

REPORT ON PHASE 1A  
ARCHAEOLOGICAL DOCUMENTARY RESEARCH  
FOR THE NEW ARTHUR KILL ROAD STATION  
OF THE STATEN ISLAND RAILWAY  
LOCATED ALONG ARTHUR KILL ROAD  
IN TOTTEVILLE, STATEN ISLAND, NEW YORK  
BLOCK 8020 – LOTS 6, 80 AND 86  
NYCT Contract CM-1184 Task 146



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Conditions looking southwest from Arthur Kill Road toward the existing tracks.

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## EXECUTIVE SUMMARY

This Phase 1A archaeological documentary study for the proposed Arthur Kill Road Station of the Staten Island Railway was conducted for New York City Transit. The study includes the property planned for construction of the new station and an associated commuter parking lot in Tottenville, Staten Island, Block 8020, Lots 6, 80 and 86 (about 18 acres). Specific project impacts will be defined during the upcoming design phase.

This archaeological report is being conducted to comply with environmental review regulations and meets the standards of the New York State Office of Parks, Recreation and Historic Preservation.

The project area contains a moderate to high potential for the preservation of prehistoric archaeological resources and no archaeological potential for preservation of historic archaeological resources. Archaeological testing is recommended for all areas of the APE where below ground disturbances are planned, except for a small area near the intersection of Arthur Kill Road, Ellis Street and St. Andrews Place where a substantial amount of fill has been added to eliminate a grade crossing, unless the planned below ground impacts to that section of the APE will penetrate below the depth of fill. Specific project below ground impacts and prior utility disturbances will have to be evaluated prior to developing an archaeological testing plan.

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## INTRODUCTION

New York City Transit (NYCT) is planning to build a new station for the Staten Island Railway and an associated commuter parking lot in Tottenville, Staten Island, New York (Figures 1 and 2). The proposed Arthur Kill Road Station will replace and be located between the existing Nassau and Atlantic stations. It will include Block 8020, Lots 6, 80 and 86, a total of about 18 acres (Figure 3). For purposes of this report, these three lots will be referred to as the area of potential effect (APE). This archaeological documentary study of the project area is being conducted at the request of NYCT in order to comply with environmental review regulations.

Below ground project impacts have not yet been determined, as the design phase is not completed at this time. As a result, several assumptions were made about the project in order to conduct this study. One is that the below ground work will be confined to the three lots mentioned above. Another is that the demolition of the two existing stations will not create any new below ground disturbances and will therefore not have the potential to affect archaeological resources. Additionally, a request was made to NYCT for information about current topography and existing utilities so as to be able to determine changes in the historic topography and the extent to which the installation of utilities would have disturbed possible archaeological resources. NYCT will not have this information available until they go through the design process. Therefore, this report does not include an analysis of previous below ground disturbances from utility work. However it does offer an analysis of potential locations of disturbance based on other available data.

This report will examine the prehistory and history of the project area and evaluate its potential to contain archaeological resources. The report combines its presentation of the local history with the general history of the project vicinity in order to provide a context for events, places and people that have potential significance to the project area. This report has been prepared in accordance with the New York Archaeological Council's Standards and the archaeological report guidelines of the New York State Office of Parks Recreation and Historic Preservation. This report was prepared by Linda Stone for Shaw Environmental & Infrastructure, Inc. Robert Kristik conducted a portion of the cartographic research. The author would like to acknowledge the assistance of Joseph McLaughlin of Shaw for facilitating the project.

## PROJECT AREA TOPOGRAPHY

Evaluation of project area topography, current as well as historic, was made through analysis of current and historic topographic data and pedestrian survey. The three lots that make up the Staten Island Railway APE are not entirely contiguous. They are divided by Arthur Kill Road. Lot 6 is to the south of Arthur Kill and Lots 80 and 86 are to the north (see Figure 3). Lot 6 is about 960 feet (about 290 meters) from west to east and between about 600 and 850 feet (about 180 – 260 m.) north to south. Lots 80 and 86 combine to be about 1,400 feet (about 425 m.) west to east and from about 60 to 170 feet (about 18 – 52 m.) north to south and are generally bounded by Ellis Street to the north. Lots 80 and 86 contain the existing train tracks (see report cover). Lot 6 contains a Staten Island Railway substation, but otherwise is a vacant lot (see Photo 1). Most of the lot is wooded and overgrown. However a section measuring about 200 feet square (about 60 meters square) is groomed, and according to the caretaker raking leaves on the day of the site visit, used as a picnic and recreational area by the Barnard Caterers who run a business on Barnard Avenue, abutting the APE (see Photo 2 and the cleared area on Figure 3).

NYCT has previously prepared a topographic survey of Lots 80 and most of Lot 86. It shows elevations from about 15 to 20 feet along the southern side of the lots, abutting Arthur Kill Road, sloping down slightly to about 14 feet at Ellis Street. The tracks are at elevations from 15 feet in the west to 12 feet in the east. There is a steep slope at the intersection of Arthur Kill Road, St. Andrews Place and Lion Street within Lot 86. The elevation at the street is about 30 feet and the lot slopes down to 10 feet adjacent to the tracks, a distance of about 100 feet (a 20% slope).

There is no detailed current topographic survey for Lot 6 at this time. The most currently topographic information available for this lot is the USGS topographic survey updated in 1981. Topographic contours are given at 10-foot intervals. The southern end of the lot is from 40 to 50 feet in elevation. The northern side of Lot 6 along Arthur Kill Road is between 10 and 20 feet.

The 1910/11 Borough of Richmond Topographical Survey provides a good comparison with contour intervals of two feet (see Figure 4). In 1911, Lots 80 and 86 were at elevations about 10 to 12 feet. Lot 6 was then at elevations of about 12 feet at the north to 20 feet in the southern side of the lot. A topographic survey of the area was also done in 1901 (Richmond County Borough President's Office 1901). This survey has 20-foot contours. It depicts Lot 6 at between 20 and 40 feet in the south to zero to 20 feet in the north. Lots 80 and 86 are also shown as between zero and 20 feet. These elevations are summarized in the following table.

The changes to topography over time generally appear minimal. The most substantial change is in the area of the intersection of Arthur Kill Road, St. Andrews Place and Lion Street, Lots 80, 86 east. This is due to raising Arthur Kill Road as an overpass for the Staten Island Railway. A very slight increase in grade over time is also seen in the western part of Lots 80, 86. The changes observed in the maps related to Lot 6 are not as easy to explain. The northern part of the lot shows relatively no change in elevation during the 20<sup>th</sup> century. However, the southern part of the lot may have increased in elevation by as much as 10 to 20 feet. The historic research discussed later in this report would indicate no such major change in grade would have taken place.

ELEVATIONS (feet)	SURVEY YEAR			
LOT	1901	1911	1981	2005
80, 86 West	0-20	10-12	10	14-15
80, 86 East	0-20	10-12	10	10-30
6 North	0-20	12	10-20	N/A
6 South	20-40	20	40-50	N/A

Earlier maps, from the 1850s, depict a stream between 200 to 400 feet to the west of what is now the Staten Island Railway APE (see Figures 8 and 9). Although not seen in Figure 4, the larger 1911 Borough of Richmond Topographical Survey shows a stream and marsh about 1,000 feet to the north of the Staten Island Railway APE. These streams and wetlands are not depicted on the more recent maps, indicating they had since been filled.

## Current Conditions

A site visit was conducted on November 15, 2005. Photo 1 depicts the area of the substation taken from Arthur Kill Road facing southeast. The lot is surrounded by woods to the west and south. Photo 2 shows the area behind the Barnard Caterers facing west. The edge of a bocce ball court can be seen in the foreground on the lower left of the photo. There were several small holes in the lawn, not far from the bocce court. One of them is about 40 feet (about 12 m.) north of it, in the center of the photo. It was about 2.5 feet (about 0.8 m.) in diameter and about 1.5 feet (about 0.5 m.) deep. The soil was clean sand, possibly natural. This was the largest of four holes. The three other holes were observed to the northeast of it, at the rear of the cleared portion of the lot. It is possible they were used to anchor a soccer net. Some almost totally worn white markings were observed on the lawn, which could have been part of a soccer field. The soils in the APE vicinity are considered part of the terminal moraine, deposited by the retreating Wisconsin glacier over 20,000 years ago (Benimoff and Ohan 2003: 2).

There are a number of footpaths into/out of the lawn area, connecting it to the surrounding streets. These are not groomed paths, but rather a result of people taking shortcuts. The woods themselves contain a variety of overgrowth, mostly covered with dead leaves at the time of the site visit. In addition there were several areas where the results of dumping were observed. These were generally small mounds of debris, many covered with rotted and fallen leaves.

## PREHISTORIC PERIOD

As part of the evaluation of potential prehistoric site resources, three factors were considered: 1) project area topography, 2) proximity to fresh water and 3) known archaeological sites in the vicinity of the project area. The reasons these indicators are useful in predicting locations of unknown sites has to do with their relationship to subsistence and settlement patterns during prehistory. Ecological factors such as distance to fresh water, elevation, slope, and soils are generally used as predictors of past animal habitats. If it can be demonstrated that past environmental conditions were conducive to exploitation by game animals, birds and fish then it can be inferred that human population may have in turn exploited these resources. Furthermore, if evidence of prehistoric human activity can be found near the project area, this assertion can be strengthened. Identification of known prehistoric archaeological resources was done through review of previously conducted archaeological work including standard resources for Staten Island.

Very little archaeological data exists for the earliest prehistoric cultural periods in the New York City area, the Paleo-Indian through Middle Archaic periods prior to about 5,000 years ago. Staten Island is one locus of what little information exists. One possible explanation is that these early sites were buried under water as the sea level rose. Funk (1991) summarizes what little is known of these periods.

In the case of the Port Mobil site, located on the western shore of Staten Island near the Arthur Kill, evidence suggests that Paleo-Indians lived at the site when sea level was considerably lower than at present and the Arthur Kill was an upland creek (Kraft 1977). Similarly, Early Archaic sites on Staten Island close to the present shore lines and elevated slightly above sea level, such as Ward's Point, Hollowell, and Old Place (Ritchie and Funk 1971), would have been inland and upland locations at the time of occupation. No Paleo-Indian sites, as such, are known along the Lower Hudson north of Staten Island. (Funk 1991:51).

