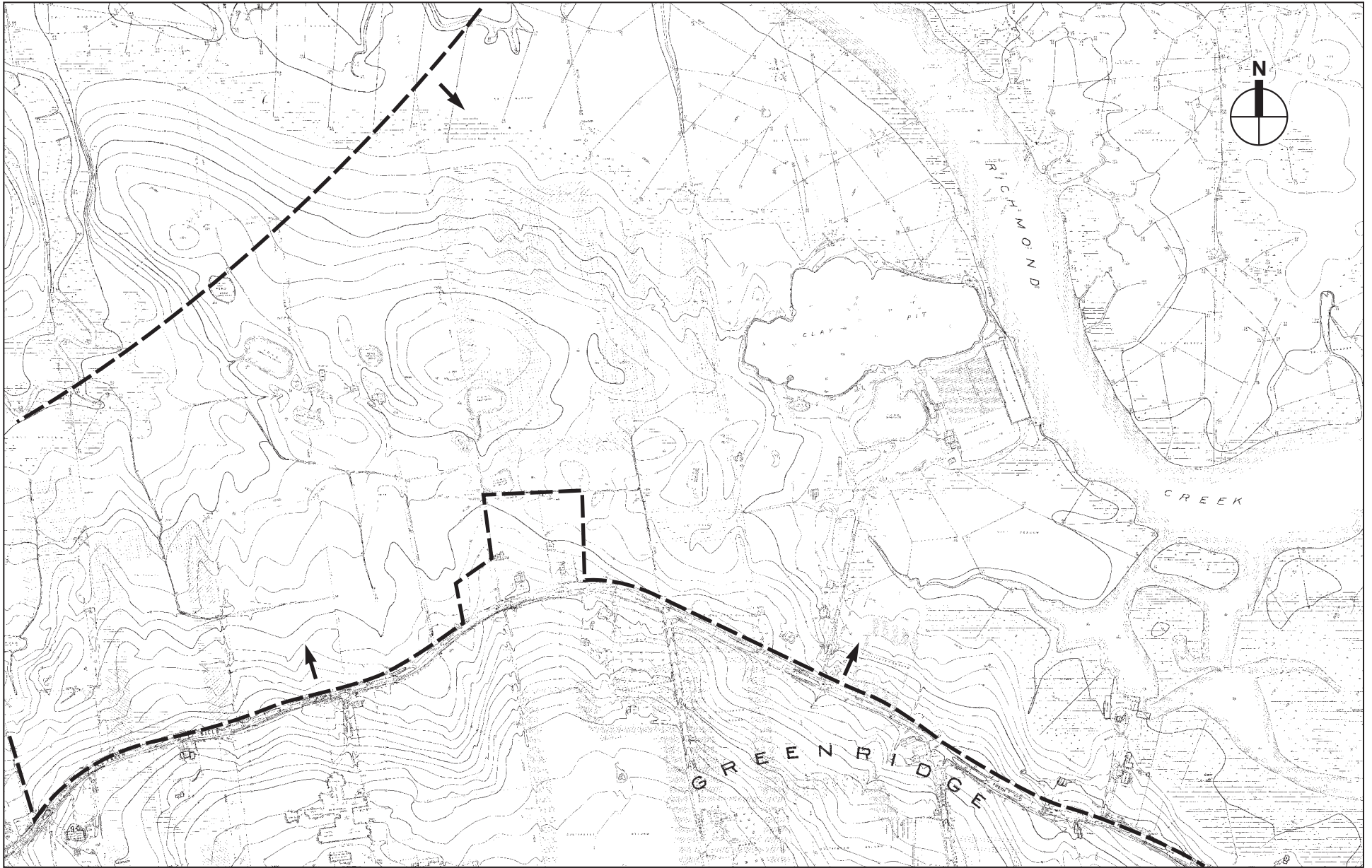
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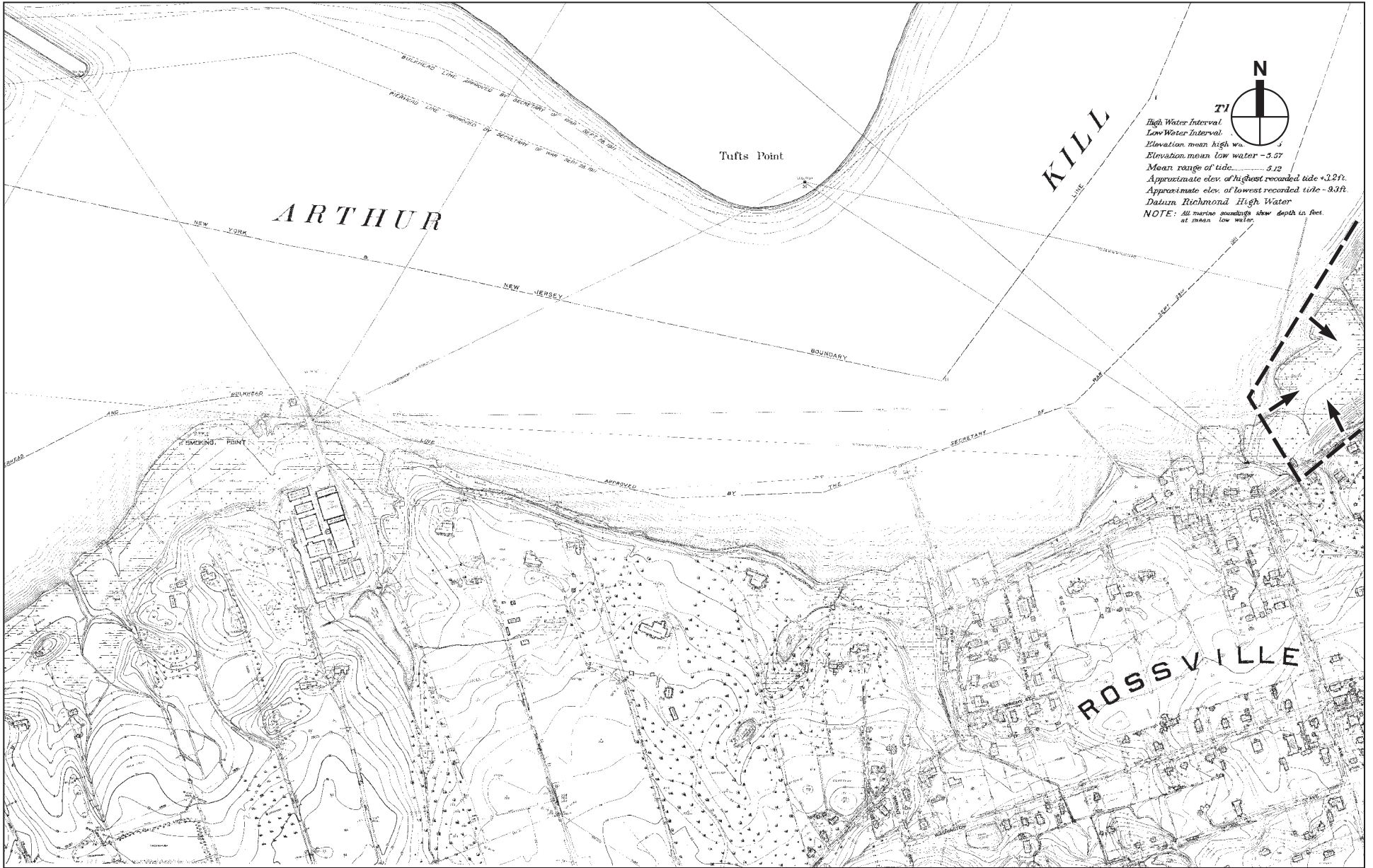
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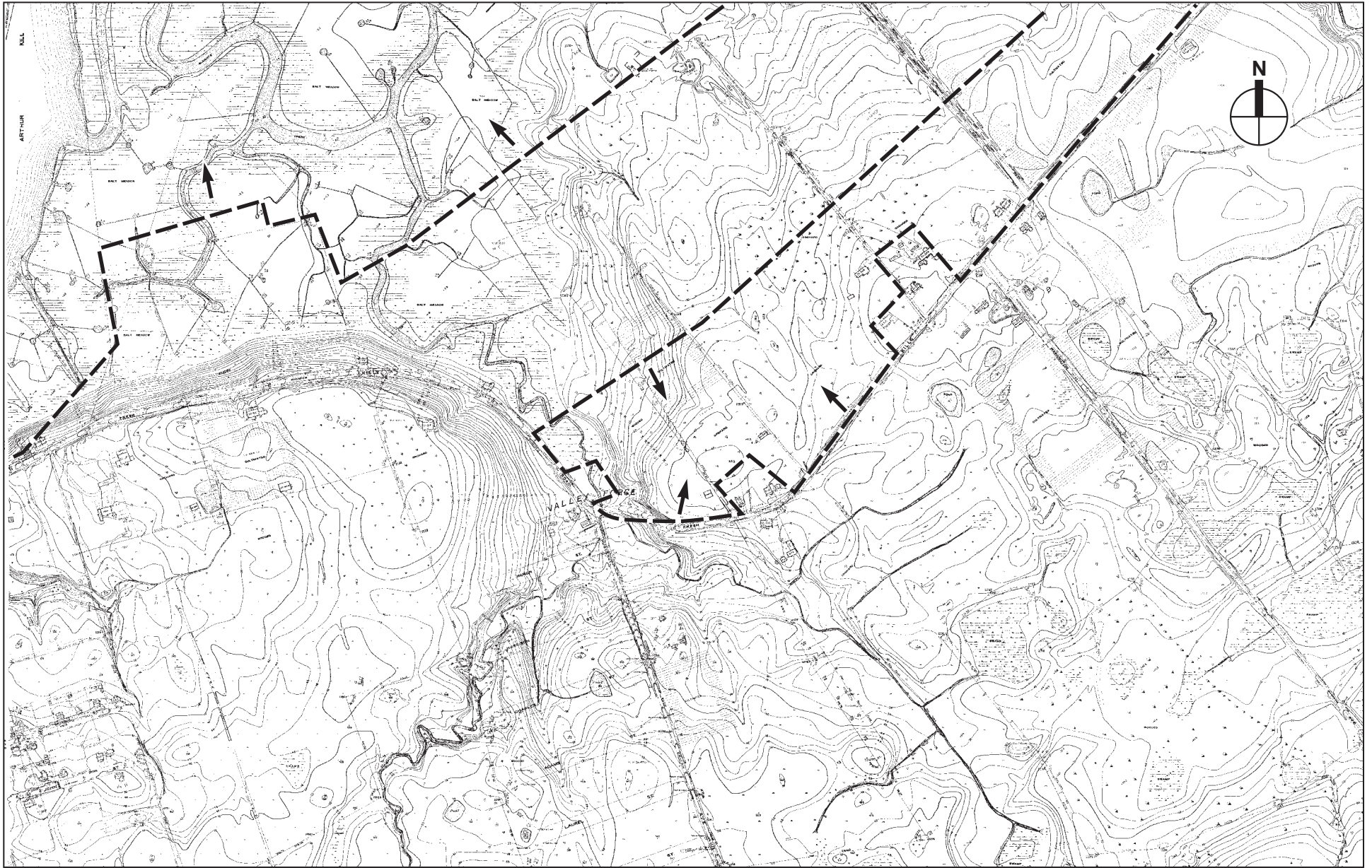
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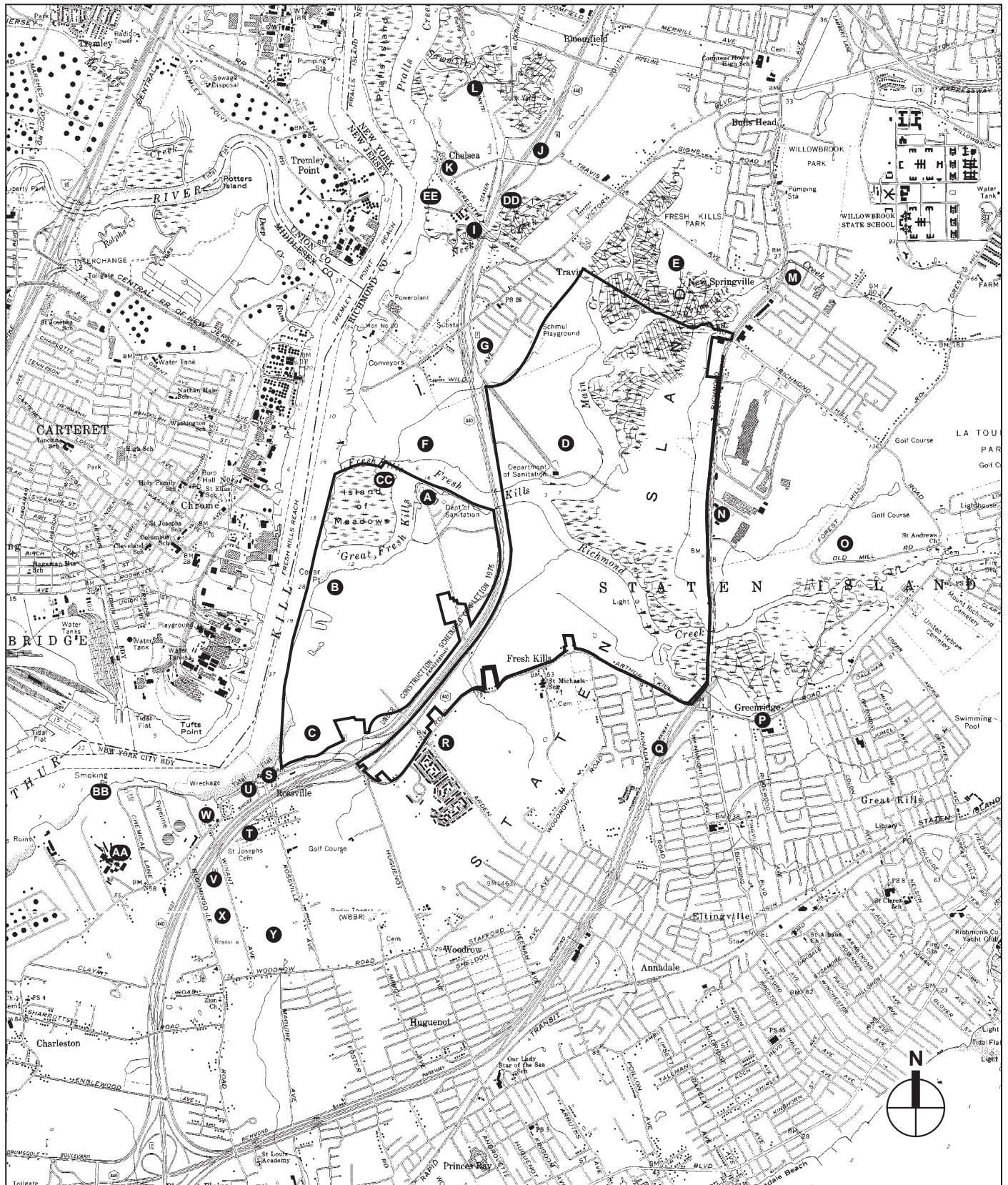


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--- Approximate Project Site



11.1907



— Project Site

0 3600 FEET  
SCALE

Previously Identified Native American Archaeological Sites  
Within One Mile of the Project Area.  
USGS Map, Arthur Kill Quadrangle





NOT TO SCALE

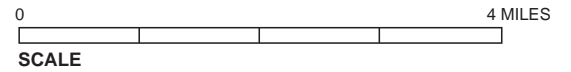
11.19.07



0 4 MILES  
SCALE

*New York and Perthamboy Harbours.*  
Henry Popple, 1733  
**Figure 10**





*A Sketch of the Operations of His Majesty's Fleet and Army...in 1776.*  
Joseph Des Barres, 1777

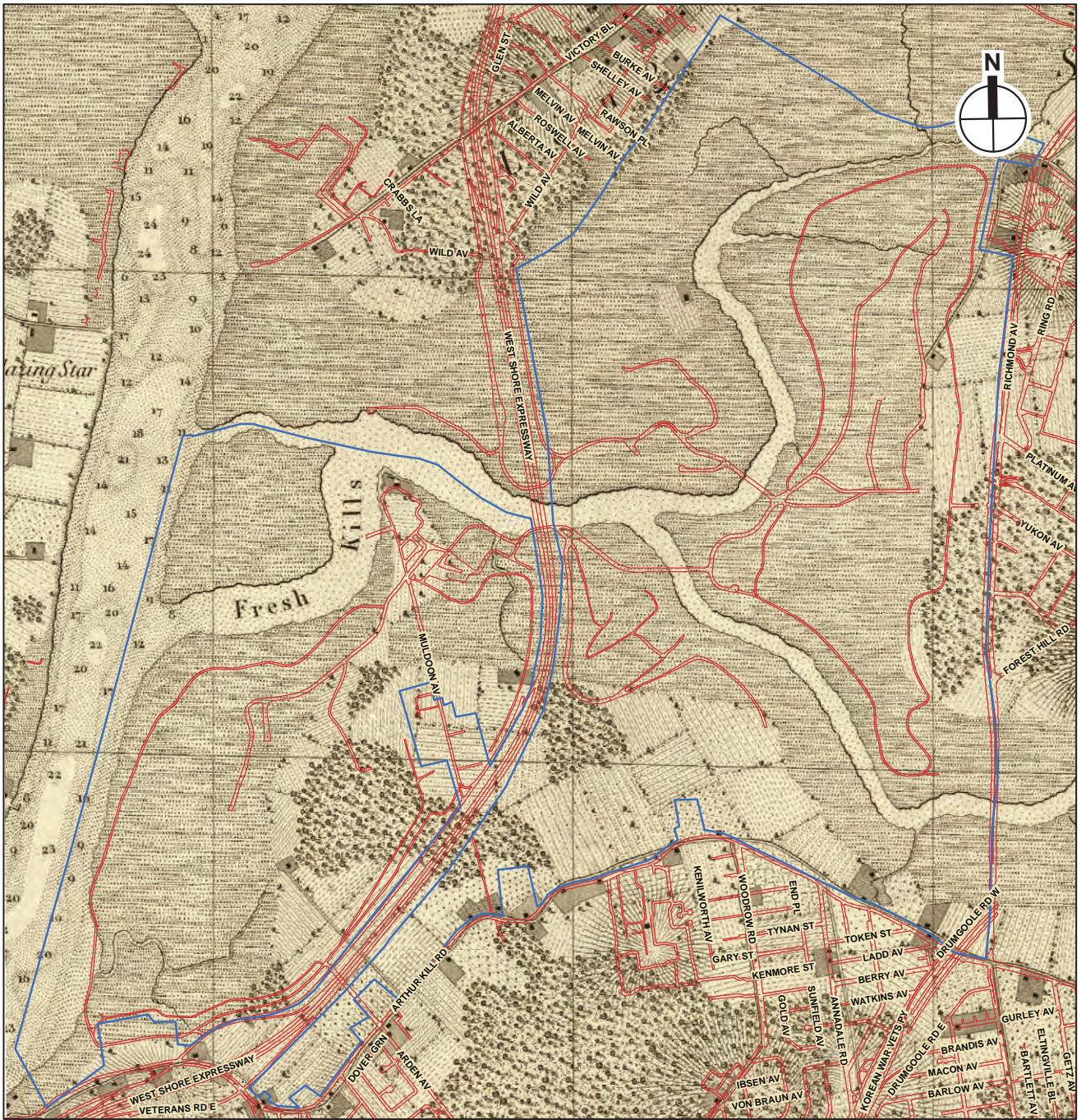




NOT TO SCALE

The Map of Staten Island During the Revolution, Loring McMullen, 1933





Project Site  
 Modern Street Lines  
 (Source: NYC Dept of Information Technology and Telecommunications)