The amount of data on the prehistoric population of the Late Archaic increases dramatically. This large increase in archaeological evidence is one of the factors that separate the Late Archaic from the previous periods. It also indicates that adaptations must have been such as to allow for the increase in the number of recorded sites. The three well-known Late Archaic sites of Staten Island are all along its northern shore: Bowman's Brook, Old Place and Arlington Place (Ritchie 1980:146). The environment had essentially stabilized during the Late Archaic, with conditions much the same as today's.

Many prehistoric archaeological sites were occupied during multiple periods. The Old Place site contained artifacts dating from both the Archaic and Woodland periods. Ward's Point in Tottenville has been documented with materials dating from Late Archaic, Middle and Late Woodland (New York State Museum n.d.: 61).

Identification and evaluation of known prehistoric archaeological resources and their potential to affect the identification of unknown prehistoric archaeological resources relies on current information. In general, known prehistoric sites in the southern part of Staten Island are located on high ground overlooking Raritan Bay and the Arthur Kill or inland near streams. Locations of known prehistoric archaeological sites within one mile of the Staten Island Railway APE are shown on Figure 5 and in the following table (based on Pickman 1997: 19-23).

Among the first to record sites was Alanson B. Skinner who, in 1909, identified "extensive" archaeological evidence in Tottenville. This includes "shell mounds near Billopp house" and Burial Ridge (Skinner 1909: 11). Both of these sites are associated with what is now Conference House Park and Wards Point, more than a mile from the Staten Island Railway APE. These sites are on a bluff. Pickman states, "There have been no specific sites reported along the bluffs between Tottenville and the Port Mobil South site" (Pickman 1997: 20). This would encompass the area along the Arthur Kill near the project impact area. However there have been a number of archaeological findings in this proximity. These include projectile points and other prehistoric artifacts found along the beach north of Outerbridge Crossing, possible camp sites, and artifact concentrations (Pickman 1997: 19-23). There are undoubtedly additional previously identified sites that have gone unreported, as well as more recently identified



sites. However, the NYC Landmarks Preservation Commission does not list any reports for sites within a one-mile radius of the APE completed more recently than 1989 (LPC 2005). The New York State Office of Parks Recreation and Historic Preservation GIS shows the entire one-mile radius around the APE as sensitive for Prehistoric archaeological resources.

FIGURE 5 SITE NUMBER	REFERENCES	DISTANCE FROM APE feet (meters)	SITE TYPE
1	Anderson 1967	5,000 (1,524)	Artifact concentration
2	Pickman and Yamin 1978, 1984	4,700 (1,433)	Artifact concentration
3	Pickman and Yamin 1984	3,900 (1,190)	Artifact concentration
4	Anderson 1965, Grossman 1985, Kaeser 1966, Pickman and Yamin 1984, Roberts and Stehling 1987	4,300 (1,311)	Artifact concentration
5	Pickman 1988	4,400 (1,341)	Possible camp site
6	Grossman 1985, Leng and Davis 1930, New Bulliten 1961	3,100 (945)	Possible camp site
7	Roberts and Stehling 1987	4,000 (1,219)	Possible camp site
8	Pickman 1988	4,000 (1,219)	Possible camp site

## SITE HISTORY

### Seventeenth Century

Although Verrazano was the first European recorded to have spotted Staten Island, in 1524, the history of Staten Island begins in earnest in 1609, when Henry Hudson anchored at Sandy Hook in the Narrows and took two Staten Island Native Americans on his trip up the Hudson River (Bayles 1887:44-45; Historical Records Survey 1942:v). The native Staten Islanders were members of the Delaware nation. They called the Island "Eghquaons" or "Aquehonga Manacknong", meaning high sandy banks or dark bad wood (Clute 1877:8; Federal Writers' Project 1939:598; Grumet 1981:2; Kolff 1926:1; Leng and Delavan 1924:1). Hudson named it "Staaten Eylandt" after the States General of Holland. He claimed the entire area between the Delaware and Connecticut Rivers where fur was plentiful, and called it New Netherlands (Historic Records Survey 1942:xii; Kolff 1926:16).

A lack of control over the fur trade in New Netherlands led to the charter of the Dutch West India Company in 1621. This company then came into power over all matters related to the New Netherlands (Clute 1877:12-13; Leng and Delavan 1924:2). The Dutch West India Company had among its responsibilities on Staten Island, issuing land grants. The grants stipulated the simultaneous purchase of the land from the Native Americans.

The first grant of land on Staten Island was in 1630 to Michael Pauw. However, no settlement was established at the time and Pauw transferred his interest in Staten Island back to the Dutch West India Company directors in 1634 (Bayles 1887:63; Historical Records Survey 1942:xiii). A 1636 land grant to David Pietersen de Vries did result in a settlement at what is now Tompkinsville. However, this settlement was abandoned after a war with the Indians in 1642 (Kolff 1926:17-18). A large grant covering most of Staten Island, except for de Vries farm, was issued to Cornelius Melyn in 1641 (Historic Records Survey 1942:xiii). This settlement also encountered problems with the Native Americans and it was virtually destroyed. Additionally, Melyn was at odds with the Governor over Indian issues (Bayles 1887:66-69). He eventually sold his interests in Staten Island back to the Dutch West India Company in 1659, which, in turn, granted land to some French immigrants (*ibid.*: 70-71). The French first established a church in Greenridge around 1698. It was the first church on Staten Island and was located to the north of the project area on Arthur Kill Road (SIAS n.d.).

In 1664 New Netherlands was surrendered by the Dutch to the English. New Amsterdam became New York. Staten Island became part of the West Riding of Yorkshire, which also included Long Island and Westchester (Historic Records Survey 1942:xvii). The English Governor Francis Lovelace made the final purchase of Staten Island from the Indians in 1670. This purchase effectively led to the departure of almost all Native Americans from Staten Island. All of these native Staten Islanders signed this final deed in order to bind it (Kolff 1926:22).

The English governance allowed many of the same freedoms the Dutch conferred; therefore many of the Dutch and French settlers chose to remain on Staten Island (Bayles 1887:75). However, no property survey had been conducted "and the boundaries of their lands, as well as the title to them, were quite indefinite" (Leng and Davis 1930:741). Governor Lovelace began conducting land surveys in 1675, the year Staten Island became an independent judicial district. This task was completed in 1677 by his successor, Governor Andros whose surveys extended as far south as Great Kills (Clute 1877:56, Leng and Delavan 1924:6, Steinmeyer 1987:24).

The earliest recorded property owner of the project impact area was Christopher Billopp. The land now encompassing the Staten Island Railway APE was part of a 2,522-acre parcel for the entire southwestern corner of Staten Island granted in two parts. The first was in March 1676 and the second in May 1687, as depicted on Skene's 1907 map showing locations of colonial patents. However there is a 1668 reference to a Billopp land grant and a 1675 reference to "the neck of land" belonging to Captain Billopp, indicating the grant was earlier than 1676 (Tottenville Historical Society nd: 1). It is possible Billopp occupied the land prior to receiving the grant. "The Neck" is one of the older place names on Staten Island and refers to the area that is now Tottenville (Leng and Davis 1930: 330). In addition to the land, Billopp was given the "Lordship or Manor of Bentley," Bentley being the name of Billopp's ship which sailed around Staten Island in less than 24 hours securing the island for the Duke of York (Morris 1898: 28; Steinmeyer 1987:24).

In 1683, the first assembly of the colony of New York adopted a bill of rights that included the establishment of Richmond County. The county was promptly divided into four precincts. Five years later Richmond County was divided into four towns encompassing the four precincts (Historic Records Survey 1942:xix-xx; Bayles 1887:90). “Bently Manor” was also an appellation for a section of what is now Tottenville, established in 1687 (Leng and Davis 1930:351). Billopp also established a ferry to Amboy on his property in the late seventeenth century (Leng and Davis 1930:351).

By the end of the seventeenth century the population of Staten Island had grown to 727 (Steinmeyer 1987:30). The first roads began to be laid out. Captain Christopher Billopp was commissioned as “surveyor of highways” (McMillen 1946: 3). Records show there were twelve roads by 1694 (Leng and Davis 1930:721). The Skene plan also shows some of the early roads, although not within or close to the project APE. The English, as one of their first public improvements, began making dirt roads on Staten Island in 1694 (Bayles 1887:141, Leng and Delavan 1924:12). Many of these have become the major roads of today, including parts of what are now Amboy Road, Arthur Kill Road and Richmond Road. Although the dates of the origin of several old roads are questionable it is possible they follow the course of Indian trails (Bayles 1887:143). Despite this development, Staten Island maintained an agricultural economy that continued throughout the eighteenth century.

### Eighteenth Century

Initially the Richmond and Amboy Road was called the “Great Road,” “Maine Road,” or “Kings Highway” (Historic Records Survey 1942:xxvi; McMillen 1946:1, 8; Reed 1965:17, 18). When Amboy Road was initially laid, it was called the “New Road” according to 1708 records. McMillen hypothesizes this is because it was laid out after Arthur Kill Road (McMillen 1946: 8). However the earlier sections of Arthur Kill Road were to the north of the Staten Island Railway APE. In addition to the improvements in transportation, including ferries, other services were also introduced on Staten Island during the early eighteenth century.

Prior to the Revolution, manufacturing and industry on Staten Island were discouraged by the British. Livelihoods were generally based on farming, stock raising, shell fishing, saw and grist milling and shipbuilding with a few shops and craftsmen to supplement the economy (Federal Writers' Project 1939:600, Leng and Delavan 1924:14). The population of the Island had grown to almost 3000 (Steinmeyer 1987:37). The name of Totten reportedly first appeared in Staten Island church records in 1765. The family had widespread land holdings in the area by the late eighteenth century. They were of Welsh extraction and were “sea captains, shipbuilders and merchants” (Bayles 1887:583; Leng and Davis 1930: 962).