Map of New-York Bay and Harbor and the Environs.  
 U.S. Coast Survey, 1844  
**Figure 13**

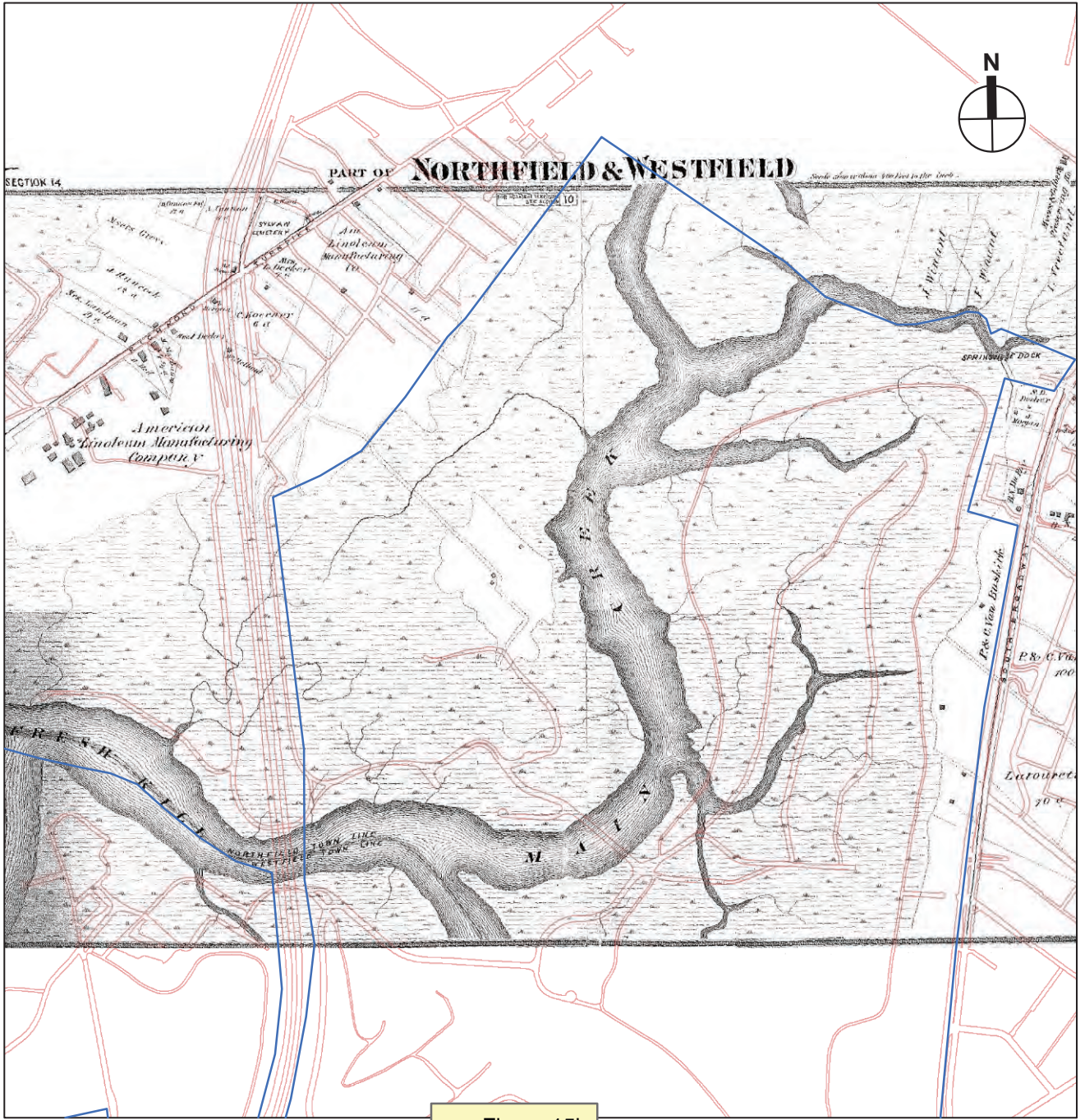




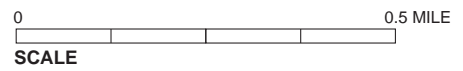
— Approximate Project Site

*The Map of Staten Island,  
or Richmond County, New York.  
J. Butler, 1853*





see Figure 15b



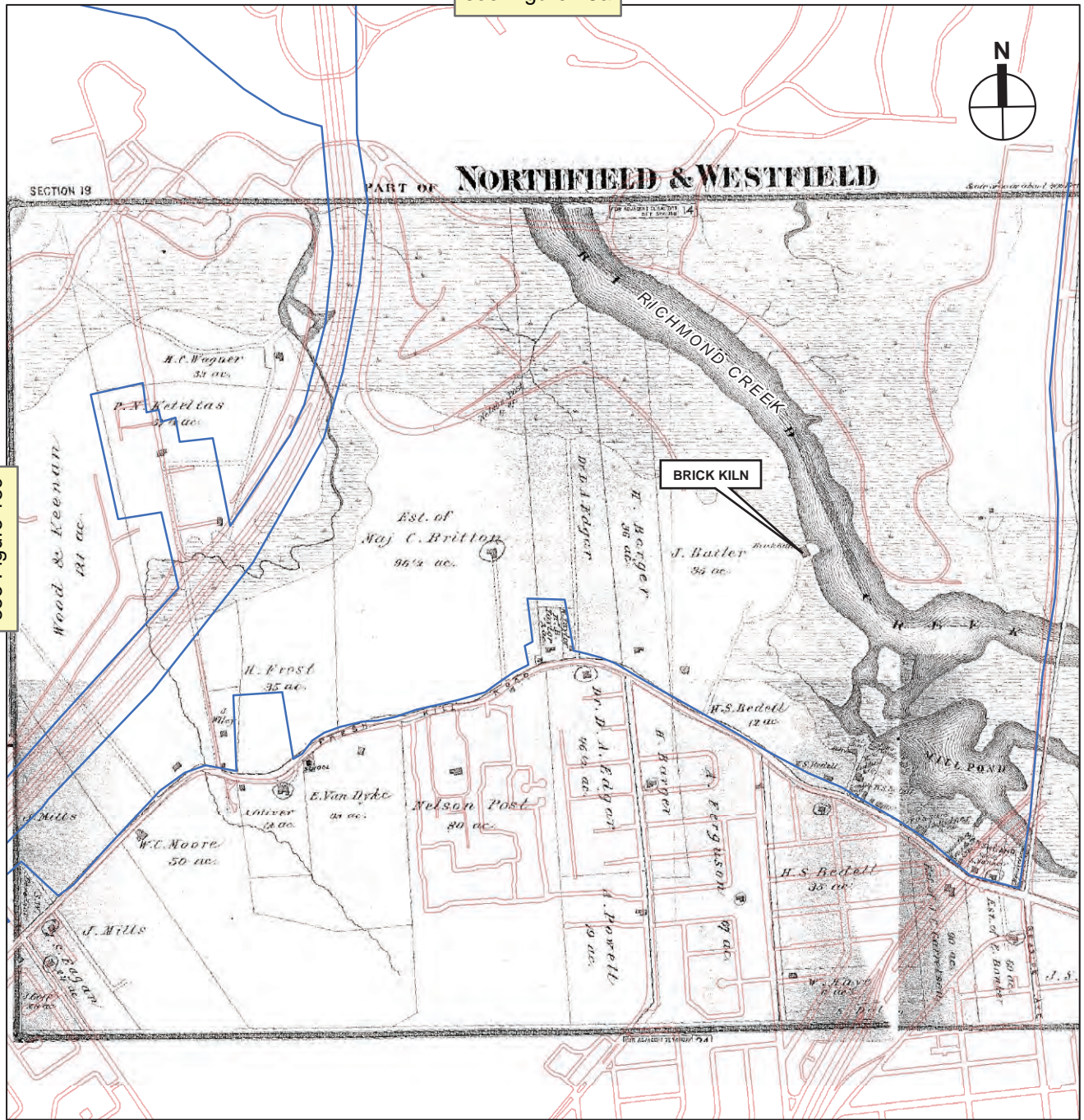
- Project Site
- Modern Street Lines  
(Source: NYC Dept of Information Technology and Telecommunications)

Atlas of Staten Island, New York.  
F.W. Beers, 1874



see Figure 15a

see Figure 15c

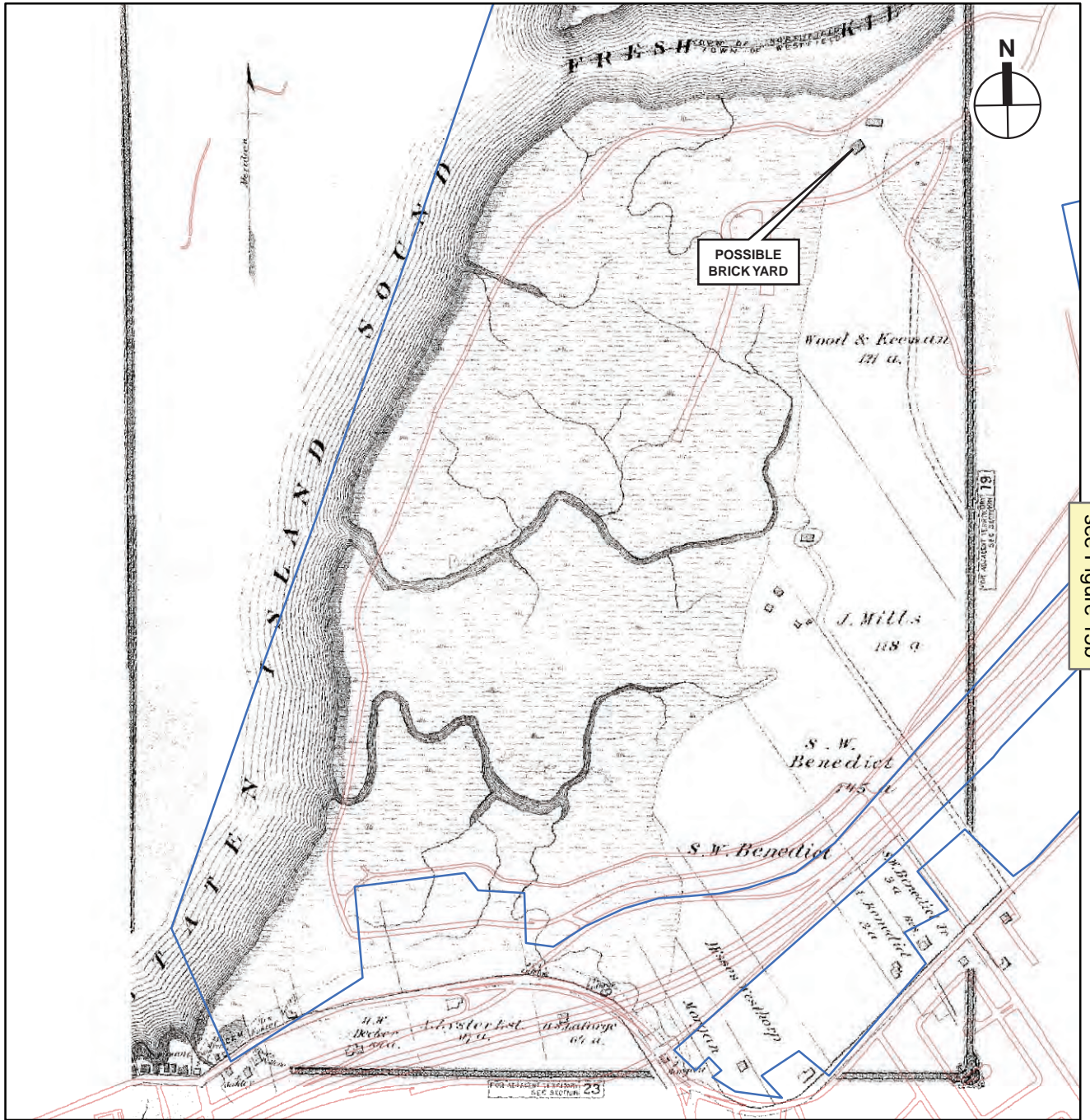


Project Site  
 Modern Street Lines  
 (Source: NYC Dept of Information Technology and Telecommunications)

0 0.5 MILE  
SCALE

Atlas of Staten Island, New York.  
F.W. Beers, 1874





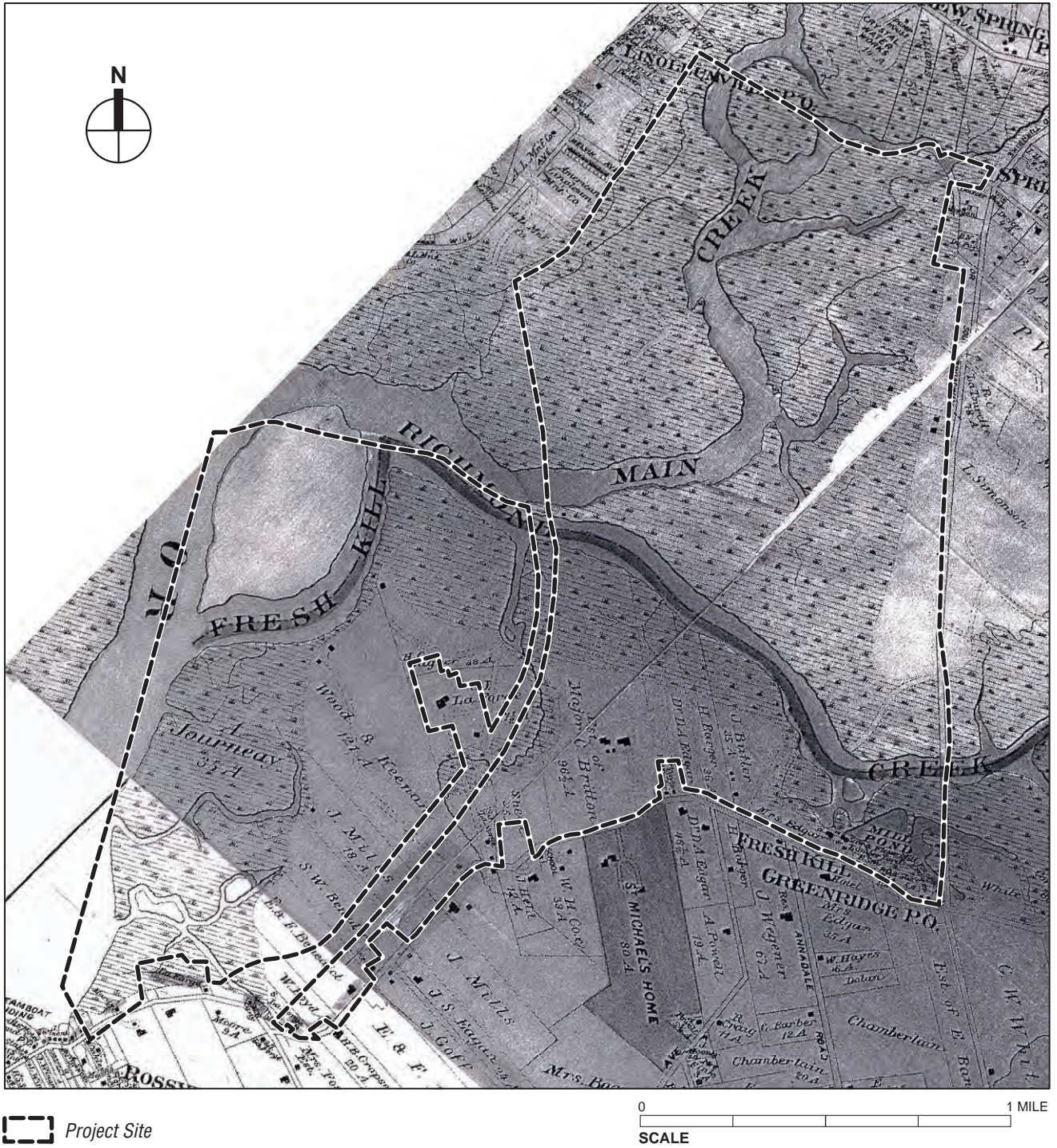
see Figure 15b

- Project Site
- Modern Street Lines  
(Source: NYC Dept of Information Technology and Telecommunications)