With the impending Revolutionary War, Staten Island was valued for its location, from a military point of view. The Staten Islanders of that time were generally in favor of reconciling with the British (Historic Records Survey 1942:xxi; Leng and Delavan 1924:16). These feelings were made known by five Island representatives at the First Provincial Congress. Although actions were taken by the rebels, Staten Island became a British military stronghold. By 1776 there were over 30,000 troops camped on Staten Island under the direction of General Howe. Many of the rebels fled to New Jersey for their safety (Clute 1877:85-86).

The declaration of peace did not immediately ease life on Staten Island. There was a period of time, before the large number of British troops evacuated their camps, when their relations with the Americans were strained. The last of the British troops left Staten Island, and New York, on November 25, 1783 (Bayles 1887:172, 216).

Figure 6 is a copy of the French map of British-Hessian's camps on Staten Island from 1780 and 1783. It depicts some of the early roads in proximity to the project APE: Arthur Kill and Richmond Valley Roads (north of Mill Creek), and Amboy Road. The Staten Island Railway APE was just south of Mill Creek and was either near or part of the property “C. Laforge”.

After the Revolution, the common name for what is now Tottenville was “The Neck”. The area was then occupied by a number of the Totten family (Leng and Davis 1930: 351). The community was using the name Tottenville beginning in the 1870s, in deference to Gilbert and Joseph Totten who were among those to organize Bethel Methodist Church in 1772 (Tottenville Historical Society nd: 1). By the end of the 18th century the population of Staten Island had grown to over 4,500, more than a five-fold increase over 100 years (Leng and Davis 1930: 249; Steinmeyer 1987:57).

## Nineteenth Century

The early nineteenth century was a time of increased development on Staten Island. However it was not until after the War of 1812 that Staten Island's economic base expanded. The Richmond Turnpike Company was organized in 1816 (Leng and Davis 1930: 723). Agriculture was still predominant, but "other occupations such as fisheries, shipbuilding, and manufacturing gradually developed and became important" (Historic Records Survey 1942:xxxi). According to the 1840 census of Richmond County, 31 percent of those listing professions were employed in the field of agriculture, 29 percent in trades and manufactures and 24 percent in navigation (Akerly 1843:189). These numbers show that while agriculture and navigation still played a predominant role at that time, more industrial pursuits were also well established.

By 1828, a stage line had been formed on Staten Island (Reed 1965: 18). During this period, the practice of residents conducting roadwork in lieu of paying taxes was well established. However, in 1847 a state law was passed prohibiting such practice and requiring road maintenance be funded by taxing and/or cash contributions (Reed 1965: 18). In 1845, there was still very little development in the area of what is now the Staten Island Railway APE. The U.S. Coast Survey depicts the area as mainly wooded and farmed (see Figure 7). There are no buildings or roads within the APE at that time.

By 1850 the population of Staten Island had boomed to over 15,000, increasing over 300% since the beginning of the century (Leng and Davis 1930: 249). Two wooden plank roads were created on Staten Island about 1850. Port Richmond and Fresh Kills Plank Road was part of what is now Richmond Avenue and Richmond Plank Road was part of what is now Richmond Road (McMillen 1946:8; Reed 1965:18). Road improvements continued and, in 1864 macadamization began on Staten Island when stone from the Port Richmond quarry was used for paving Richmond Avenue and the street name was changed to Stone Road (Reed 1965:20-21). In 1853, the Staten Island Railway project APE was showing some increased developments (see Figure 8). Several roads are depicted on the Butler Map, although not labeled. This includes two unimproved roads within what is now the APE. Three structures are depicted abutting the APE, however none are seen within it. One of these is to the north and is labeled "Price", the structure to the west is labeled "J. Fisher" and the one to the south is unlabeled. This building is along the unimproved road that goes through what is now Lots 6 and 86. The name Laforge is still seen on this map, to the east of the APE, along Amboy Road. The Bethel Methodist Church can be seen to the north of Laforge on Amboy Road.

It is also of interest that the 1853 Butler map refers to the area as "Tottenville" although the name of the post office wasn't officially changed until 1862 (Leng and Davis 1930:351). The boat docks were referred to as Totten's Landing and Bently on the 1853 Butler map. The charter for Tottenville was granted in 1869, the time when the name "Tottenville" became official. The village was reincorporated in 1894 (Leng and Davis 1930: 271, 329).

In addition to improvements in the roads of this time, the 1860s brought the first rail service to Staten Island, although rail service had been proposed earlier, as can be seen on the 1853 Butler Map of Staten Island (Leng and Delavan 1924:24-25, Reed 1953:3). The Staten Island Railroad (as it was then called) from Vanderbilt Landing (Clifton) opened in 1860. At the time it ran as far as Eltingville. The advertisement for the service said trains ran three times per day, twice on Sundays, to meet with the ferry from New York (Steinmeyer 1987:78). Later in 1860, the Staten Island Steam Railroad commenced with service from Clifton to Tottenville (Leng and Davis 1930: 267). A ferry between Tottenville and Perth Amboy, New Jersey was established shortly there after (Mangino 2000: 1). By 1880, the Staten Island Rapid Transit Railroad Company was organized. It was soon leased by the Staten Island Railway Ferry Company, of which there was an ownership interest by the B & O Railroad (Leigh and Matus 2002: 6; Leng and Davis 1930: 702). The train to Tottenville became part of the Rapid Transit system in 1884 (Bayles 1887:690). The introduction of trolleys in 1895 signaled trouble for the railway, leading the company to file bankruptcy. In 1899, B&O Railroad bought it at auction, including all three passenger branches (Leigh and Matus 2002: 7).

Walling's 1859 Map of Staten Island shows the tracks of the then constructed railway as going through the APE (see Figure 9). It also depicts East Broadway as part of what is now Lots 80 and 86. This is the only development within the APE that can be seen. In fact, the two unimproved roads that had been shown going through the APE on the 1853 map are no longer there by 1859. The name of "J. Fisher" is still in proximity to the APE, but now associated with the building to the south that had been unlabeled on the 1853 Butler Map. The building to the west is

associated with the name “P. Sleight” in 1859. In addition to “A. Price,” associated with the building to the north of the APE in 1859 (as it was in 1853), there is a house next door associated with a “Mrs. S. A. Totten” and one to the north of that with “Rachel Totten.” It is also of note that “W. Gage” had a building near the shore to the north of the APE in 1859.

The Civil War had little effect on the Island, as evidenced by the progress in services throughout the 1860s. Despite draft riots, Staten Island was considered a safe haven during the Civil War and southern farmers reportedly sent their women to the Island as a refuge during these years (Federal Writers' Project 1939:601). In 1862 the first gas light company on Staten Island was established (Bayles 1887:740).

The mid- to late-nineteenth century was a time when new services were being introduced on Staten Island. The Richmond County Gas Company was formed in 1856. The Staten Island Water Supply Company was incorporated in 1879 (Steinmeyer 1987:115). Telephone service began on Staten Island in 1882 (Leng and Delavan 1924:28). Shortly after, the electric power industry took hold on Staten Island (Leng and Davis 1930: 730; Steinmeyer 1987:116). A train bridge was built over the Arthur Kill to the north of the Staten Island Railway APE in 1889 (Leng and Davis 1930:715). In 1897, the New York and Staten Island Electric Company was incorporated (Lang and Davis 1930:330).

Beers' 1874 Atlas of Staten Island provides a detailed view of the project area (see Figure 10). It does not show any structures within the lots that now make up the Staten Island Railway project area. It, however, depicts what is now Lot 6 as part of the “Gage estate,” as well as a portion of “E.J. Totten's” property comprising what is now part of Lot 86.

Ephraim J. Totten was born in 1806 in Tottenville. At the age of 19, Totten began a career at sea. In the 1840s, Totten returned and purchased a homestead in Tottenville where he lived. He was an early director of the Staten Island Railroad (as it was then called). He had established himself as a merchant up until 1874. Ephraim Totten was also active in politics; he was a supervisor from 1846 to 1849 and a member of the state legislature in 1848 (Bayles 1887:583). Totten was also a recording steward and trustee of the nearby Bethel Methodist Church for 33 years, continuing his family's commitment to the church (Leng and Davis 1930: 962). The church was originally built in 1840 and was depicted on the 1853 Butler map.

Figure 11 is from the Robinson Atlas of the Borough of Richmond in 1898. It depicts the addition of a number of roads in proximity to the Staten Island Railway APE. However none of these are within the APE, with the exception of a small part of Cedar Street (now called Heckar Street) at the northeastern end of Lot 86. The table below provides the names of some of these streets, currently and in 1898. The Robinson Atlas also shows the area beginning to be subdivided by 1898. A branch of the railroad can also be seen extending to the north. This branch forks with one line each for two factories that operated in the area: the Atlantic Terra Cotta Company and the Kreusler Stone Cutting Works. The Atlantic station of the Staten Island Railway (one of the two stations to be eliminated as a result of this project) was named for the Atlantic Terra Cotta Company. The company manufactured architectural terra cotta and was in business from 1897 through the early 1930's. During its heyday, the Company was one of the largest employers on Staten Island (Mangino 2000: 2).

Within the APE on the 1898 atlas (Figure 11), the property formerly attributed to E. J. Totten within what is now Lot 86 is no longer associated with any owner in 1898. The property attributed to the Gage estate in 1874 is attributed to J.W. Wilber in 1898. John W. Wilber was listed in the 1886 directory as superintendent of the Staten Island Railway. His residence was at 7 Simpson Avenue in Clifton (Webb 1886: 288).

CURRENT STREET NAME	1898 STREET NAME
Bethel	Church
Hart	Hart
Ellis	East Broadway
Arthur Kill	East Broadway
Heckar	Cedar
Lion	Pine
Craig	Oak
N/A	Chestnut
Brehaut	Lehigh
St. Andrews	North
Nashville	Prospect
Fisher	Fisher

## Twentieth Century

At the turn of the century Staten Island's population had grown to over 67,000, more than quadrupling over the past 50 years (Steinmeyer 1987:116). The early twentieth century brought the continued increase of development on Staten Island. The municipal ferry was established at St. George in 1900 (Kolff 1926:30). The Richmond Light and Railroad Company was formed in 1902 after purchasing electric rail rights (Leng and Delavan 1924:29). In 1925, the Staten Island Rapid Transit (as it was then called) was converted from steam to electric power on the section through Tottenville (Leng and Davis 1930: 715). “The project included extensive track rehabilitation and an entirely new signal system”. The elimination of grade crossings began at that time with the last crossing eliminated in 1966 (Leigh and Matus 2002:9-10). Two of the three lines were closed in 1953, leaving only the Tottenville line in operation (see Figure 12 for the route map). The Tottenville Perth Amboy ferry stopped running in 1948 (Mangino 2000:1). In 1971 MTA took over operation of the remaining line as the Staten Island Railway (Leigh and Matus 2002:1).

By 1907, the vicinity of the Staten Island Railway project area continued to show small changes. The adjacent Hart Heights development had changed shape (see Figure 13). Oak Street (now Craig Avenue) was not extended to the southwest at that time. However, Barnard Avenue was laid out. It was called James Street to the north towards East Broadway. Barnard was one of the property owners whose land, adjacent to the APE, became Barnard Avenue. Owen Howard Barnard was born in Connecticut in 1830. In 1890, he established a silk factory in Tottenville. He died in 1898 (Leng and Davis 1930:856). Lot 6 was still attributed to “John Wilber” in 1907.

In 1917, the Standard Motor Construction Company had possession of the northern part of what is now Lot 86. By 1907, they had a business across East Broadway from there. A number of homes had been built on Barnard Street (formerly James Street), adjacent to the Staten Island Railway project area by 1917 (see Figure 14). Atlantic Station had been established within what is now the southwestern part of Lot 86 by then. “John Wilber” was still shown having ownership of Lot 6.

By 1920, the population of Staten Island had grown to over 116,000 (Leng and Delavan 1924:33). Outerbridge Crossing opened in 1928, connecting Staten Island to Perth Amboy, New Jersey at Tottenville. By 1937 the present road configuration had been established within and adjacent to the Staten Island Railway APE (see Figure 15). Staten Island Rapid Transit Railway Company (as it is shown on Figure 15) had built a substation in the northern

corner of what is now Lot 6. Staten Island Edison also built a substation at the southeast edge of the lot (also shown on Figure 15). The grade crossing at Arthur Kill Road had been eliminated and Atlantic Station had been moved to its current location to the southwest. An additional rail line is shown in what is now Lots 80 and 86 on the 1937 Insurance Map. It is possible this is the remains of the branch that went to the Atlantic Terra Cotta Works or the remains of the “shoo-fly” line, a temporary line used during the construction to eliminate the grade crossing (Leigh and Matus 2002: 14). The current aerial photograph shows the substations remaining, but only a ghost of the earlier train tracks (see Figure 3).

## ARCHAEOLOGICAL POTENTIAL AND RECOMMENDATIONS

### Archaeological Potential

Archaeological remains from the Prehistoric Period have been found at numerous sites in Tottenville and in relative proximity to the Staten Island Railway APE. Two streams and a marsh were in close proximity to the project area in the early historic periods. The bluffs along the nearby shore would have been considered good vantage points. These factors combined would indicate the possibility of encountering Prehistoric Period archaeological material in undisturbed portions of the planned below ground project impacts. Prehistoric Period archaeological potential within the APE should be considered moderate to high. Furthermore, such archaeological resources would not be expected to be deeply buried, except where fill has been added, particularly the area of the APE near the intersection of Arthur Kill Road, Ellis Street and St. Andrews Place where the Staten Island Railway grade crossing was eliminated.

There is no evidence that any historic period structures ever existed within the Staten Island Railway APE, aside from the original Atlantic Station, nor is there any evidence that the property was used in any way which would have resulted in establishing historic significance. The property is otherwise consistently depicted on historic maps as open land. There is no archaeological potential for historic period resources within the Staten Island Railway APE.

The specific below ground impacts resulting from this project have not been provided by New York City Transit and for the purposes of this report the APE for archaeology was defined as Block 8020 – Lots 6, 80, and 86. Should NYCT define a wider area during the course of development of this project, those areas added should also be considered for their archaeological potential. Once the design of the project is determined, information on below ground impacts to specific locations should be evaluated to determine where potential archaeological resources might be encountered.

### Recommendations

The property contains a moderate to high potential for containing archaeological resources from the Prehistoric Period as well as virtually no indication of historic period disturbances. The only historic below ground disturbance documented for the three lots is the construction of the tracks themselves, as well as the first Atlantic Station (shown on Figure 14, 1917). While the historic topographical information indicates there may have been a substantial increase in grade in Lot 6, no historic evidence was found that supports this. Therefore archaeological testing is recommended for all parts of the APE where below ground work is planned and no record of past disturbance exists. NYCT plans to provide data on past disturbance from utilities. Such disturbances may obviate the need for testing in parts of the APE. Once NYCT defines their APE and identifies the past utility disturbances and current excavation plans, they should prepare an archaeological testing plan. As it stands now, with the exception of the part of the APE near the intersection of Arthur Kill Road, Ellis Street and St. Andrews Place, where fill was added to eliminate the grade crossing, any area within Lots 6, 80, and 86 which has not been documented to have been disturbed, but will be from the construction of this project, should be archaeologically tested prior to construction by shovel testing. Should construction of the project in the northern part of Lot 86, which was filled to remove the grade crossing, reach below the depth of fill (about ten feet), then these parts of the APE should also be tested. Such pre-construction testing should take place far enough in advance of construction so that should significant archaeological resources be identified the recovery of archaeological data will not interfere with the construction schedule.



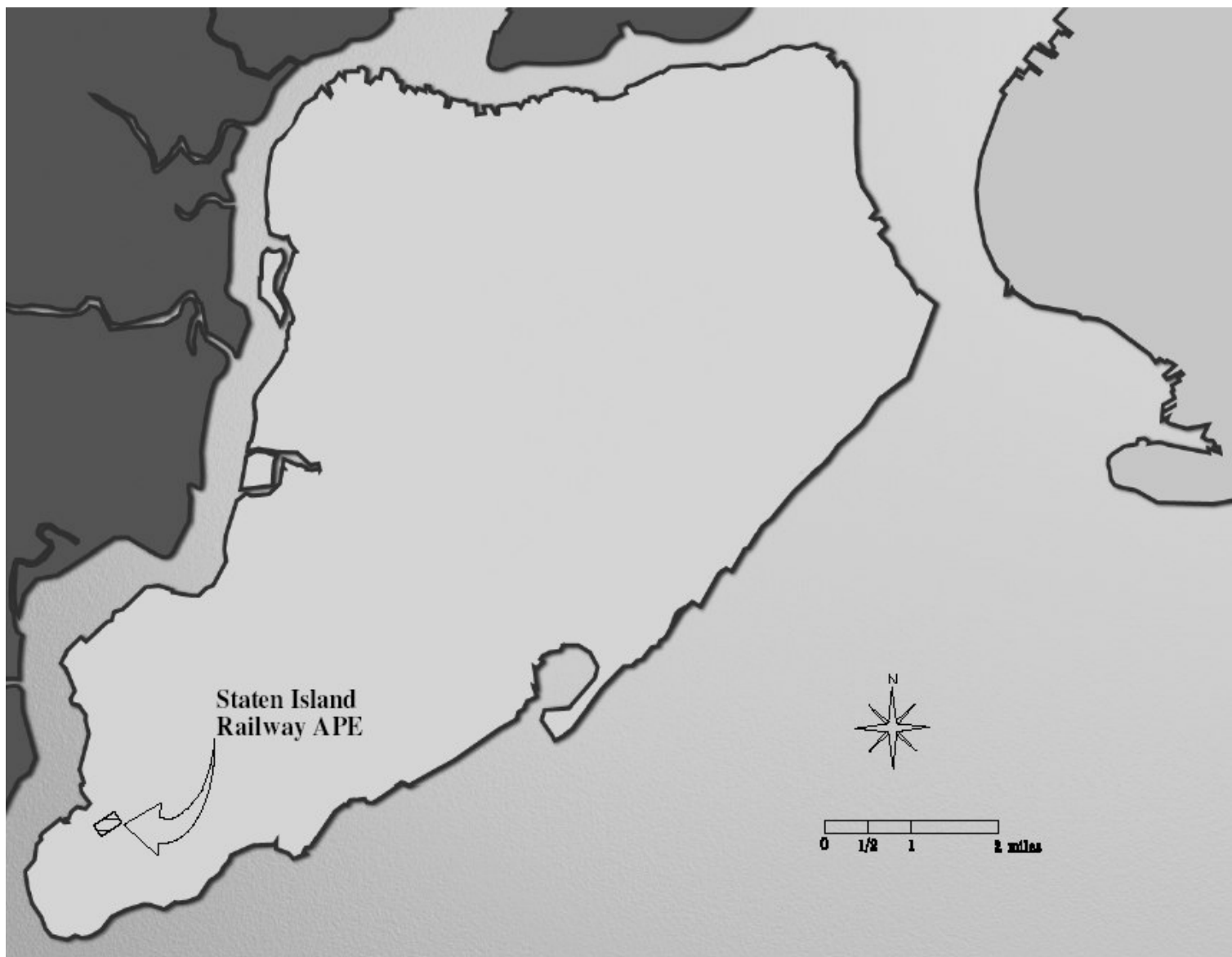


Figure 1      The general location of the new Arthur Kill Road station of the Staten Island Railway within New York City.