0 0.5 MILE  
SCALE

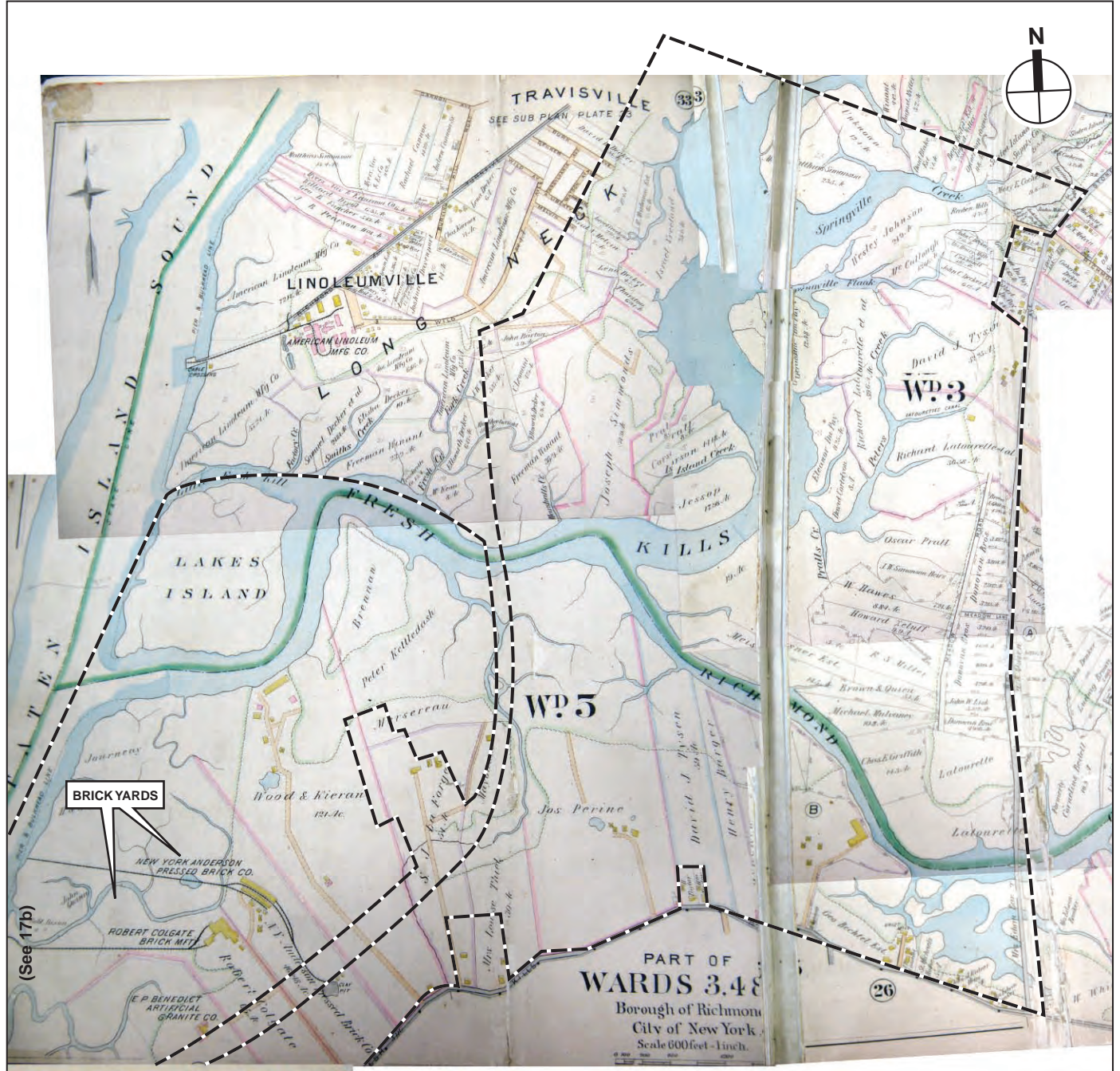
Atlas of Staten Island, New York.  
F.W. Beers, 1874



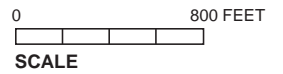


Atlas of Staten Island, Richmond County, New York.  
J.B. Beers, 1887

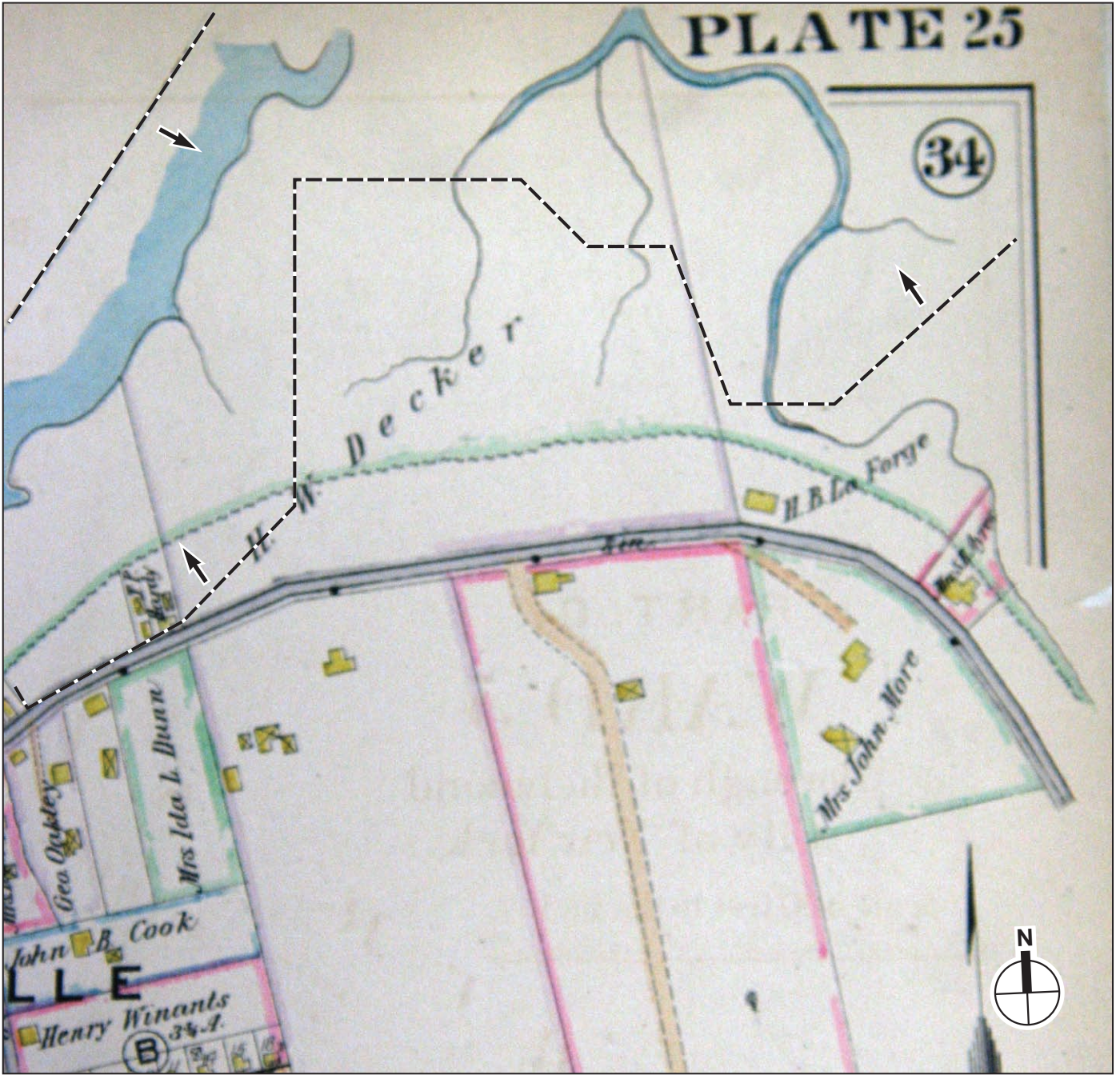




NOTE: Map composited from multiple photographs

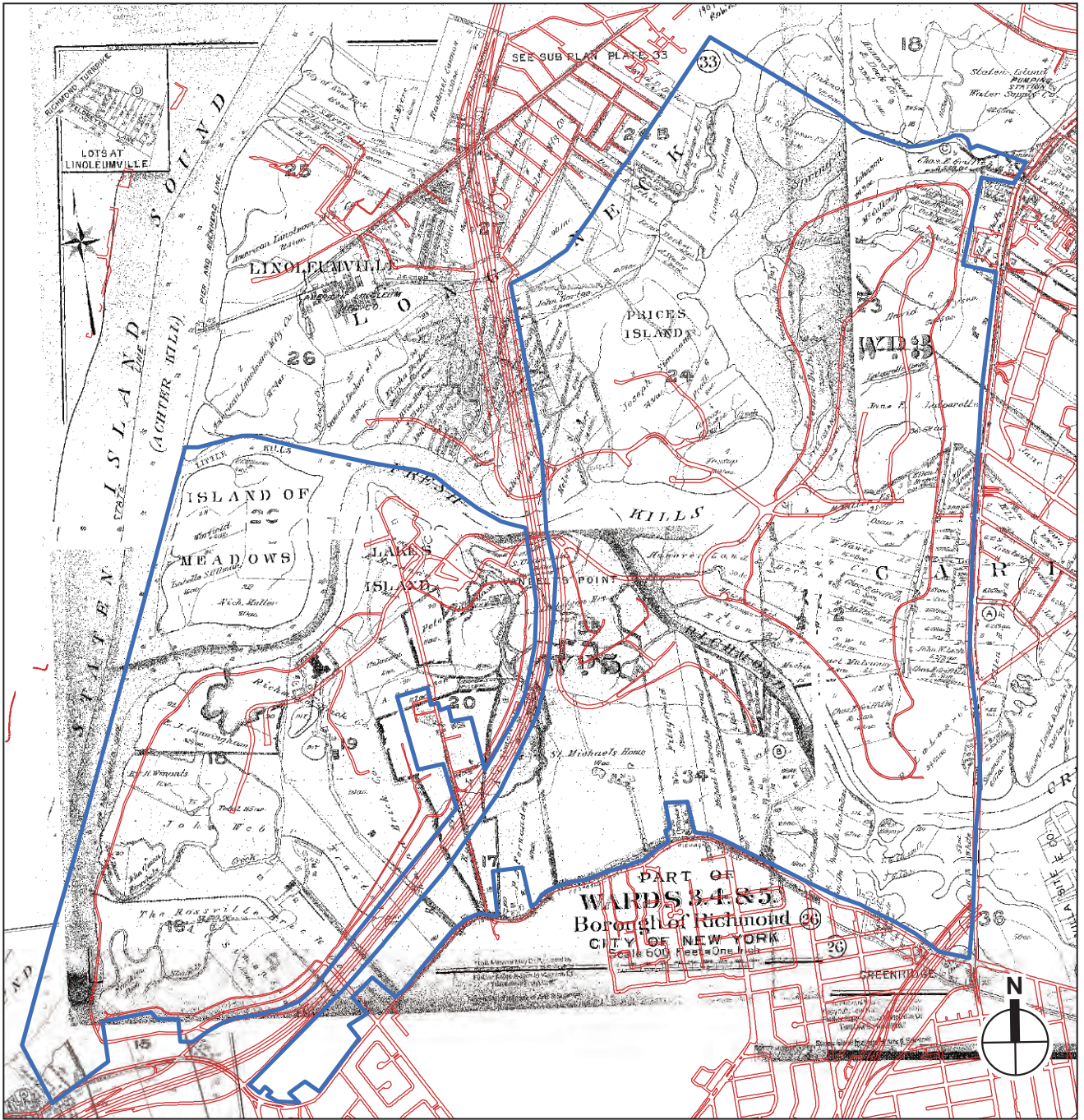






*Atlas of the Borough of Richmond*  
E. Robinson, 1898  
**Figure 17b**



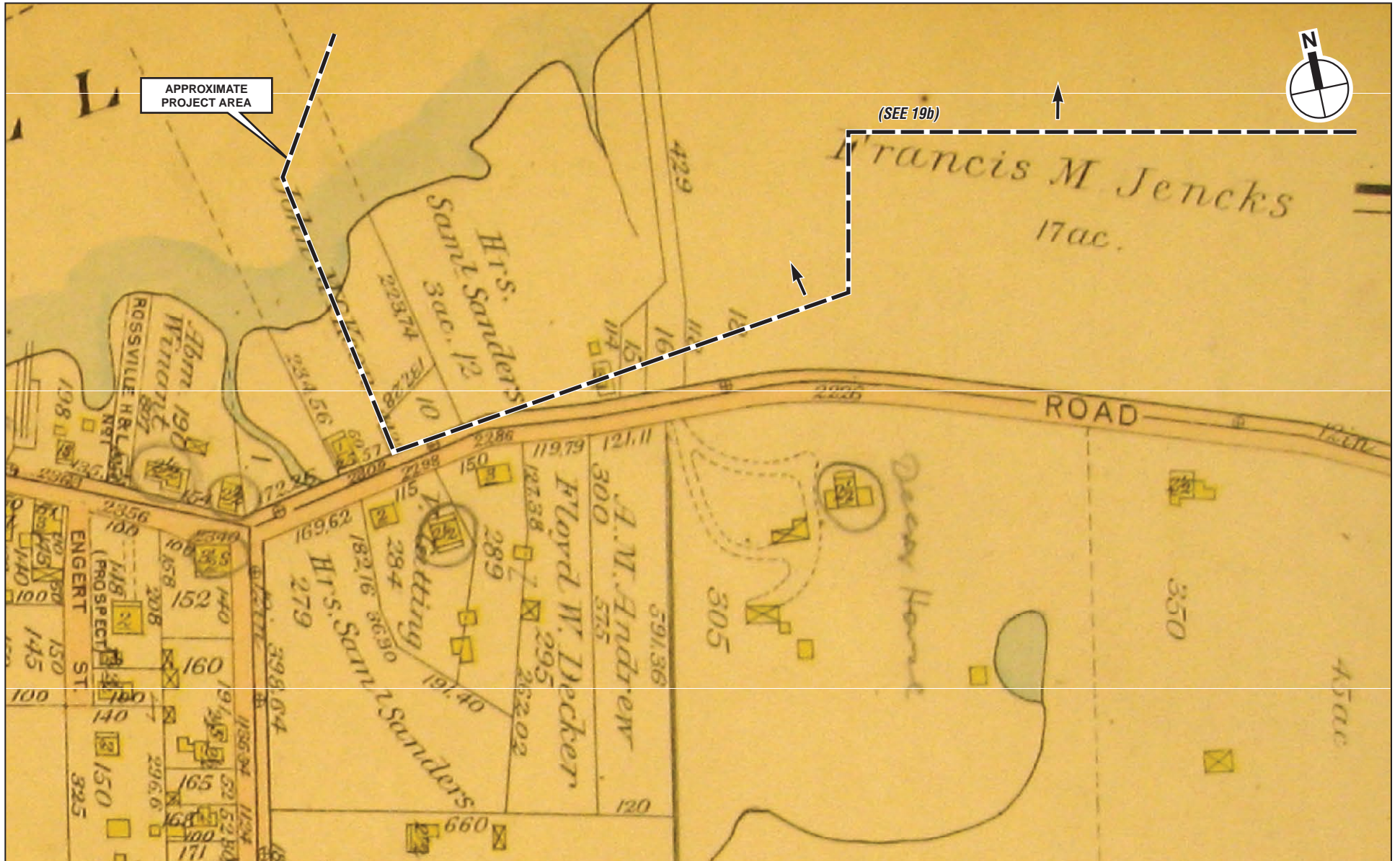


Project Site  
 Modern Street Lines  
 (Source: NYC Dept of Information Technology and Telecommunications)