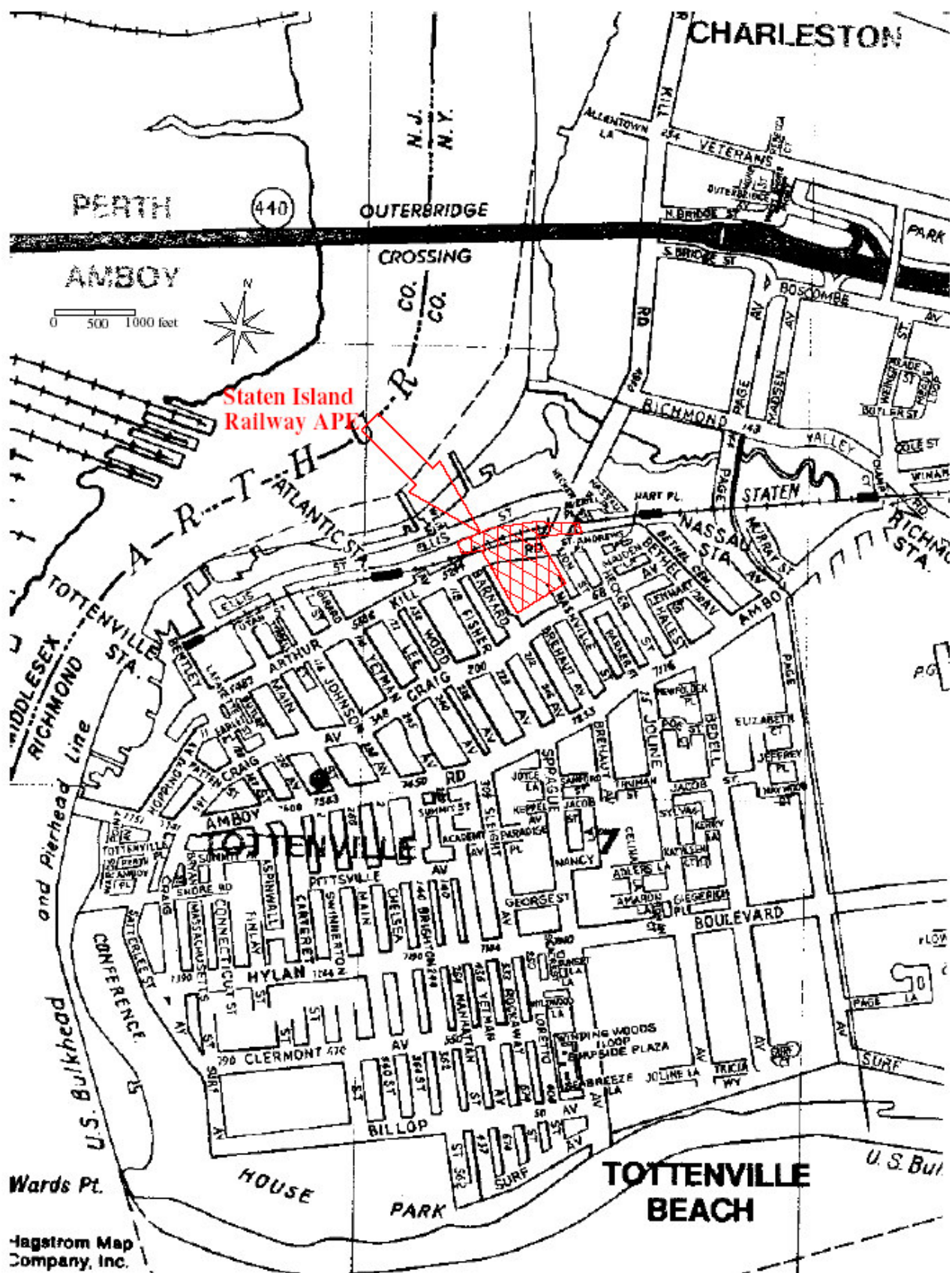


Figure 2

Hagstrom 1992 Map showing Tottenville and the location of the Staten Island Railway project area.





(c) 2002 CMAP/OASIS.



0 200 400 600 800 1000 feet

Figure 3 Aerial Photo of the Staten Island Railway project area in 2002 showing the tax lot designations.



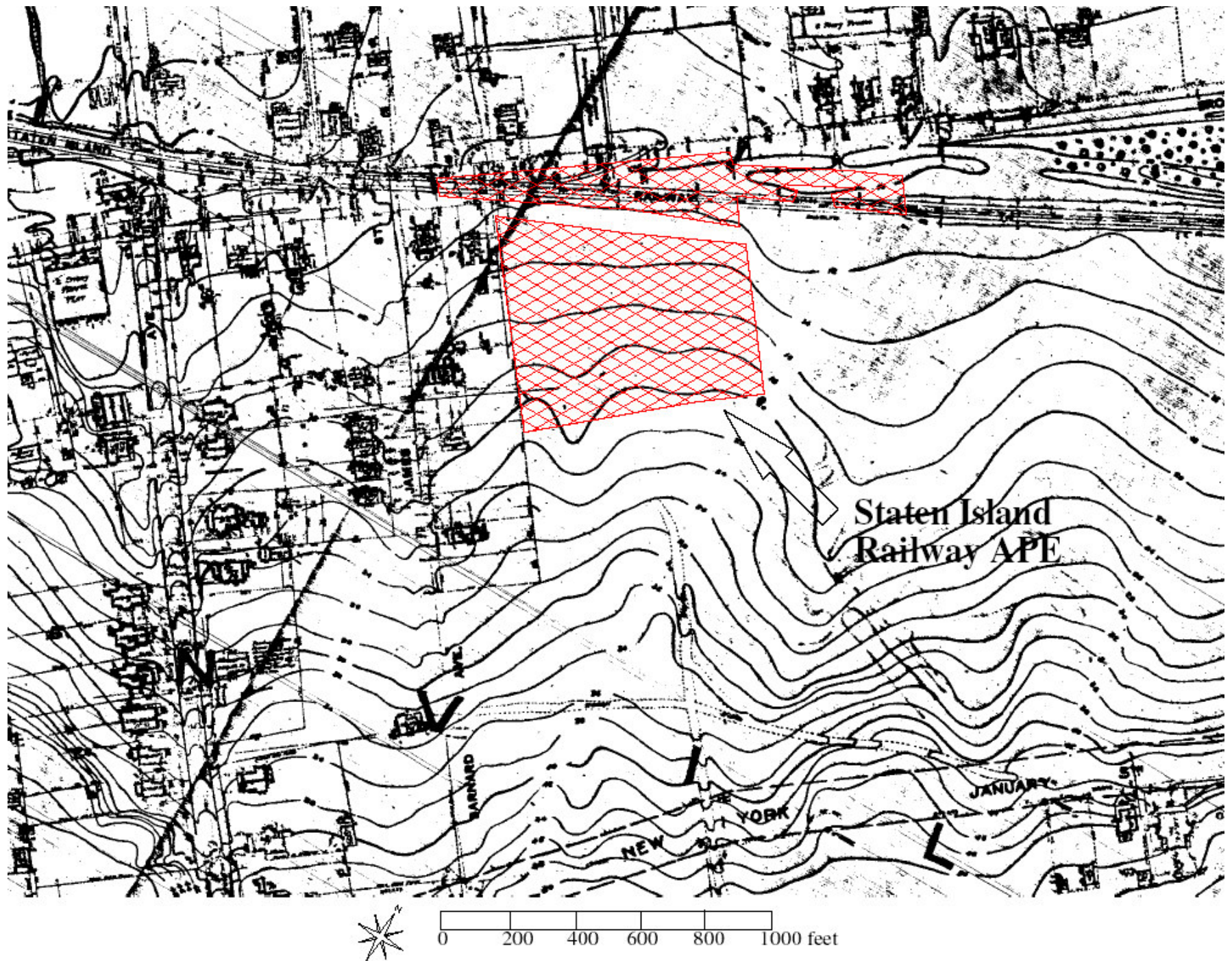


Figure 4 Borough of Richmond Topographical Survey of 1910/1911 showing the Staten Island Railway project area.



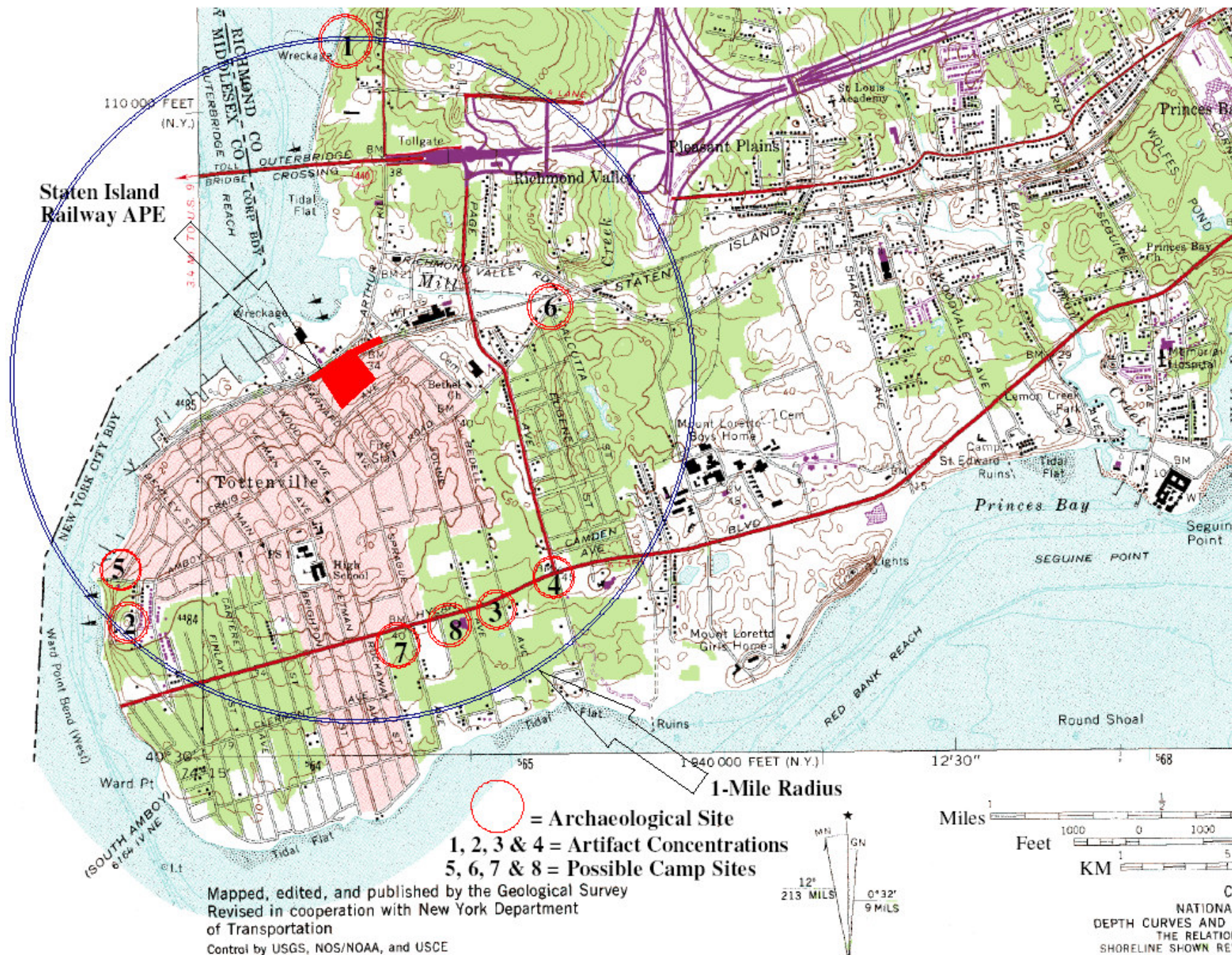


Figure 5 USGS 7.5 minute series Arthur Kill quadrangle updated to 1981 showing the location of pre-historic Native American sites in proximity of the Staten Island Railway project area.





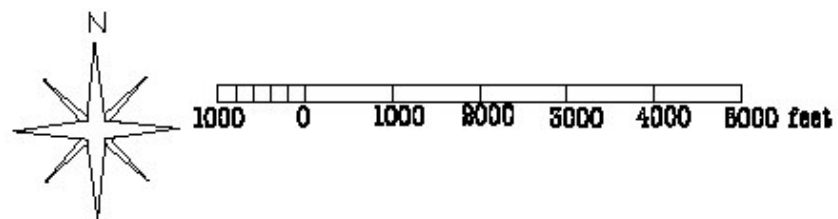
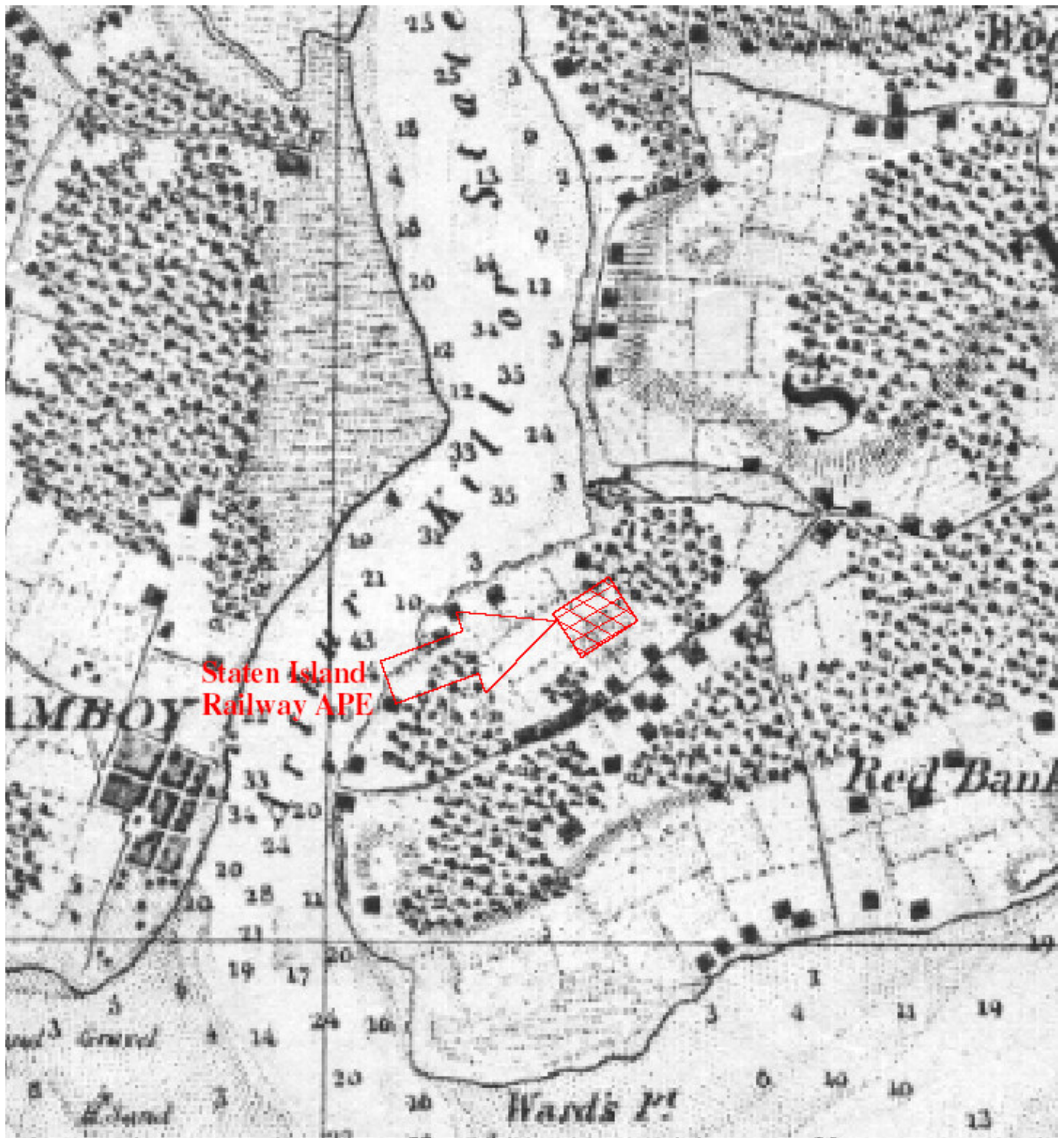


Figure 7 A section of the 1845 U.S. Coast Survey showing the location of the Staten Island Railway project area. APE.



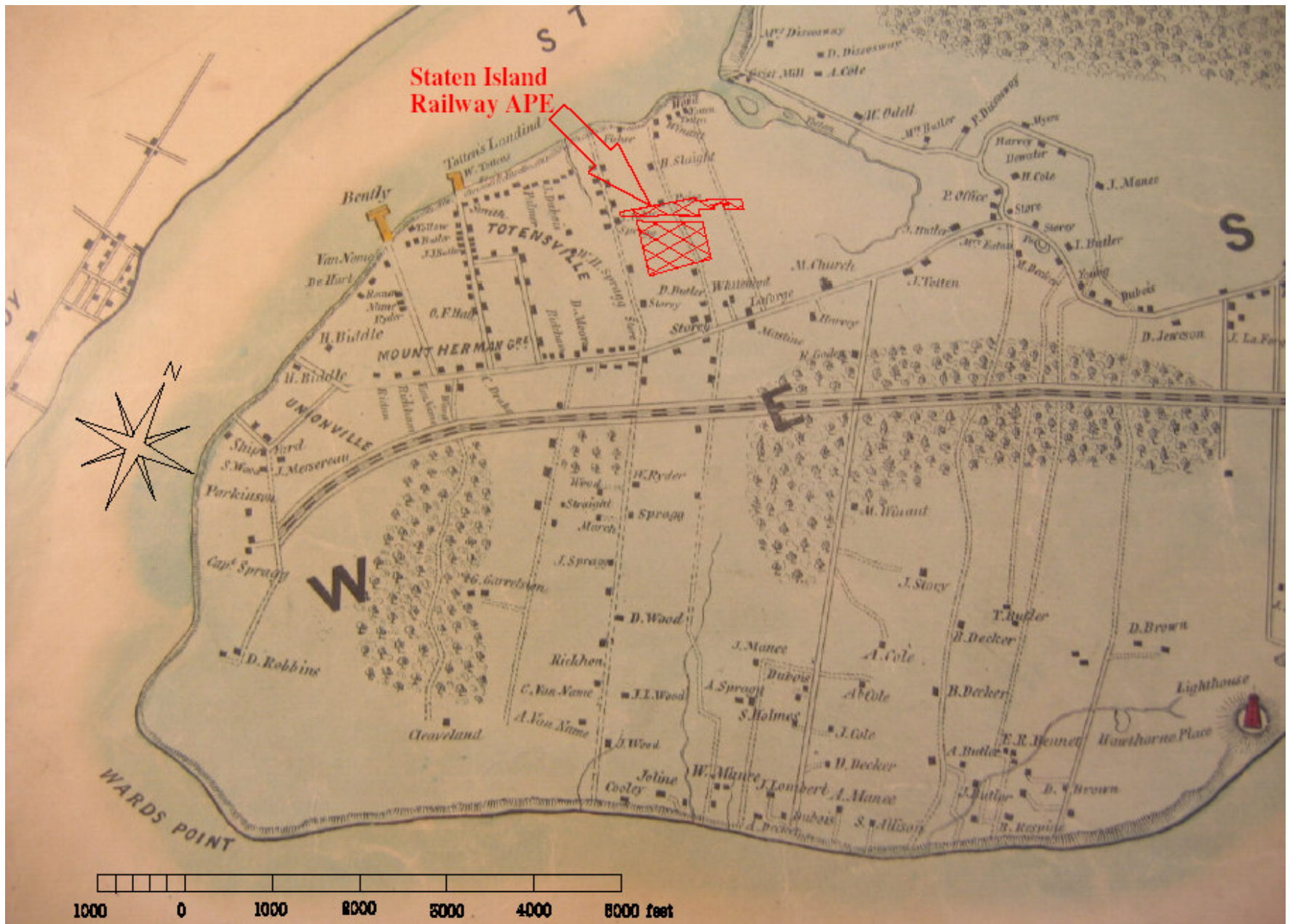


Figure 8 A section of the 1853 Butler Map of Staten Island showing the location of the Staten Island Railway project area.