0 1 MILE  
SCALE

Atlas of the Borough of Richmond.  
E. Robinson, 1907



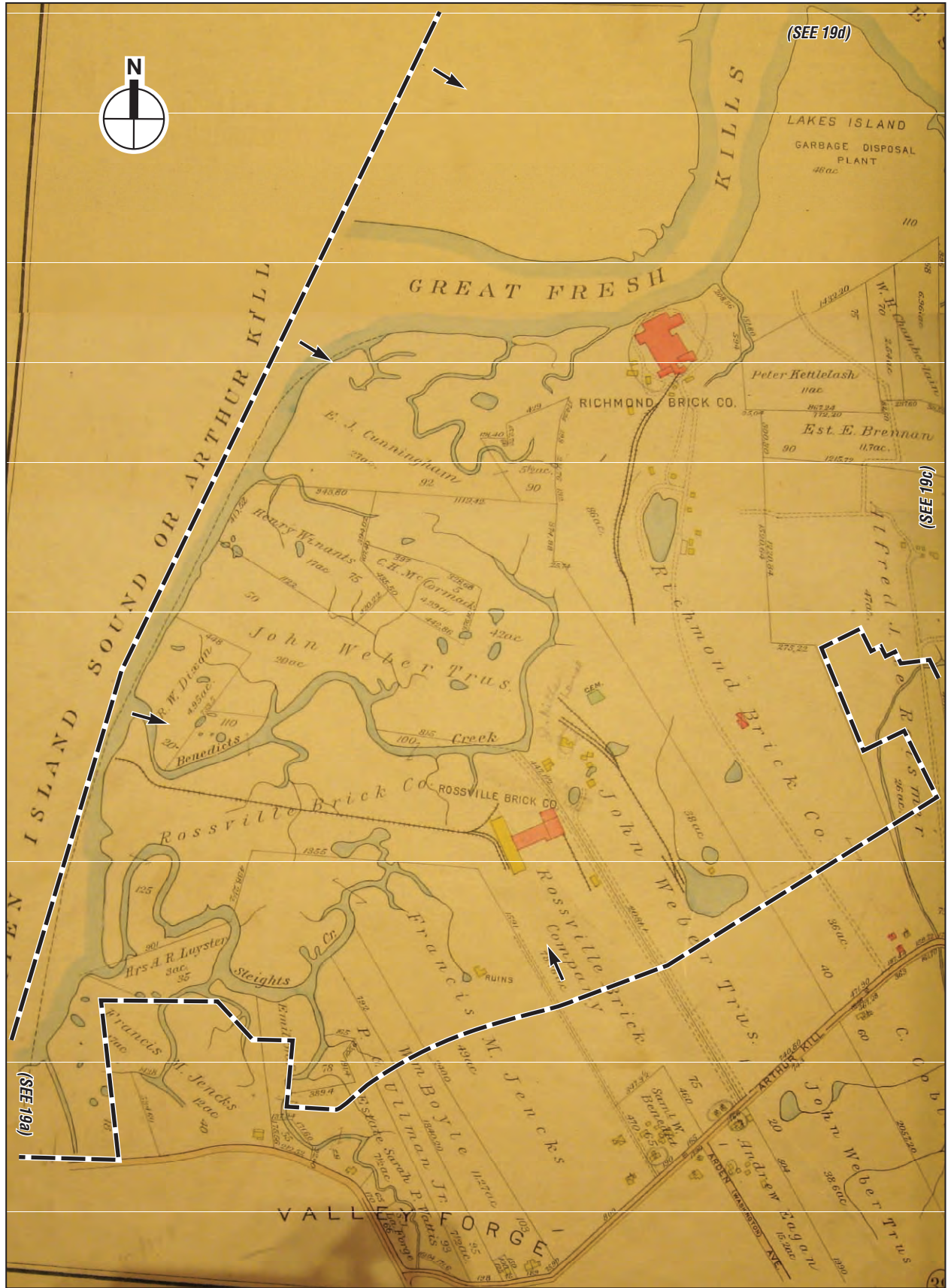


NOTE: Map composited from multiple photographs

--- Approximate Project Site

Atlas of the City of New York,  
 Borough of Richmond.  
 Bromley, 1917  
**Figure 19a**





NOTE: Map composited from multiple photographs

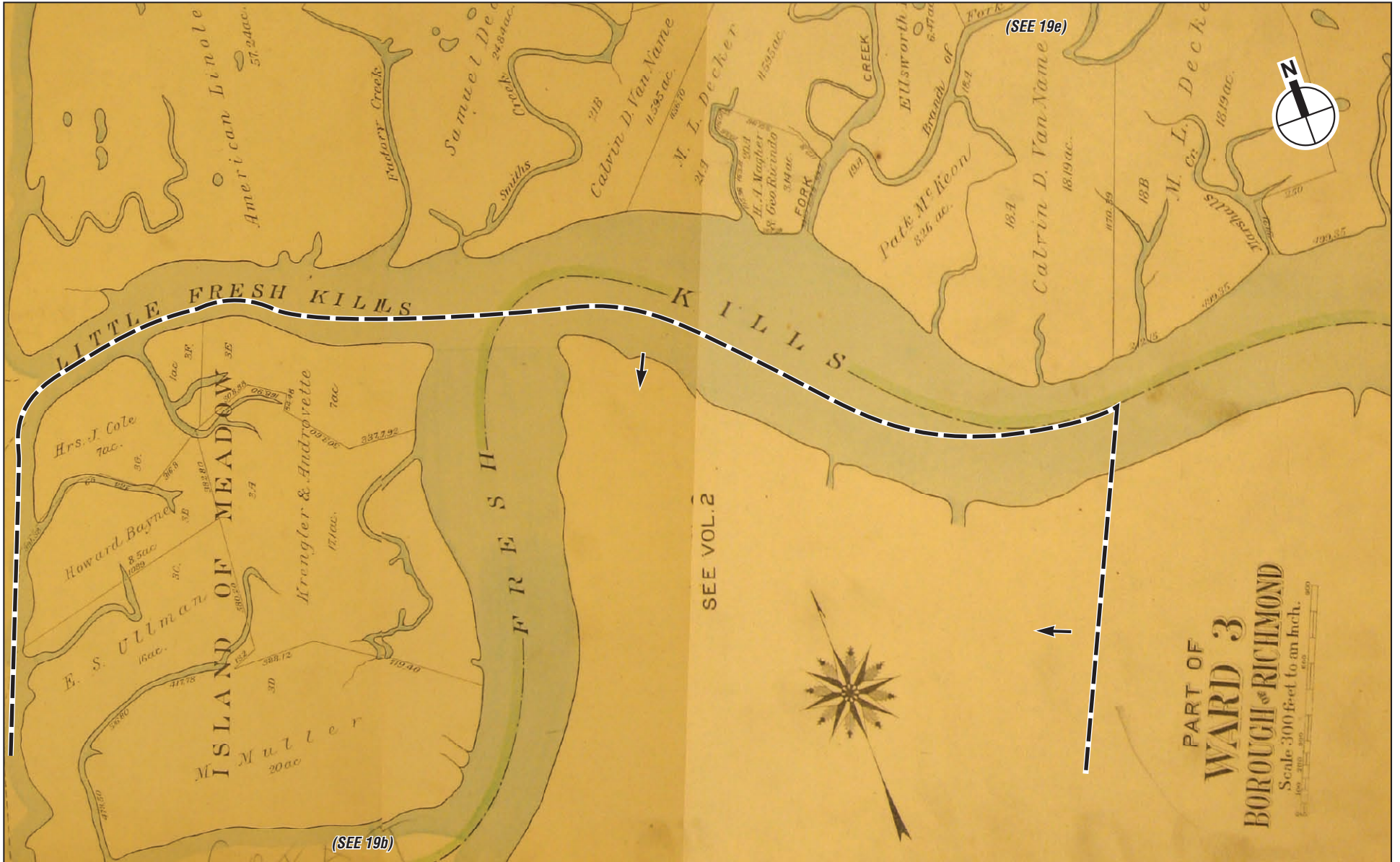
--- Approximate Project Site

Atlas of the City of New York,  
Borough of Richmond.  
Bromley, 1917  
Figure 19b









NOTE: Map composited from multiple photographs

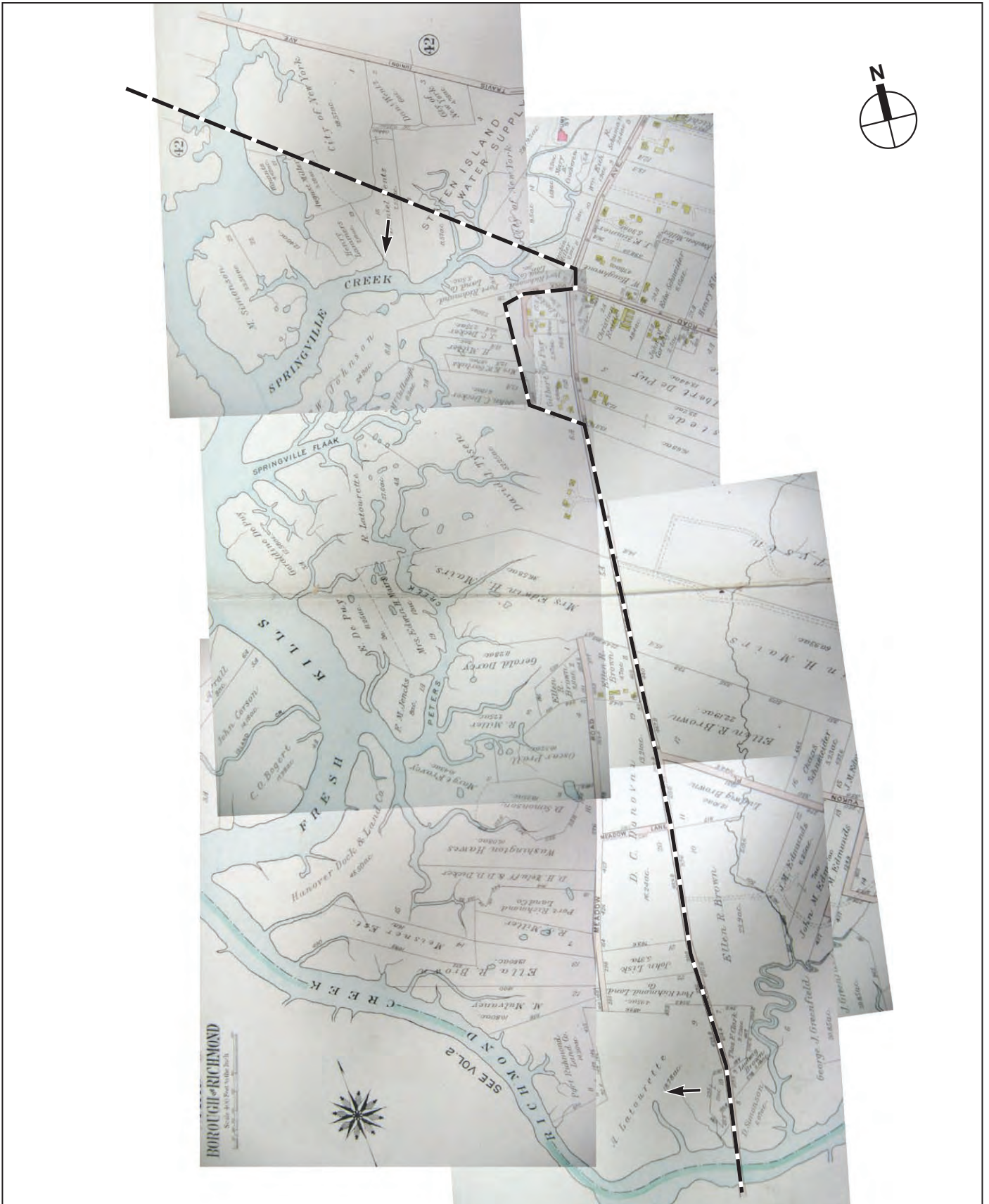
— — — — — Approximate Project Site

Atlas of the City of New York,  
Borough of Richmond.  
Bromley, 1917  
Figure 19d







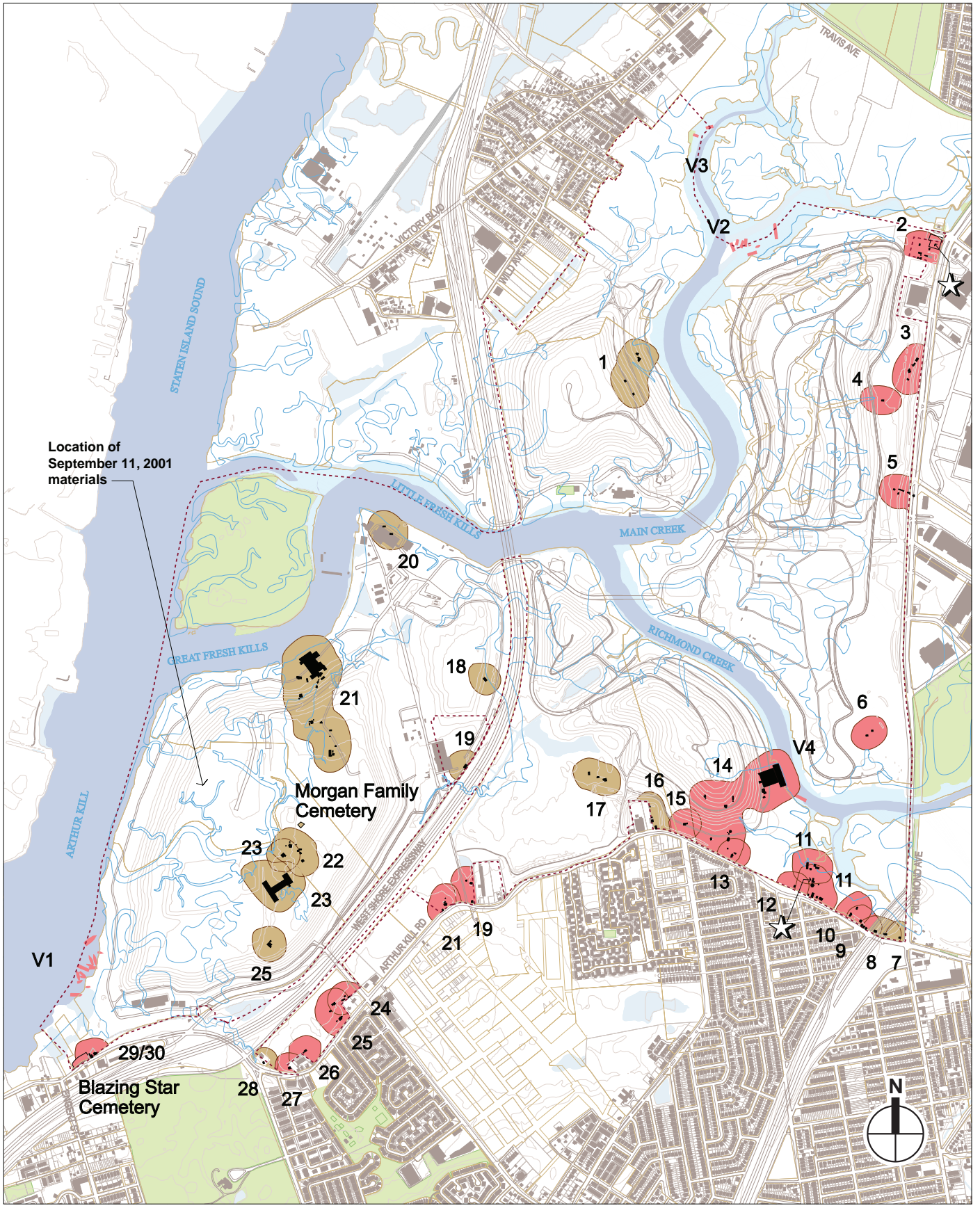


NOTE: Map composed from multiple photographs

— — — Approximate Project Site

Atlas of the City of New York,  
Borough of Richmond.  
Bromley, 1917



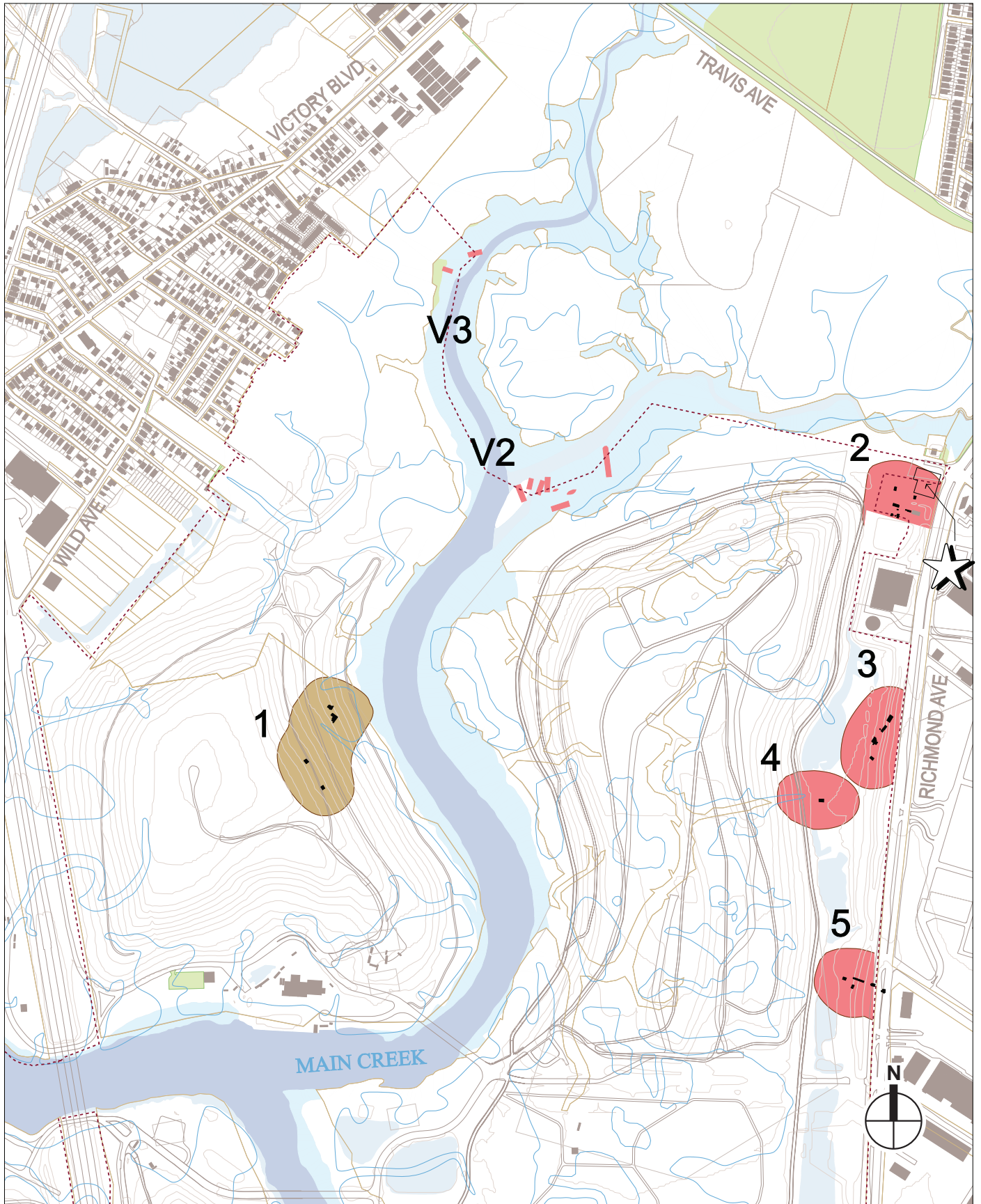


Location of September 11, 2001 materials

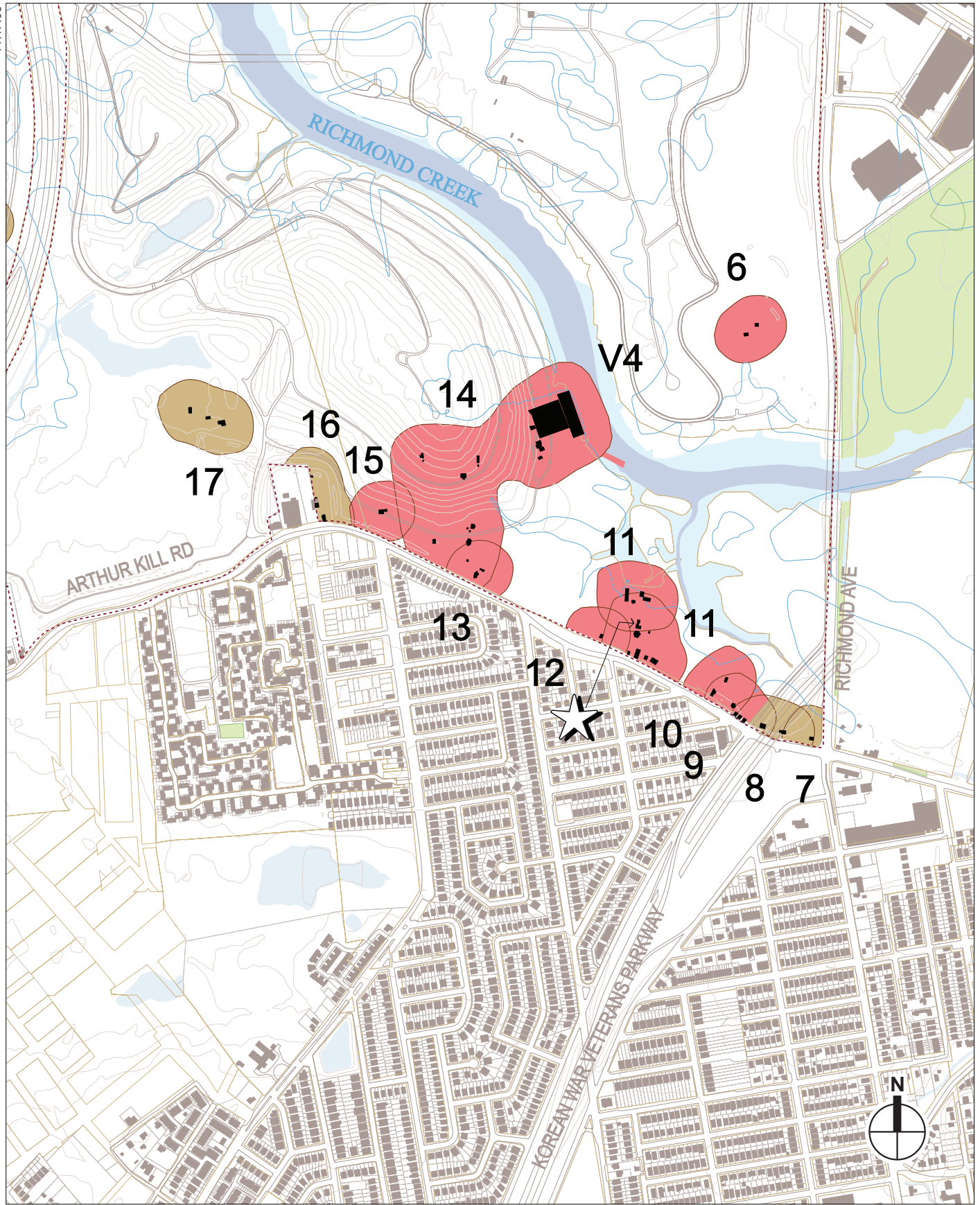
- Project Site
- Former Building
- Existing Building
- ★ 20th Century Demolished Building
- 25 Historic Properties (see Table 7-1)
- Deeply Buried and/or Disturbed
- Areas of Historic Sensitivity
- 0 foot contour in 1912
- 10 foot contour interval in 2004







- Project Site
- Former Building
- Existing Building
- ★ 20th Century Demolished Building
- 5 Historic Properties (see Table 7-1)
- Deeply Buried and / or Disturbed
- Areas of Historic Sensitivity
- 0 foot contour in 1912
- 10 foot contour interval in 2004

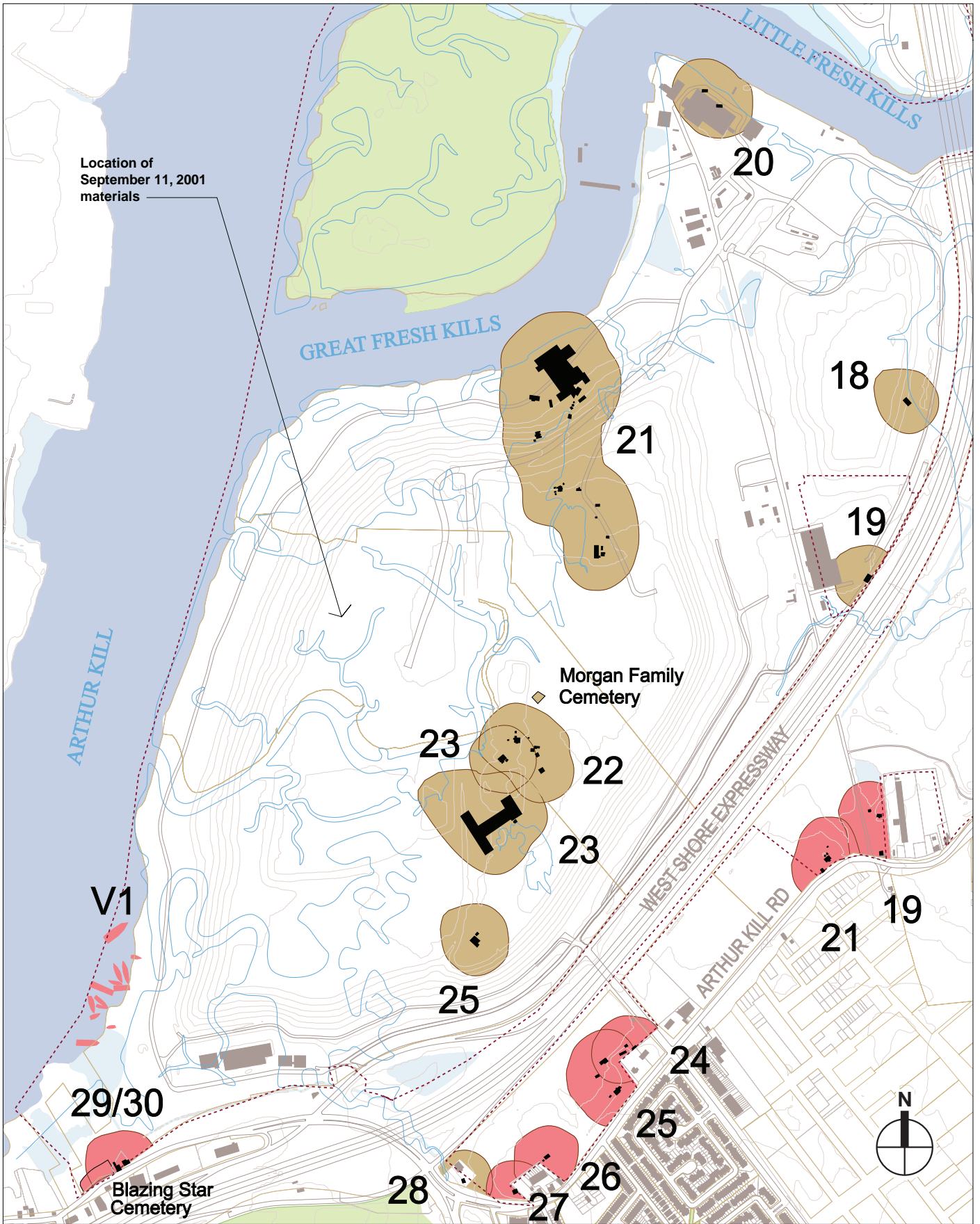


- Project Site
- Former Building
- Existing Building
- Deeply Buried and/or Disturbed
- Areas of Historic Sensitivity
- 20th Century Demolished Building
- 25 Historic Properties (see Table 7-1)
- 0 foot contour in 1912
- 10 foot contour interval in 2004



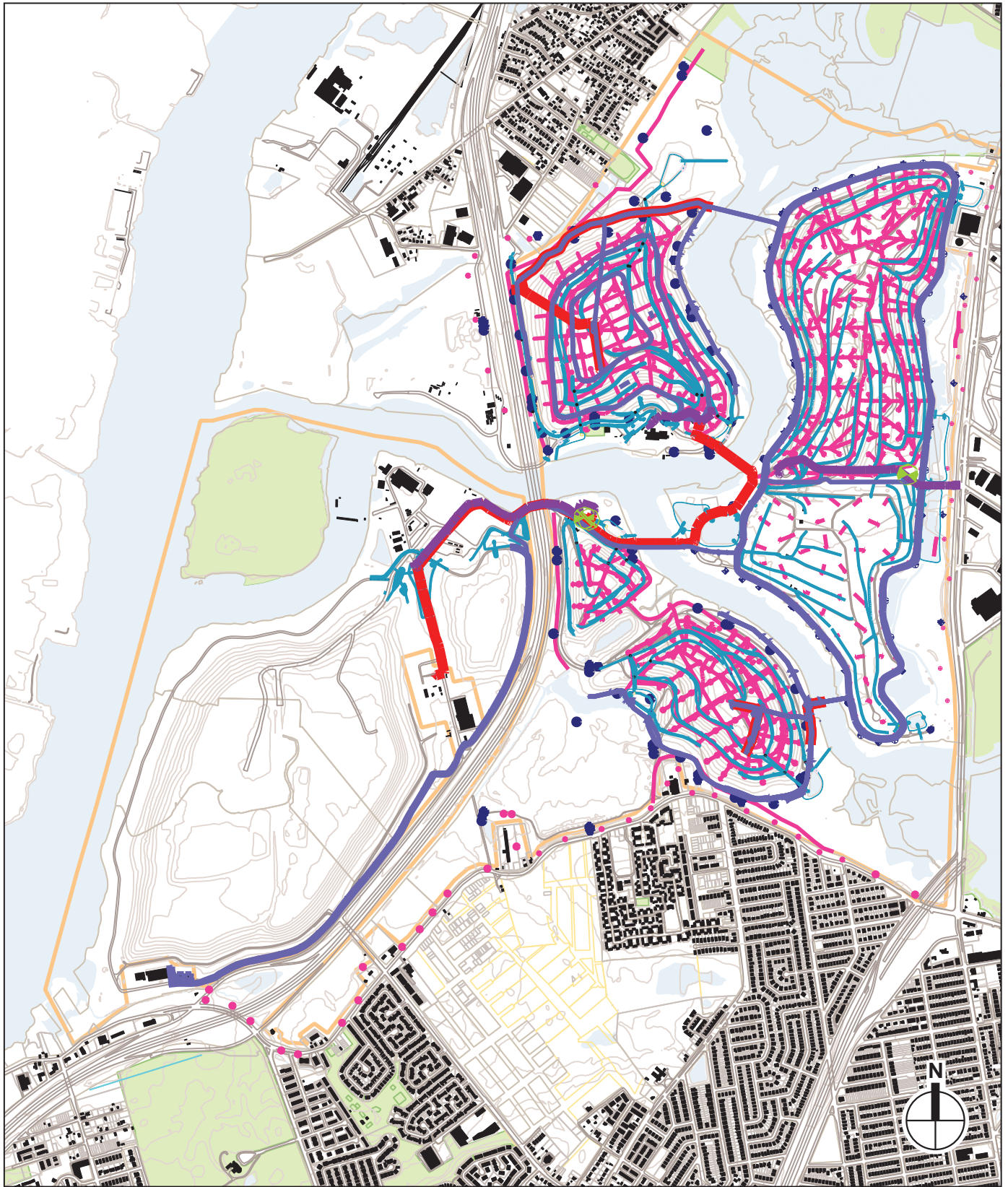
0 600 FT





- Project Site
- Former Building
- Existing Building
- ★ 20th Century Demolished Building
- 25 Historic Properties (see Table 7-1)
- Deeply Buried and/or Disturbed
- Areas of Historic Sensitivity
- ~ 0 foot contour in 1912
- ~ 10 foot contour interval in 2004

Areas of Historic Sensitivity  
Figure 20c

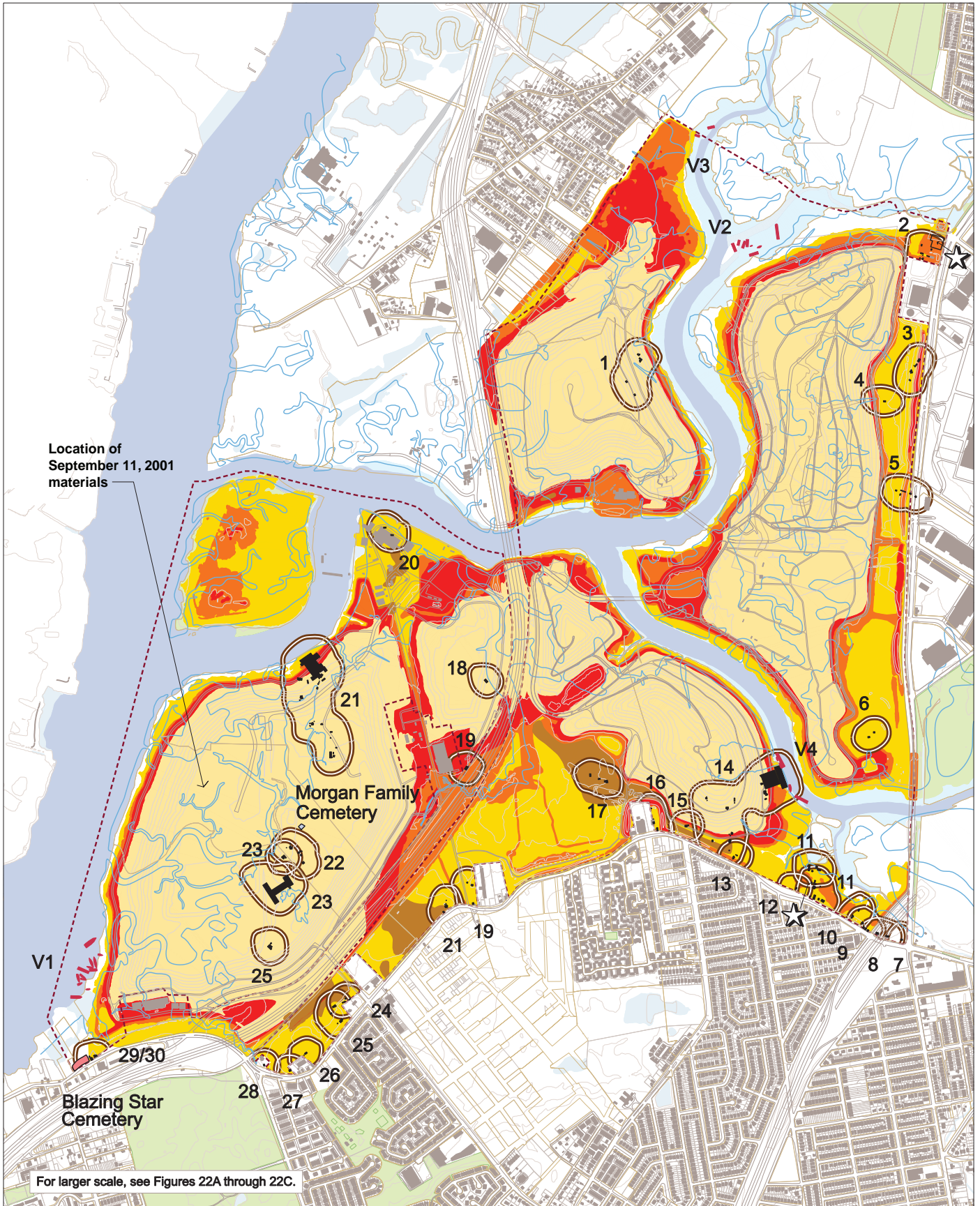


- Project Site
- Landfill Gas Control System
- Leachate Control System
- Stormwater Control System
- Water Quality Monitoring Well
- Fire Control Water Infrastructure
- Electrical Service Infrastructure
- Phone Service Infrastructure