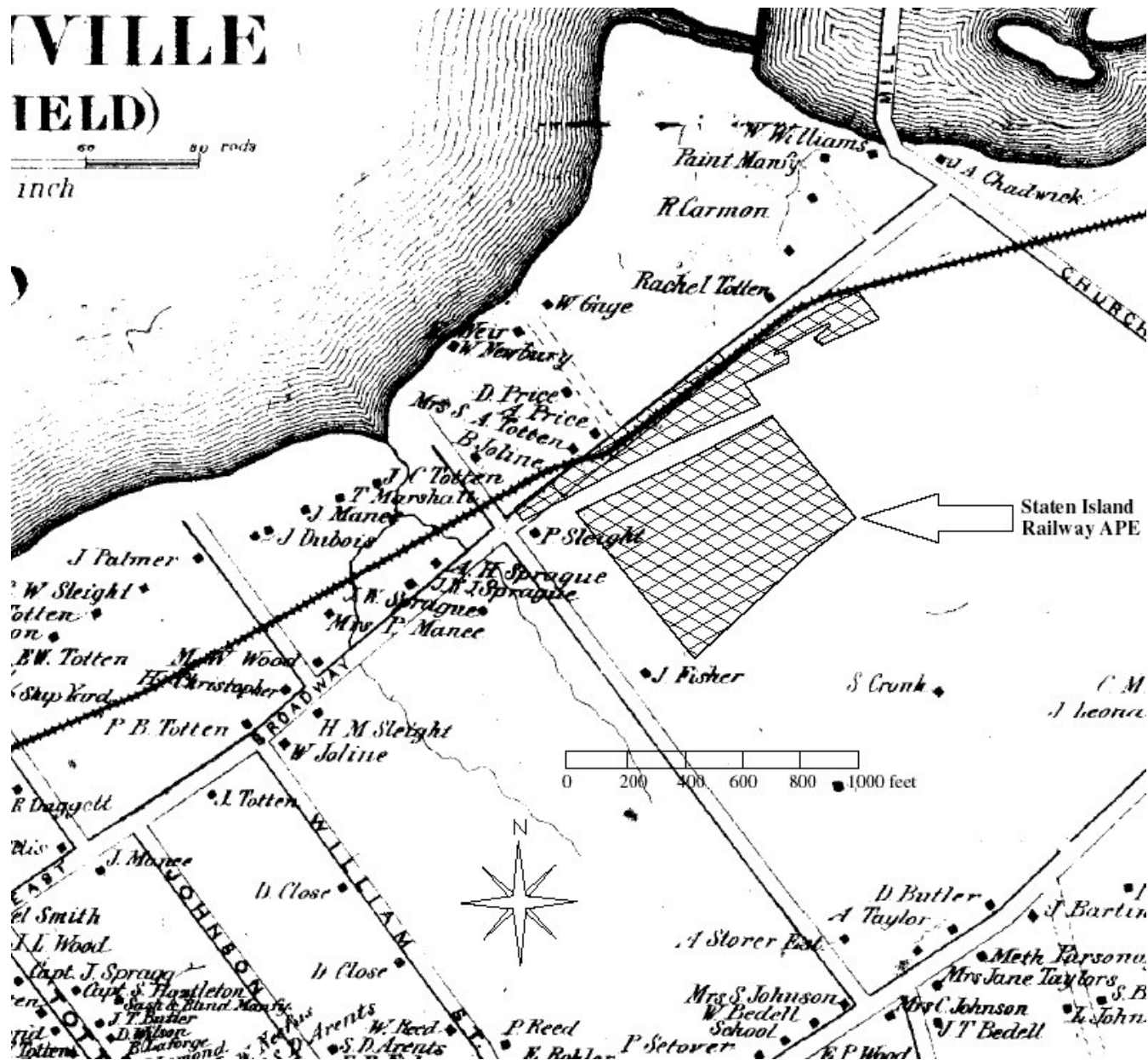


Figure 9

A section of the 1859 Walling Map of Staten Island showing the location of the Staten Island Railway project area.



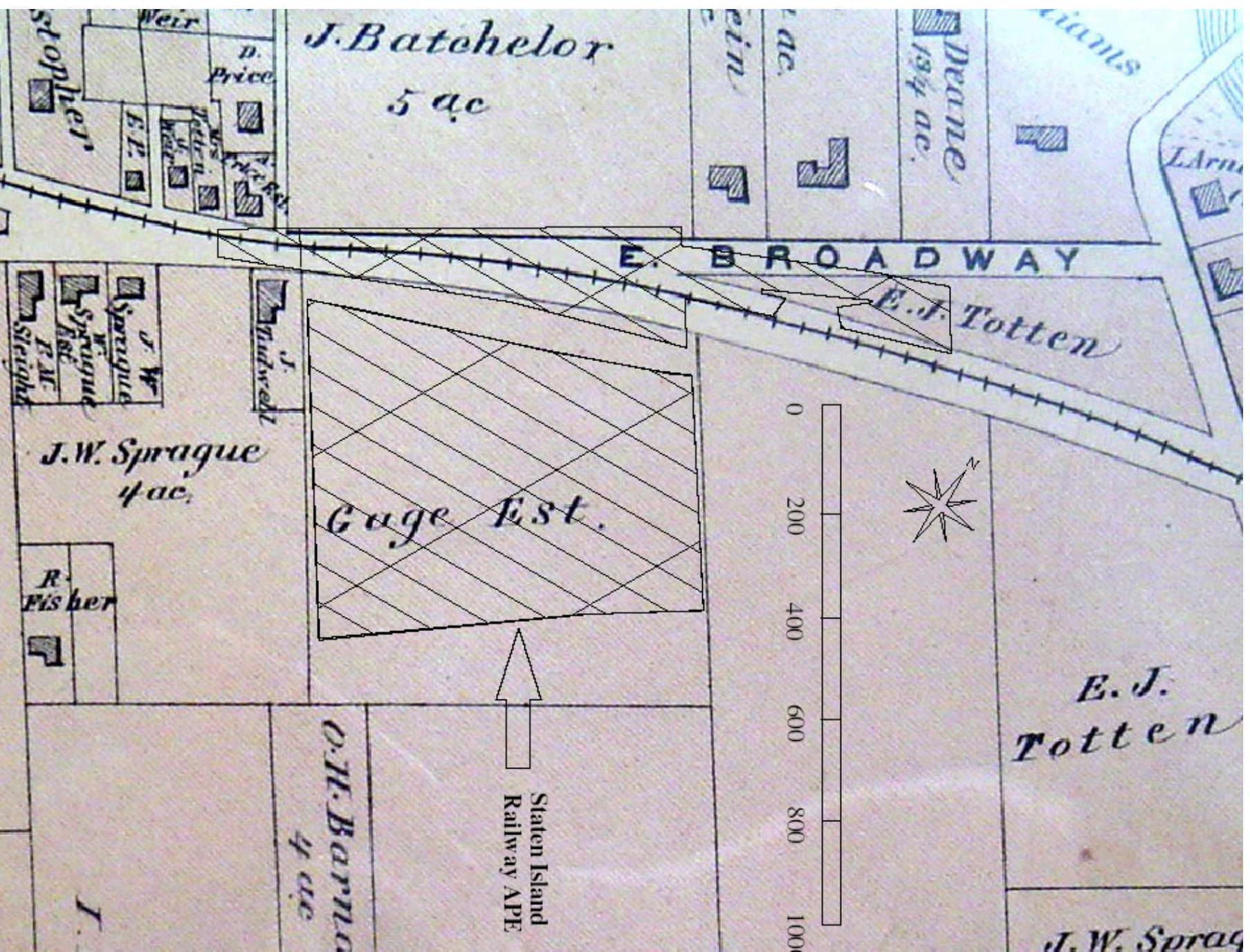


Figure 10 A section of the 1874 Beers Atlas showing the location of the Staten Island Railway project area.







# STATEN ISLAND RAPID TRANSIT

IN 1965  
PLUS PRE-1953  
NORTH SHORE AND  
SOUTH BEACH  
SERVICES

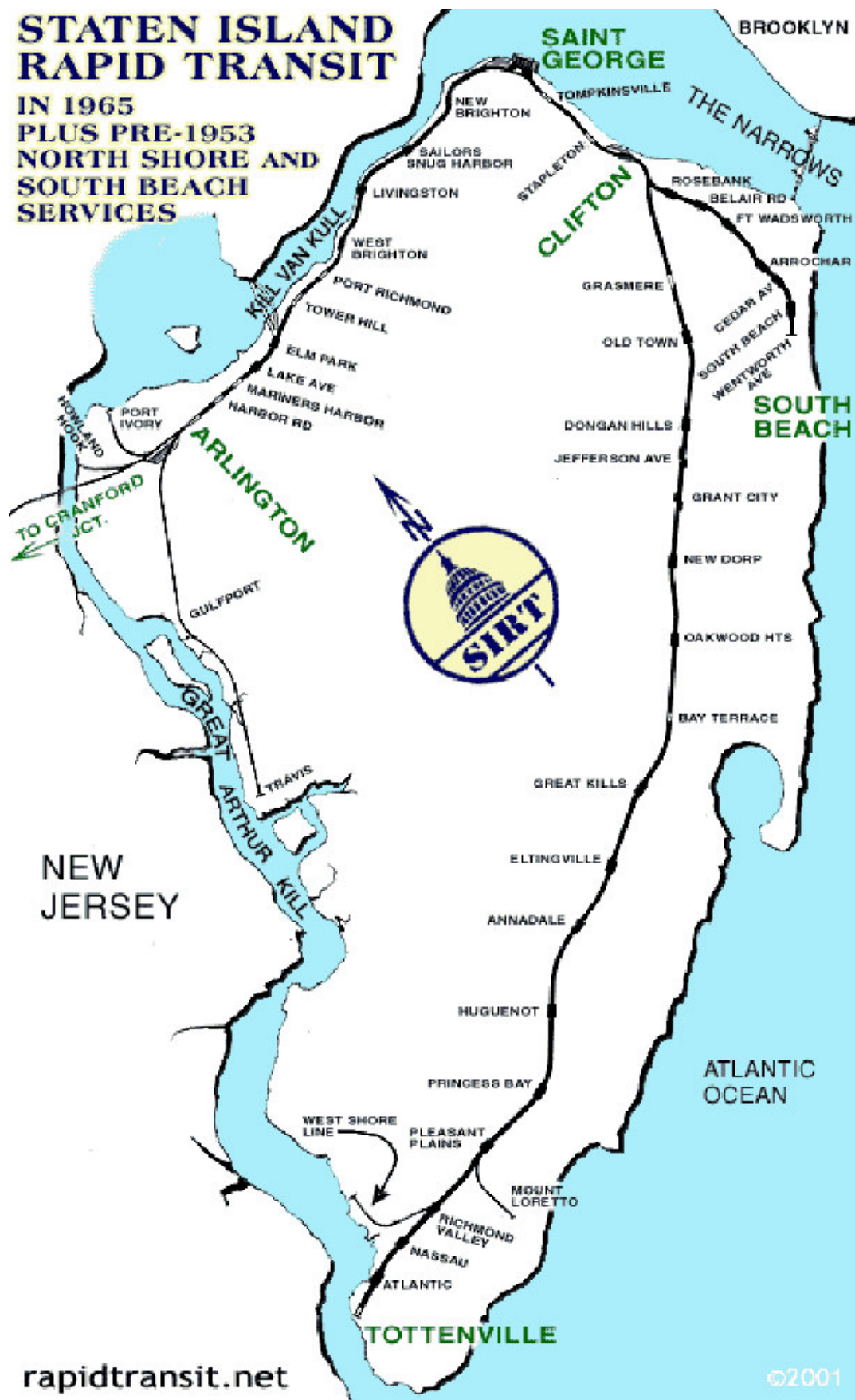


Figure 12 Staten Island Rapid Transit Route Map showing the pre-1953 lines and branches.