NOTE: Complete West Mound Data Unavailable

### Fresh Kills Landfill Environmental Control Infrastructure





Location of September 11, 2001 materials

Morgan Family Cemetery

Blazing Star Cemetery

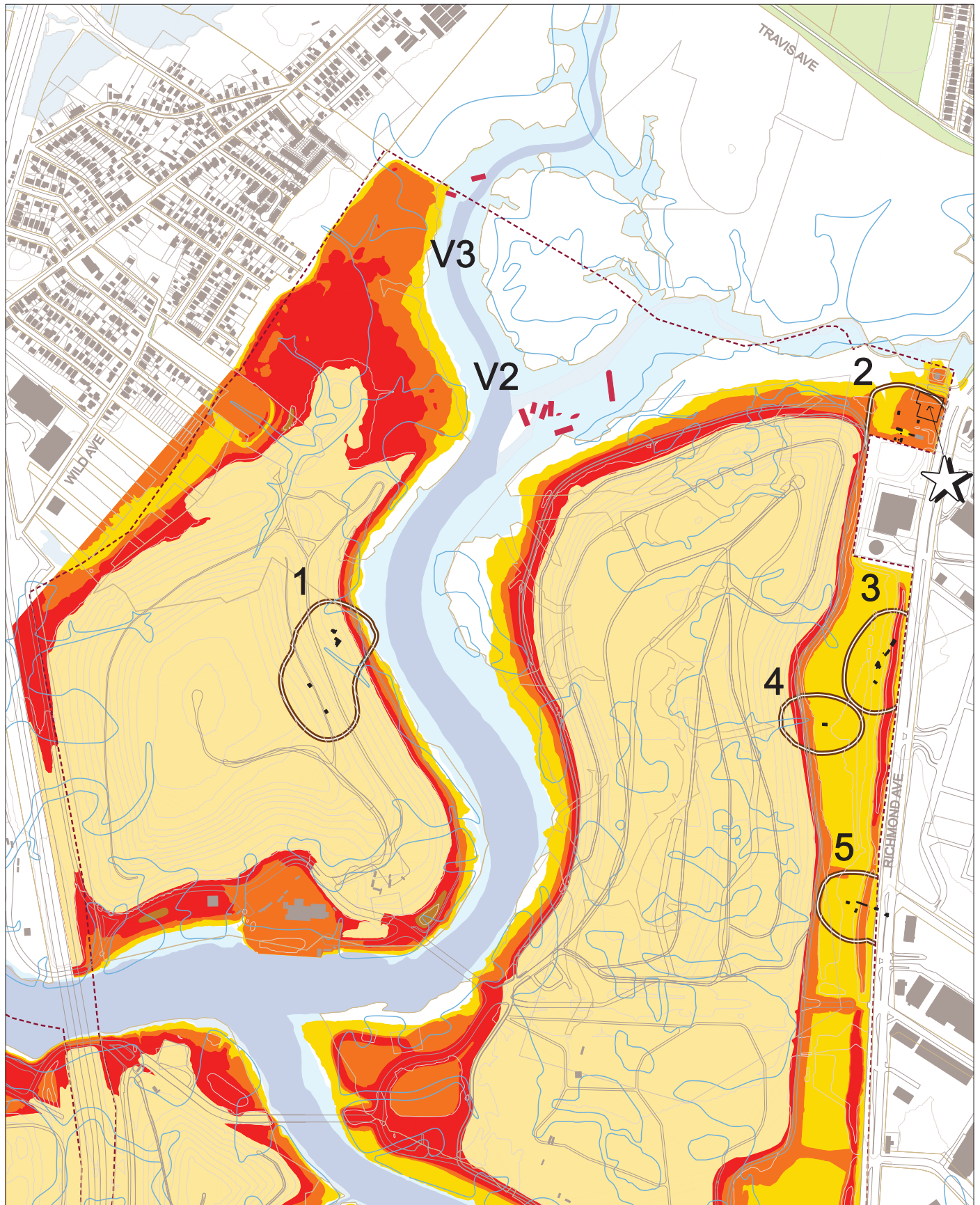
For larger scale, see Figures 22A through 22C.

- Project Site
- Former Building
- Existing Building
- 0 to 5 feet lower than 1912
- 0 to 5 feet higher than 1912
- 5 to 10 feet higher than 1912
- 10 to 20 feet higher than 1912
- 20 feet or more higher than 1912
- ★ Demolished 20th Century Building
- 10 feet contours
- 0 foot contour in 1912
- Areas of Potential Historic Sensitivity (See Figure 20 and Table 5)



1912 to 2007 Soil Level Changes Based on Cartographic Research  
Figure 22

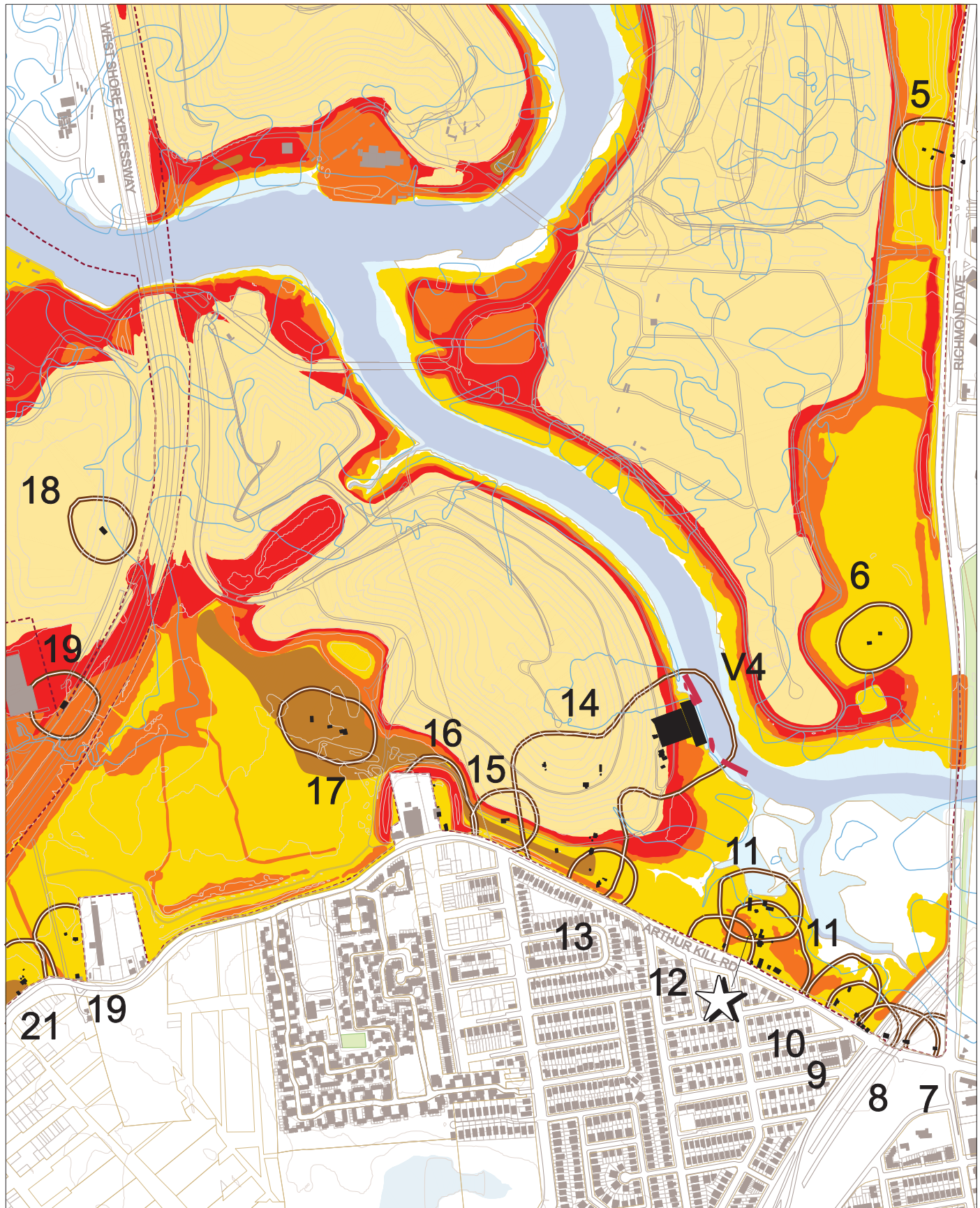




Project Site	0 to 5 feet lower than 1912	Demolished 20th Century Building	0 foot contour in 1912
Former Building	0 to 5 feet higher than 1912	10 feet contours	Areas of Potential Historic Sensitivity (See Figure 20 and Table 5)
Existing Building	5 to 10 feet higher than 1912		
	10 to 20 feet higher than 1912		
	20 feet or more higher than 1912		

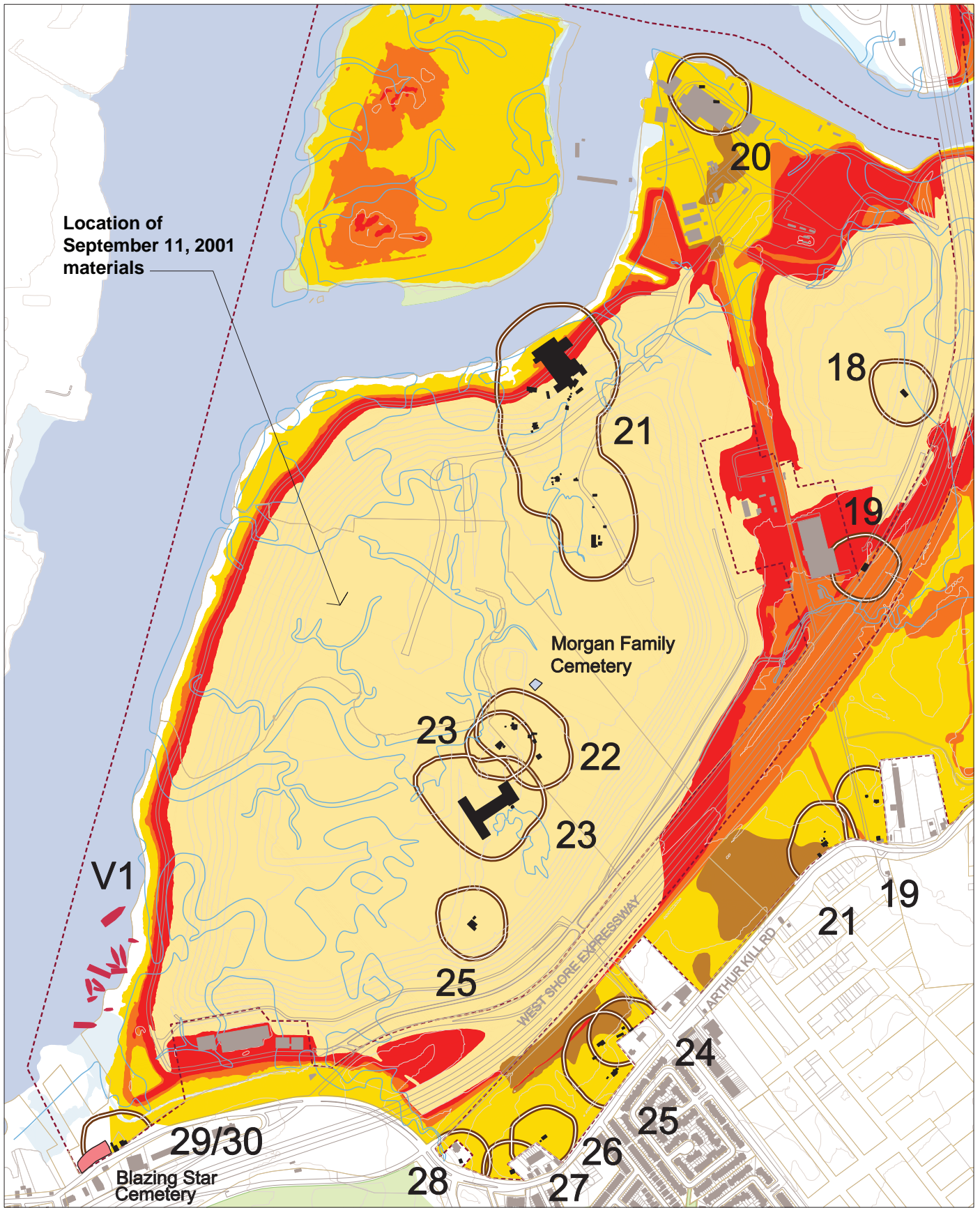
1912 to 2007 Soil Level Changes Based on Cartographic Research  
 Figure 22A





1912 to 2007 Soil Level Changes Based on Cartographic Research  
 Figure 22B

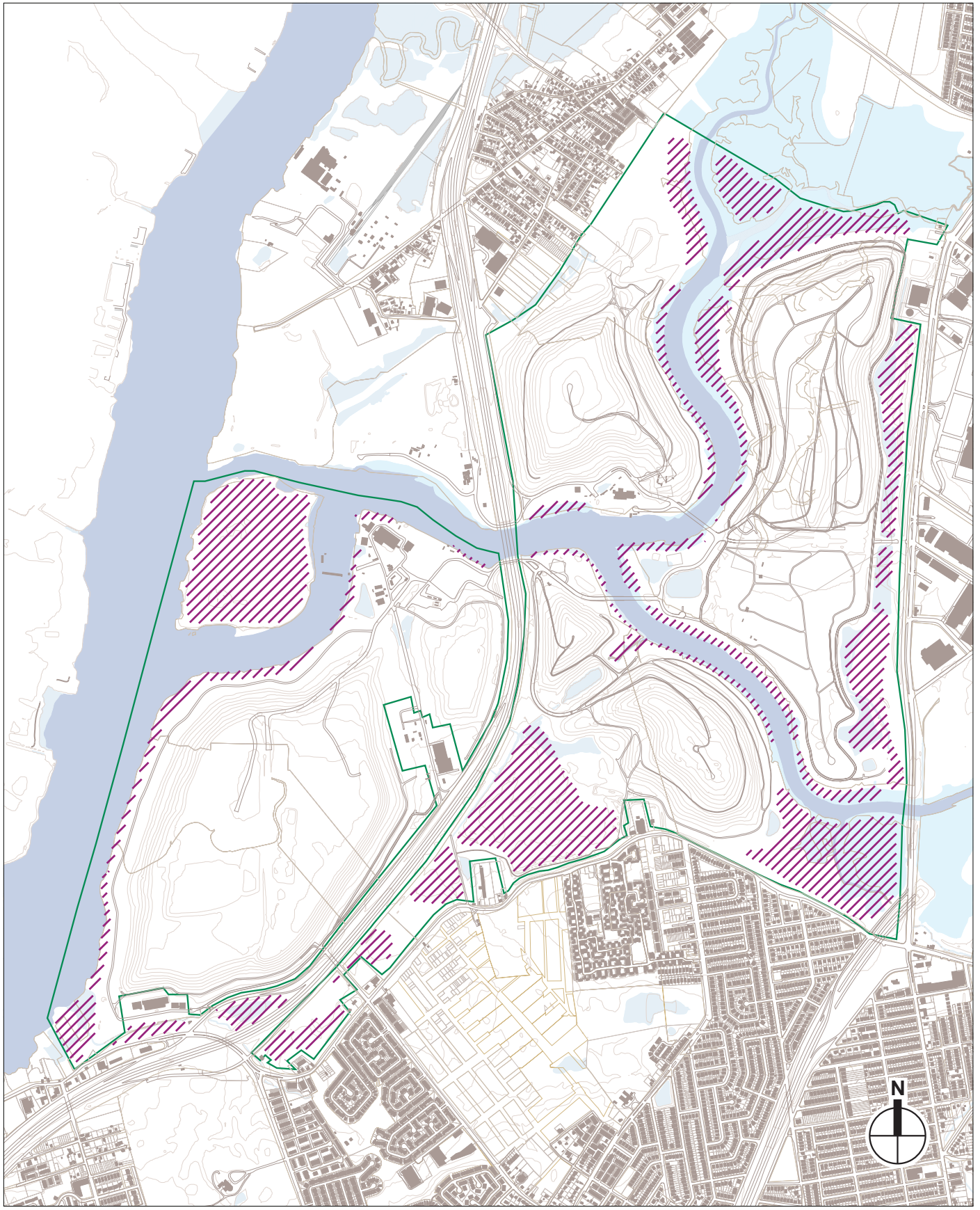




Location of  
September 11, 2001  
materials







Project Site    
  Areas of Prehistoric Sensitivity    
  10 feet contours (2004)

0                      1200 FT

# Photographs



Flare Station on East Mound, looking northeast 1



Flare Station on North Mound, looking southeast 2





View from area north of North Mound, looking northeast **3**



Stormwater drain within basin to north of North Mound, looking east **4**



View of North and East Mounds, looking southeast from West Shore Expressway **5**



View of South Mound and bridge across Richmond Creek, looking south **6**





North Mound and bridge across Richmond Creek, looking northeast from South Mound **7**



Looking northeast from East Mound, marshland and Manhattan skyline are visible in background **8**





Examples of utilities at top of North Mound **9**



Typical manhole, at base of North Mound **10**





Typical methane ventilation pipe 11



Typical utilities on North Mound 12

# Appendices



**Appendix A: Inventory of Historic Structures identified within the Fresh Kills Park Project Area**

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<b>ID # [Fig. 20]</b>	<b>Location</b>	<b>1844 Coastal S.</b>	<b>1850 Dripps</b>	<b>1853 Butler</b>	<b>1859 Walling</b>	<b>1866 Colton</b>	<b>1872 Dripps</b>	<b>1874 Beers</b>	<b>1887 Beers</b>	<b>1898 Robinson</b>	<b>1907 Robinson</b>	<b>1917 Bromley</b>
1	Price's Island	[1] (no name)	Price [1]	E. Price [1]	E. Price [1]	E. Price [1]	(Map unclear)	[3] (no name)	(not shown)	Joseph Simmonds [0]	Joseph Simmonds [0]	Joseph Simmonds [2]
2	New Springville	[1] (no name)	DuPuy [1]	J. DuPuy [1]	[0]	[0]	No name [1]	S. D. Decker [1] [appears to be same structure as 1853]	[1] (no name)	S. Decker [2-3] (one structure is outside of APE)	S. Decker [2]	R. S. Decker [2]
3	New Springville	[0]	Van Boskirk [1]	Van Buskirk [1]	P. & C. Van Buskirk [0]	P. & C. Van Buskirk [1]	(Map Unclear)	P. & C. Van Buskirk [1]	P. Van Buskirk [1]	David J. Tysen [2]	David J. Tysen [2]	David J. Tysen [4]- two are same as 1907
4	New Springville	[1] (no name)	H. Latourette [1]	D. Latourette [1]	De La Tourette [1]	De La Tourette [1]	(Map Unclear)	Latourette [1]	(Map Unclear)	Richard Latourette [1]	Jane E. Latourette [1]	[0]
5	Carls Neck	[0]	J. Morgan [1]	J. Morgon [1]	J. Morgon [1]	J. Morgan [1]	(Map Unclear)	No name (possibly part of Latourette) [2] one may be same as 1850/1853 structure	R. C. LaTourette [2-3] same as 1874	Brown & Quien [2] Different than earlier maps	Ellen R. Brown [2] same as 1898	Ellen Brown [5] two are same as 1907
6	Carls Neck	[0]	(not shown)	(not shown)	(not shown)	(not shown)	(not shown)	[2 ] (no name)	(not shown)	(not shown)	(not shown)	(not shown)

Fresh Kills Park – Phase 1A Archaeological Documentary Study

ID # [Fig. 20]	Location	1844 Coastal S.	1850 Dripps	1853 Butler	1859 Walling	1866 Colton	1872 Dripps	1874 Beers	1887 Beers	1898 Robinson	1907 Robinson	1917 Bromley
7	Greenridge	[0]	[0]	[0]	(Map Unclear)	(Map Unclear)	[0]	J. H. Garretson Coal Yard [1]	White [1] appears same as 1874	[0]	Sophia B. White est [0]	Lot is not directly labeled, either part of Emma L. Banker property to the west or the Frances B. White property to the north [0]
8	Greenridge	[0]	[0]	[0]	(Map Unclear)	(Map Unclear)	[0]	E. Banker [2]	E. Banker [2] same as 1874	Mrs. Edwin Banker [3] two appear same as 1887	Emma L. Banker same as 1898	Emma L. Banker [4], appears to have an additional barn or shed north of the main house, which is a different shape than 1907
9	Greenridge	[1] (no name)	H. M. Boehm/ BH Shool [1]	H. M. Boehm/ School [1]	J. G. Odell's Store; Marshland P.O.; Farron's B.S. Shop; Sash, Blind, and W.W. Shop; & S. Farron [4]	(Map Unclear)	[0]	J. A. Ridner [4] Post Office/ Store; Paint Shop; Wagon Shop; Blacksmith Shop	J.A. Ridner [1] 'Post Office & Store' [may be same as 1853 School]	John A. Ridner Heirs [6] one appears same as 1887	Sophia B. White [4] Post Office [same bldg as 1887]	Sophie B. White [5], lot contains "Green Ridge P.O."
10	Greenridge	[0]	[0]	[0]	[0]	(Map Unclear)	[0]	H. S. Bedell [2] Blacksmith Shop	Blacksmith [2]	St. Michael's Home [0]	St. Michael's Home [0]	Arch-Diocese of N.Y. [0]

**Appendix A: Appendix A: Inventory of Historic Structures identified within the Fresh Kills Park Project Area**

<b>ID # [Fig. 20]</b>	<b>Location</b>	<b>1844 Coastal S.</b>	<b>1850 Dripps</b>	<b>1853 Butler</b>	<b>1859 Walling</b>	<b>1866 Colton</b>	<b>1872 Dripps</b>	<b>1874 Beers</b>	<b>1887 Beers</b>	<b>1898 Robinson</b>	<b>1907 Robinson</b>	<b>1917 Bromley</b>
11	Greenridge	[2] (no name)	"G. Mill" [4]	Mill and unnamed buildings[4]	Fresh Kill Tide Mill [1] H. S. Bedell. [2]	Fresh Kill Tide Mill and unnamed buildings [4 or 5, map unclear]	"Jessup's Mill" [1]	M. Conklin & Co. [6]: Store; Coal Yard; Flour, Saw, & Planing Mill; Lumber Yard	No name: [4] One saw & flour mill; one lumber yard; two unidentified buildings	J. G. Cassell [4] one labeled 'Grist Mill'	J. G. Cassell [6]	This property is depicted differently on connecting plates Plate 43: [4] Plate 38: [5], two are the same as 1907
12	Greenridge	[1] (no name)	A. S. Bedell [1]	A. S. Bedell [1]	H.S. Bedell [2]	H.S. Bedell [1] map unclear	H. S. Bedell [1]	H.S. Bedell [1]	Mrs. Edgar [1] likely same as 1853	Geo. Bechtel Est. [3]- one appears same as 1887	(not shown)	[0]
13	Greenridge	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]	H. Androvette [1]	F. H. Androvette [1]	No name [2] one same as 1907
14	Greenridge	[0]	[0]	[0]	[0]	[0]	Butler Brick Yard [1]	J. Butler [2] Brick kiln	J. Butler [3] one appears same as 1874	Schenck [10] three may be same as 1887	John Dunn & Jas. Dolan Brick Mfy [11] two or three may be same as 1887	John Dunn & Jas. Dolan Brick Mfy [14] similar to 1907; some may be drying racks
15	Greenridge	[0]	D. V. H. Floyd [1]	D. V. H. Floyd [1]	A. F. Ockershausen [1]	W. P. Buckmaster [sp?] [1]- appears to be same as 1853	[0]	H. Barger [1] unclear if same as 1866	H. Barger [0]	Henry Barger [0]	Michael and Dorothe Dierauf [0]	Michael and Dorothe Dierauf [0]
16	Greenridge	[0]	(not shown)	(not shown)	(not shown)	(not shown)	Dr. Edgar [1]	(not shown)	(not shown)	(not shown)	(not shown)	(not shown)
17	Greenridge	[0]	C. Britton [2]	C. Britton [2]	Maj. C. Britton [1]	Maj. C. Britton [1]	Britton [1]	Maj. C. Britton [1]	Major C. Britton [4] Two are likely same as 1850/3 and 1874	Jos. Perine [4] one or two appear same as 1887	St. Michael's Home [3] all appear on 1898	St. Michael's Home [3] same as 1907
18	Greenridge	[1] (no name)	J. Bedell [1]	J. Bedell [1]	[0]	[0]	[0]	H.C. Wagner [1]	(not shown)	Maybaum [1] Appears same as 1844 and 1853	A.C. Simonson [1] Same as 1898	Francis M. Jencks [0]



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ID # [Fig. 20]	Location	1844 Coastal S.	1850 Dripps	1853 Butler	1859 Walling	1866 Colton	1872 Dripps	1874 Beers	1887 Beers	1898 Robinson	1907 Robinson	1917 Bromley
19	Greenridge	[1] (no name)	P. L. Cortelyou [1 in APE] same as 1844	P.L. Cortelyou [1 in APE] same as 1850	P. Kettletas [1] same as 1853	P. Kettletas [1] same as 1859	[0]	P. N. Keteltas [2] one is same as earlier maps; a second structure is further north	S. J. LaForge [2] same as 1874	S. J. La Forge [3] two same as 1887	Roger I. Lee [4] three same as 1898	Alfred de Raismer [6] Appear to be different structures from 1907, but in similar locations
20	Lakes Island	[1] (no name)	[1] (no name) same as 1844	(not shown)	(not shown)	(not shown)	(not shown)	(not shown)	H.C. Wagner [1] unclear if it's same as 1850/1853 appears to be south of it.	Brennan [0]	E. Brennan [2] appears in roughly same location as 1850/3	"Lakes Island Garbage Disposal Plant" [0]
21	Rossville-Greenridge	[1] (no name)	R. Connor/Burnt House [2]	R.Connor [2] same as 1850	R. Conner [1]	R. Connor [1] One building same as 1850/3	Brick Yard [1] appears to be on Wood & Keenan property	Wood & Keenan [3] two appear same as 1853	Wood & Keenan [3]- two appear same as 1853	Wood & Kieran [10] one, possibly two, are same as 1887	Richmond Brick Co. [13] different from 1887; Railroad tracks on property	Richmond Brick Co. [20] similar to 1907- some structures likely drying racks; Railroad tracks on property
22	Rossville	[0]	J. Mills [1]	J. Mills [1]	J. Mills [1] "Fertile Plain"	J. Mills [1] "Landing"	0	J. Mills [1]	J. Mills [1]- appears same as previous	New York Anderson Pressed Brick Co. [9] apparently not the same bldgs as 1874. Rail Road	John Weber, Trustee [7] same as 1898; Railroad tracks on property	John Weber, Trustee [7] one is same as 1887; Railroad & Cemetery on property
23	Rossville	[1] (no name)	S. W. Benedict [1]	J. W (sic) Benedict [1] same as 1850	S. W. Benedict [1] "Fertile Plain"	S. W. Benedict [1] same as 1853	[0]	S. W. Benedict [4 in APE] one appears same as previous	S. W. Benedict est. [0 in APE]	Robert Colgate Brick Mfty [2]	Rossville Brick Co. [3+] two are same as 1889; Pier and RR on property	Rossville Brick Co. [4] two appear to be drying racks. RR on property

**Appendix A: Appendix A: Inventory of Historic Structures identified within the Fresh Kills Park Project Area**

<b>ID # [Fig. 20]</b>	<b>Location</b>	<b>1844 Coastal S.</b>	<b>1850 Dripps</b>	<b>1853 Butler</b>	<b>1859 Walling</b>	<b>1866 Colton</b>	<b>1872 Dripps</b>	<b>1874 Beers</b>	<b>1887 Beers</b>	<b>1898 Robinson</b>	<b>1907 Robinson</b>	<b>1917 Bromley</b>
24	Rossville	-----	[0]	[0]	J. S. Eagon [1]	J. S. Eagon [1]	S. W. Benedict, Jr. [1]	S. W. Benedict, Jr. [1]	'Res.' [1 in APE]	S. W. Benedict [2 in APE]	S. W. Benedict [2 in APE]	Samuel W. Benedict [3 in APE]
25	Rossville	[1] (no name)	Not clearly labeled [S. W. Benedict?] [1 structure in APE]	Not clearly labeled [S. W. Benedict?] [1 structure in APE]	[0]	A. Benedict "Rose Hill Sem." [1]	No name [1]	A. Benedict [1]	E. & F. Benedict [1] unclear if structure is same as 1853	E.P. Benedict Artificial Granite Co. [4] does not appear to be same as 1887	A. C. [4] Simonson same as 1898	Francis M. Jencks [3] one labeled "ruins"
26	Rossville	No name [1]	No name [1] (possibly S. W. Benedict)	No name [1] (possibly S. W. Benedict)	[0]	[0]	[0]	[0]	[0]	[0]	[0]	[0]
27	Rossville	[0]	[0]	(not shown)	O. Hodge [1]	O. Hodge [1]	[0]	[0]	[0]	[0]	[0]	[0]
28	Rossville	[1] (no name)	No name [1]	No name [1]	J. Morgan [1] may be slightly north of previous building	[No structure shown]	No name [1]	J. Morgan [1] not clear if it is same as earlier maps	Morgan [0]	[0]	[0]	[0]
29	Rossville	[1] (no name)	(Map Unclear)	Parsonage [1]	S. Pound, Parsonage, St. Luke's Ch. [1]	Parsonage [1]	[0]	Lang [1]	Hardy [1] may be same as 1853	J. P. Hardy [4] one same as 18	Sarah R. Wattis [4]	Samuel Sanders Hrs. [2]
30	Rossville	[0]	(Map Unclear)	School [1]	(Map unclear)	[1] (name illegible)	[1] (no name)	J. B. Ayers [2]	[2] (no name)	McKeon [2]	John McKeon [1]	John McKeon [1]

**Notes:**  
Numbers in brackets represent the number of individual structures present on the property  
**Sources:**  
See Figures 13 through 19 for maps and Figures 20 and 22 for areas of historic sensitivity.

\*

**Appendix B:****Deed Records for Fresh Kills Park Project Area**

Block #	Date	Grantor	Grantee	Liber	Page	Remarks
2649	2/16/1927	American Linoleum Manufacturing Company	Otto Wohrle	637	237	
2650	4/15/1929	Otto Wohrle	Wild Development Company, Inc.	639	417	
2651	3/13/1930	Frank H. Innes, Referree	George J. Cullen	697	503	
	2/25/1953	Treasurer of the City of New York	The City of New York	1228	214	
2561 and 2652	4/23/1930	Wild Development Company, Inc.	George J. Cullen	700	369	
2520	10/27/1924	Thomas F. Clark	Staten Island Edison Corporation	590	171	
	1/5/1925	Robert S. and Mary E. Brown	Ernest C. Cheek	592	286	
	8/11/1927	Thomas F. Clark, by committee	Simon F. Carlin	646	429	
	8/11/1927	Simon F. and Elizabeth F. Carlin	Marie B. Croak	646	396	
	9/11/1929	Richmond Avenue (Bridge)	In the matter of petition and order granting application to condemn	Filed Only	Filed Only	
	9/2/1941	Anna de Roche or de Roach [sic]	Leonard M. de Roche	841	522	
	1/22/1947	Anna de Roche or de Roach [sic]	Alf M.G. Hansen	981	97	
	10/19/1949	State Tax Commission	Ernest C. Cheek, est. of dec'd	1091	241	Release of Lien
	10/19/1949	Matilda B., John D., and Ernest C. Cheek	Richard H. Hans	1091	244	
	10/19/1949	Richard H. Hans	Richmond Flying Service, Inc.	1091	248	
	2/25/1953	Treasurer of the City of New York (Spencer C. Young)	The City of New York	1228	214	
	5/5/1953	Richmond Flying Service, Inc.	August Dinger and Frak Dinger, Jr.	1237	250	
	2/3/1965	State of New York Comm. General Services Casement	Brooklyn Union Gas Company	1678	292	



**Fresh Kills Park – Phase 1A Archaeological Documentary Study**

Block #	Date	Grantor	Grantee	Liber	Page	Remarks
	10/17/1974	First National City Bank	Consolidated Edison Company of New York	2100	154	Trustee Release
	6/2/1981	Cynthia Lantz and Stanley Goloin as trustees and executor of Abraham Goloin, dec'd	Cynthia Lantz and Stanley Goloin	2428	3	
2600	8/19/1942	Philip Kurtz	Laura Schumacher	849	526	
	8/9/1946	Laura Schumacher	Miriam Heilbrumm	957	267	
	8/9/1946	Elizabeth Sonn, Ray Schumann, Miriam Heilbrum, executors of Henry Heilbrumm, dec'd	Miriam Heilbrumm	957	260	
	8/9/1946	Elizabeth Sonn, Ray Schumann, Miriam Heilbrum, sole beneficiaries and distributors of Louis Heilbrumm, dec'd		957	273	
	8/9/1946	Elizabeth Sonn, Ray Schumann, Miriam Heilbrum, sole beneficiaries and distributors of Louis Heilbrumm, dec'd	Witson Realty Group	957	277	
	2/25/1953	Treasurer of the City of New York	The City of New York	1228	214	
2641	8/22/1924	Annie Melvin	Heiman Schmail	583	525	
	9/11/1924	Heiman and Rosa Schmail	Mertenis and Katherine Keerpeel	584	402	
	5/29/1925	Annie Melvin	Heiman Schmul	598	435	
	6/8/1926	Walenty Olechnowicz	Stefan Strygelzky	621	254	
	8/16/1927	American Linoleum Manufacturing Company	Otto Woehrle	637	237	
	4/15/1927	Otto and Ida Woehrle	Wild Development Company, Inc.	639	417	
	10/4/1928	William and Cora A. Wallington	Wincenty and Helen Mandryk	670	318	
	1/26/1929	Heimen Schmul (widower)	Peter and Antonio Posniak	677	176	
	8/28/1929	Stefan and Karoline Strygelzky	Ignacy and Mary Czepkiewicz	688	375	
	3/13/1930	Frank H. Innes, Referree	George J. Cullen	697	503	
	6/3/1930	Louis J. and Lucy T. DeMeyer	Minnie Sekro	702	514	
	12/22/1933	Minnie Sekro	Thomas V. and Anna M. Berry	755	457	
	11/1/1939	Thomas V. and Anna M. Berry	Paul and Anna Kalesnia	822	122	

**Appendix B: Deed Records for Fresh Kills Park Project Area**

<b>Block #</b>	<b>Date</b>	<b>Grantor</b>	<b>Grantee</b>	<b>Liber</b>	<b>Page</b>	<b>Remarks</b>
	7/10/1945	Louis Schmul, sole devisee of Heiman Schmul, dec'd	Henry and Hazel Hellstern	904	444	
	6/19/1947	Henry and Hazel Hellstern	Herbert P. Ringel	999	56	
	6/18/1951	Mary Melnik	William R. and Riuth Melnik	1164	213	
	7/31/1952	State Tax Commission	Vincent Begmen, estate of dec'd	1204	22	
	7/31/1952	State Tax Commission	Sophie Begmen, estate of dec'd	1204	24	
	8/1/1952	Vincent, jr., John, Alexander...children of Vincent Begmen	Arthur J. and Constance B. Pickles	1204	140	
	2/25/1953	Treasurer of the City of New York	The City of New York	1228	214	
	1/14/1954	Paul Racinski	Hattie Racinski	1266	230	
	11/8/1954	Distributees of Antonia Posniak	Pasqual and Rona Commisa	1266	349	
	11/7/1955	The City of New York	Walter J. and Josephine Ringel	1333	185	
	4/13/1956	The City of New York	William and Ruth Melnik	1349	151	
	9/17/1956	Bertha Sobiesiak, Edward L. Mandrek, Charles R. Mandrek, and Jennie Rejewski	Mary Mowczar	1367	144	
	9/20/1956	Mary Mowczar	Anthony F. and Mary Mowczar	1367	384	
	9/19/1957	Katherine Kurpiel	Robert E. and Josephine M. Triconio	1402	325	
	10/4/1957	State Tax Commission	Matius Kurpiel, estate of dec'd	1404	147	
	3/25/1958	William and Ruth Melnick	Margaret Q. DiGiovanni	1418	153	
	2/24/1959	State Tax Commission	Sophie Niekrash	1449	438	
	2/24/1959	State Tax Commission	Alexander Niekrash	1449	434	
	2/27/1959	Stanley, Shester, and Joseph Niekrash and Sophie Bialowarczek	Mary, William S., anmd Frank A. Niekrash, and Jennie and Peter Kopsky	1450	101	
	4/29/1960	Margaret Q. DiGiovanni	Michael DiGiovanni	1492	375	
	12/22/1960	William and Ruth Melnick	Peachee A. Welsh	1516	12	

**Fresh Kills Park – Phase 1A Archaeological Documentary Study**

Block #	Date	Grantor	Grantee	Liber	Page	Remarks
	1/23/1962	Pegasus Realty Corporation	Alberta-Mackey, Inc., Omnia Property, Inc., Omnia Real Estate Corporation, and Wild Industrial Properties, Inc.	1557	271	
	1/23/1962	City of New York	Pegasus Realty Corporation	1557	251	
	5/31/1962	William and Ruth Melnick	Frank J. and Patricia A. Black	1570	396	
	6/7/1962	Mary J. Williams	Peter and Jenny Kopsky	1571	309	
	6/7/1962	Frank A. Niekrash	Peter and Jenny Kopsky	1571	314	
	1/6/1964	Paul Kalesnik	Pauline LoPrimo	1632	390	
	7/31/1964	State Tax Commission	Anna Kalesnik	1655	425	Release of tax lien
	1/6/1966	Pauline LoPrimo	Louis and Pauline LoPrimo	1724	102	
	1/23/1968	John, Stanley D., and Agnes Czepek, aka Czeppiewicz	Genevieve Czeppiewicz	1807	95	
	3/18/1970	John J. and Gerard H. Ringel	Terrance Sindle	1896	143	
	5/14/1970	Lottie Belitzeform, Lotties Racinski, and Florence Racinski	John Racinski	1900	489	
	6/8/1971	Walter J. Ringel, individual and surviving spouse of Josephine Ringel, dec'd	Peter Modzelewski	1945	160	
	7/2/1971	Wild Industrial Properties, Inc	Arnold Rosen	1949	169	
	3/18/1975	Terrence Sindle	Peter Modzelewski	2115	81	
	5/27/1980	Margaret Q. DiGiovanni, dec'd, by executor	Louis, John, and Ellen Quattrone	2370	31	
	11/19/1980	Louis, John, and Ellen Quattrone	Christopher and Patricia Infuse	2402	141	
7152	1/9/1981	Henderson A. and Phyllis Crawford	Energy Terminal Services Corp.	2409	480	
7152	5/6/1971	Salvatore and Maria Tarantino	Pegasus Realty Corp.	1942	59	formerly Block 7162 Lot 1, and Lot 23 in Block 5 on Map of Mason Park at Rossville, 5th ward c.1926 (#1617), deeded from 2/2/1935 Liber 767, page 240,



**Appendix B: Deed Records for Fresh Kills Park Project Area**

Block #	Date	Grantor	Grantee	Liber	Page	Remarks
7152	3/20/1971	Joseph Veith	Pegasus Realty Corp.	1812	66	deeded from 11/26/1935 Liber 773, page 481, Lots 36 & 37 on Block 5 on Map of Mason Park at Rossville, 5th ward c.1926 (#1617), formerly Block 7162, Lot 47
7152	2/25/1971	Samuel Kessler	Pegasus Realty Corp.	1934	97	deeded from 12/4/1928 Liber 674, page 460 originally Lots 33 & 34 in Block 5 on Map of Mason Park at Rossville, 5th ward c.1926 (#1617)
7152	3/20/1968	Pegasus Realty	Herbert P. Weinman (40%), Omnia Properties, Inc. (10%), Omnia Real Estate Corp. (10%), Miles Establishment Balzers (40%)	1812	64	Tenants in Common for Lot 36 & 37 in Block 5 of Mason Park at Rossville, 5th ward c.1926 (#1617), formerly Block 7162 Lot 47
7152	11/26/1935	Tess Greenfield	Joseph Veith	773	481	formerly Block 7162, lots 36 and 37 Block 5, c.1926 map
7152	2/2/1935	Tess Greenfield	Salvatore and Maria Tarantino	767	240	formerly Block 7162, lot 23 Block 5, c.1926 map
7152	11/9/1933	James Radigan	Tess Greenfield	756	225	section 5 (block?)
7152	6/15/1932	Super City Realty Corp.	James Radigan	739	59	
7152	3/7/1932	Chase National Bank of the City of New York, successor to the Equitable Trust Company of New York	Super City Realty Corp.	731	599	Release, section 5, with Blocks 7076 and 4682
7152	12/14/1931	Chase National Bank of the City of New York, successor to the Equitable Trust Company of New York	Super City Realty Corp.	730	421	Release, section 5, with Blocks 7076 and 4682
7152	7/14/1931	Chase National Bank of the City of New York, successor to the Equitable Trust Company of New York	Super City Realty Corp.	722	406	Release, section 5, with Blocks 7076 and 4682
7152	12/10/1928	Equitable Trust Company of New York	Super City Realty Corp.	675	75	Release, section 5, with Block 7073

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Block #	Date	Grantor	Grantee	Liber	Page	Remarks
7152	12/4/1928	Super City Realty Corp.	Samuel Kessler	674	460	formerly Block 7162, lots 33 and 34 Block 5, c.1926 map
7152	1/15/1927	Super City Realty Corp.	Harry Kazniewsky and Nick Ratchuk	636	193	formerly Block 7162
7152	12/7/1926	Princess Angela Scherbatow (mother of Henry? or Heyward? Cutting)	Super City Realty Corp.	631	598	formerly Block 7162
7152	12/7/1926	Heyward Cutting, executors of	Super City Realty Corp.	633	387	section 5 with Block 7073
7152	3/9/1920	Mary Cole	Virginia P. and Clarence E. Cutting	509	411	3.55 acres
7152	3/9/1920	Mary Cole	William W. Cutting	508	452	3.55 acres
7152	5/24/1915	Mary Cole	William W. Cutting, as agent	443	445	3.55 acres
7152	7/12/1911	Alfred Cutting, exec. of deed	Stephen L. Cutting	389	416	land from Isaac and Catherine Winant
7152	8/2/1911	Gertrude E.Kusch	Stephen L. Cutting	392	119	land from Isaac and Catherine Winant
7152	5/12/1909	Stephen L. Cutting	Virginia P. Cutting (wife of Stephen)	359	85	land with buildings lying in the 5th ward, 81' from Public Road leading from Pleasant Plains Station to Rossville, now Pleasant Valley Avenue or Bloomingdale Road
7152	6/27/1905	Cecelia A. Winant	Arthur Kill Land and Waterfront Company	308	373, 377	mis-indexed, not found in book
7152	6/13/1905	Cecelia A. Winant	Arthur Kill Land and Waterfront Company	307	303	mis-indexed, not found in book
7152	1/9/1905	Ann Eliza Winant	Eliza W. Wetmore	305	258	an undivided portion of land devised to Ann Winant from Susan Edgerton 4/9/1873, L.101 P.453
7152	4/9/1873	Susan Edgerton, Jesse and Sarah Ann Winant, Tammy Outwater, Eliza and James Bettse, Ann Eliza Winant, Peter Winant (dec'd), Addrietta and William Goodwine and Stephen and Janthe Muan (spelling?)	Ann Winant (wife)	101	453	about 15 acres, adjoining the south side of the public road leading from Rossville to Kreysherville

**Appendix B: Deed Records for Fresh Kills Park Project Area**

<b>Block #</b>	<b>Date</b>	<b>Grantor</b>	<b>Grantee</b>	<b>Liber</b>	<b>Page</b>	<b>Remarks</b>
2649, 2650, 2651, 2652	3/27/1867	Freeman D. Decker and Elizabeth Hancock, wife of John Hancock, executors of Richard R. Decker (deceased)	Victor Nulise	69	237	
2649, 2650, 2651, 2652	6/25/1868	Emil B. Morel	George Shepherd	76	151	
2649, 2650, 2651, 2652	1/20/1873	George Shepherd	Susan B. Leggett	100	563	consisted of about 10 acres
2649, 2650, 2651, 2652	8/3/1900	Edward W. and Margaret Leggett, Susan B. Shirley, Isabel W. White, Frederick A. and Kate S. Leggett, Susan B. Martin, Anna E. Leggett, Lester and Alice Leggett, heirs to Susan B. Leggett (deceased)	American Linoleum Manufacturing Co.	281	374	
2649, 2650, 2651, 2652	5/20/1922	American Linoleum Manufacturing Co.	Carteret Ferry Company, Inc.	550	146	Lease
2649	2/16/1927	American Linoleum Manufacturing Co.	Otto Woehrle	637	237	deed of a subdivision of land in Ward 3 shown on the Map of Melvin Park c.1913, lots 83-264
2650	4/15/1929	Otto Woehrle	Wild Development Company, Inc.	639	417	sold lots 83-200, 205-224, 233-245, 251-264 - from same map c.1913
2651	3/13/1930	Frank H. Innes, referee	George J. Cullen	697	503	foreclosure of mortgage on Otto Woehrle, Wild Development Company, Inc., Aquehonga Real Estate Corp., and John Doe, plaintiffs, for lots 83-264, recorded Liber 541, Page 479
2651, 2652	4/23/1930	Wild Development Company, Inc.	George J. Cullen	700	369	lot 189 - from same map c.1913
2520	10/27/1924	Thomas F. Clark	Staten Island Edison Corp.	590	171	



**Fresh Kills Park – Phase 1A Archaeological Documentary Study**

Block #	Date	Grantor	Grantee	Liber	Page	Remarks
2520	6/1/1922	Lamport Realty Company	Thomas Clark	550	277	located in the 4th ward, Southfield, on Map #775 c.1900, lot 127 and 128 on block 4, lots = 25'x100', deed states that all buildings must be set back 10' from the front line of the lot.
2600	8/19/1942	Philip Kurtz	Laura Schumacher	849	526	
2600	9/15/1925	Louis Heilbrunn	Philip Kurtz	551	372	2 lots - 3.3204 acres and 6.265 acres -
<p><b>Notes:</b> Early deed records did not differentiate specific lots and only include Block numbers.</p> <p><b>Sources:</b> Grantor/Grantee indices on file at the office of the Richmond County Clerk</p>						

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## Appendix C-1: Blazing Star Burial Ground Tombstone Inscriptions

<b>Partial List of Inscriptions from the Blazing Star Burial Ground, Recorded ca. 1889</b>
Here Lyes the body of Abram Parlee, Born Jany 10th 1716 & Departed This Life November the 2d 1760, Aged 44 yrs & 9 months & 23 days.
Here Lyes the body of John Parlee, Born March 27th Day 1748 And Departed This Life Jan 2d 1761, Aged 17 years, 9 months and 6 days.
Here Lyes ye Body of Abram Cole, Aged 39 years, 1 mo. Deed Sept ye 22d, 1751.
In memory of Susannah, wife of John Marshel who departed this life October 2nd, in the year 1801 and in the 80 year of her age. <i>My flesh here slumbers in the ground Till the last trumpets joyful sound Then burst the chains with sweet surprise And in my saviour's image rise</i>
Here Lyeth the Body of Jacob, son of handrick Slaght, who departed this life June the 20th, 1751, Aged 26 years.
In memory of Hitchia Simonson, who died July the 25th, in the 67 year of her Age. <i>A child and grandchildren may deplore The loss of her that is no more Her frugal hands no more provide We trust she rests at Jesus side</i>
Catherine Marshal was born October 30, 1757 & Died March 18th 1783
In memory of Bornt Parlee, who died Jan 20, 1825, in the 79 year of his age <i>Father rest in peace</i>
In memory of Susannah Seguine, who departed this life the 31st Day of May, 1804, aged 34 years, 9 months and 4 days <i>Both few &amp; ill the days of man Away do quickly pass Just us a hand breadth or a span All flesh is like the grass</i>
In memory of John Seguine, born November the 15th 1757, departed this Life the 6 of October 1812, aged 55 years, 10 Months, and 21 Days. <i>Affliction sore six weeks I bore Physicians were in vain Till God alone did hear my moans And eased me of my pain</i>
Sacred to the memory of Israel Oakley, who died Dec. 10 1824, in the 85th year of his age (Stone inscribed by "H. Osborn, Woodbridge")
In memory of Elizabeth, wife of Israel Oakley, who died Jany 1st 1819, in the 76 year of her age. <i>Affliction sore five years I bore Physicians were in vain Till God alone did hear my moans And eased me of my pain</i>
<b>Source:</b> Davis (1889)

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**Appendix C-2:**

**Morgan Family Cemetery Tombstone Inscriptions**

**Inscriptions from headstones in the Morgan Family Cemetery, Recorded ca. 1889**

Inscription	Remarks
Unknown	Two small brown stones, undated, for two children of the Morgan family
<p>In memory of Jesse Morgan, sen, who died Jan 31, 1813, aged 80 years, 1 mo &amp; 28 d's.  <i>To see a pilgrim as he dies  With glory in his view  To heaven he hath his longing eyes  And bids this world adieu  While friends are weeping all around  And loth (sic) to let him go  He shouts with his expiring breath  And leaves them all below.</i></p>	Stone of white marble, extremely worn; featured a weeping willow image
<p>Catherine, wife of Jesse Morgan, departed this life March 5, 1849, aged 87 years, 3 months and 20 days.  <i>Her end was peace.</i></p>	Stone featured a weeping willow image
<p>In memory of Elizabeth Hill, Daughter of Jesse and Catherine Morgan, who died Sept 25th 1828, aged 38 years and 9 days.  <i>Fond affection rears this humble tribute of respect to the remains of an affectionate daughter.</i></p>	
<p>Here lieth the body of Deborah Morgan, who departed this life December the 17th, 1804, aged 77 years.  <i>Press'd by the hand of sore disease  In pain I wandered on  Till God my Saviour armed with love  In mercy called me home.</i></p>	
<p>In memory of James Morgan, who departed this life February the 21, 1802, aged 36 years and 1 day.  <i>Affliction sore with patience he bore  Physicians were in vain  Till God alone did hear his moan  And eased him of his pain.</i></p>	
<p>In memory of John, son of James and Mary Morgan, who departed this life June 11th 1806, aged 14 years and 9 days.</p>	
<p>In memory of David Morgan, who died Nov 4, 1832, Æ 52 yr's &amp; 3 mo's (sic).  <i>With patient resignation in the confident hope of a blessed immortality</i></p>	
<p>In memory of Anneliza Morgan, wife of David Morgan, who departed this life in the City of New York, September 28th, 1839, Aged 24 years, 2 months, 7 days.  <i>Soft was her heart and gentle was her mind  They taught each wish at virtuous voice to move  While bounteous Heaven had in her soul combined  With duty, friendship, and with friendship love.</i></p>	



**Fresh Kills Park – Phase 1A Archaeological Documentary Study**

**Inscriptions from headstones in the Morgan Family Cemetery, Recorded ca. 1889**

Inscription	Remarks
<p>In memory of Charles Morgan, Sen, who departed this life Jan 1st, 1835, Aged 79 years, 7 months &amp; 23 days.  <i>Peace to the spot where his remains are laid            May purest bliss await his friendly shade            Nature endowed him with her noblest part            A peaceful mind, a kind &amp; feeling heart.</i></p>	
<p>In memory of Catherine, wife of Charles Morgan who departed this life Dec 13, 1834, aged 84 years &amp; 40 days  <i>The soul redeem'd forsakes the tomb            To the redeemer quickly flies            Cherubs guide her to her home            And about her welcome to the skies</i></p>	
<p>In memory of David LaForge, who deceased Nov. 21st, 1795, in the 72 year of his age.</p>	
<p>In memory of Mary, wife of David LaForge, who died May 5th 1809, in the 84 year of her age.</p>	
<p>In memory of John Morgan, son of Charles and Catherine Morgans, who departed this life August 21st, 1828. Aged 11 years &amp; 23 days  <i>Behold all you that do pass by            As you are now so once was I.            As I am now so you will be            Prepare for death and follow me.</i></p>	
<p>Sacred to the memory of Charles Morgan, Jun., son of Charles and Catherine Morgan, who departed this life on the 12th of January, 1830, aged 36 years and 8 days  <i>Who lived respected and died            Lamented a loss to his friends and Society at large.            In passing by drop not a tear            Weep not for me my parent dear            Sweet is the rest found in the Grave            Sweet the repose our Saviour gave            His just decrees let us adore            In him we meet to part no more.</i></p>	
<p>Benjamin, son of Abraham and Mazabeth LaForge. Died Sept 6th, 1830, aged 6 years, 10 mos &amp; 14 days  <i>He's on the Saviour's bosom (sic) laid            And feels no sorrow there            He's by an heavenly parent fed            And needs no more you care</i></p>	
<p>Elizabeth Morgan, wife of Abraham LaForge, died Nov 15h, 1865, in the 80 year of her age.  <i>"Blessed are the dead that die in the Lord."</i></p>	
<p>Sacred to the memory of Catherine Karr, a native of County of Antrim, Ireland who departed this life September the 10, 1865, aged 17 years</p>	<p>At a distance from the remainder of the stones, "outside the family circle"</p>
<p>In memory of Margaret Hanmer, who departed this life Mch 18, 1845, aged 21 years and 6 months.</p>	<p>At a distance from the remainder of the stones, "outside the family circle"</p>
<p><b>Notes:</b> This lists represents all headstones standing ca. 1889  <b>Sources:</b> Davis 1889</p>	

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