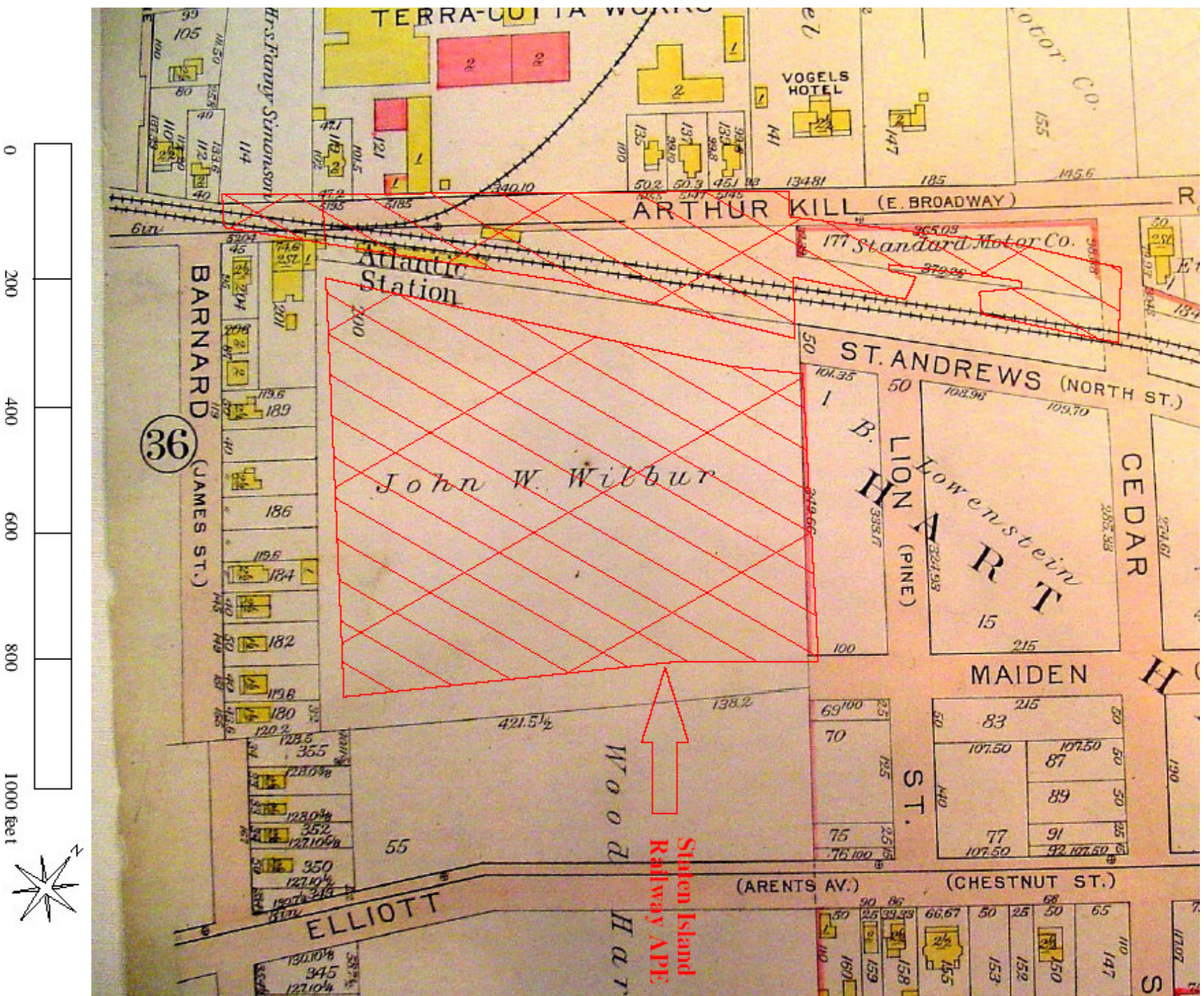


Figure 14 A section of the Bromley Atlas of the City of New York in 1917 showing the location of the Staten Island Railway project area.



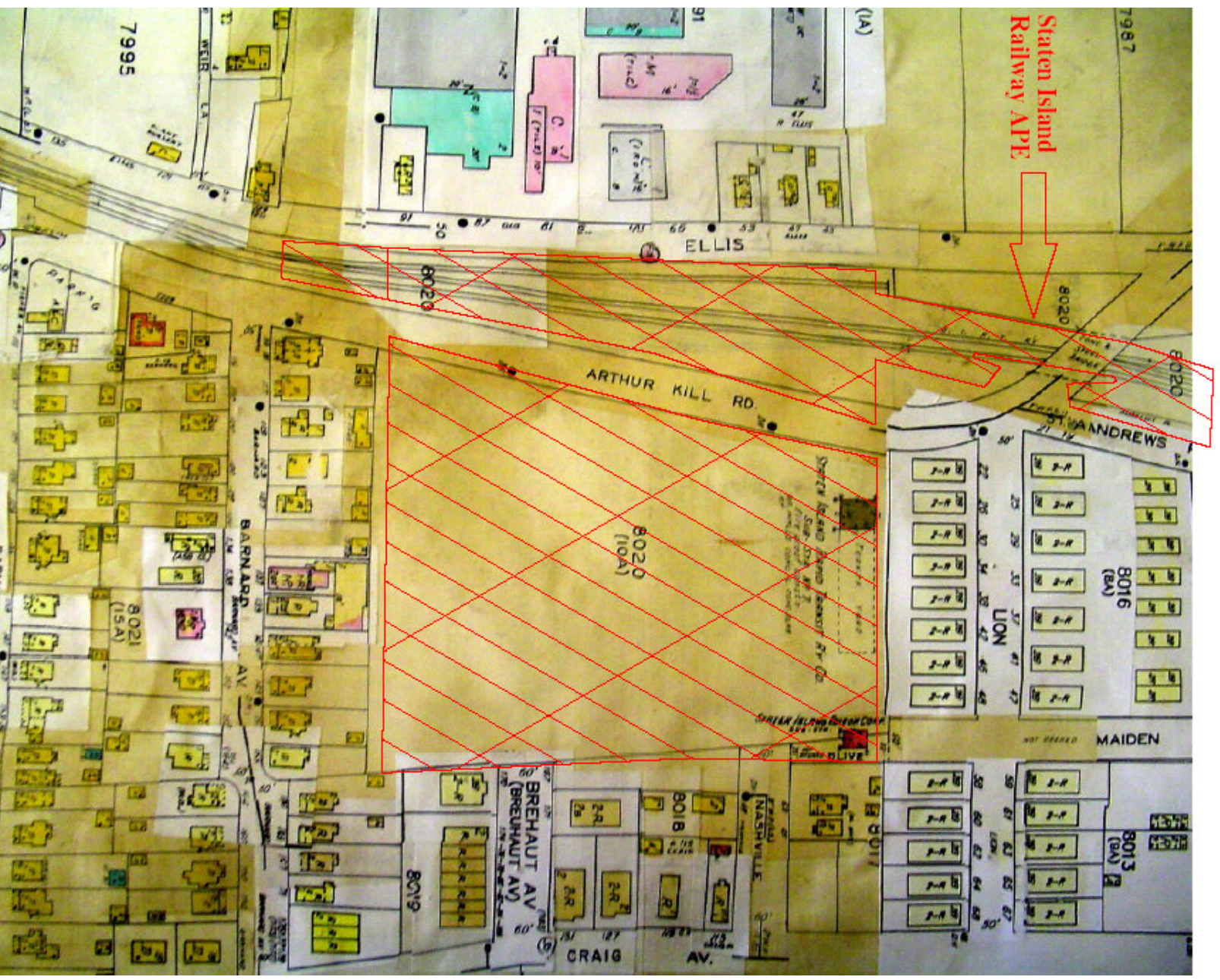
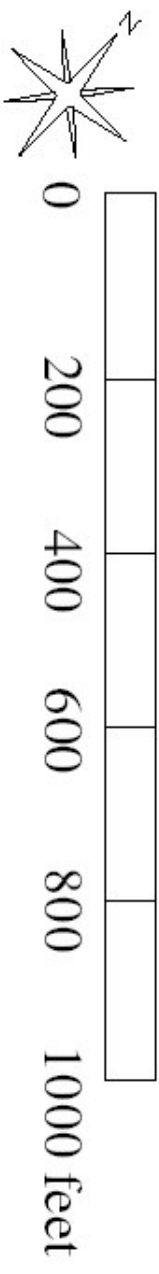


Figure 15  
From the Sanborn Insurance Map of 1937 showing the location of the Staten Island  
Railway project area.





Photo 1 View of Block 8020, Lot 6 taken from Arthur Kill Road facing southeast and showing the Staten Island Railway Substation and surrounding site conditions.



Photo 2 View of Block 8020, Lot 6 facing west and showing part of the property used by the Barnard Caterers and the wooded area of Lot 6 in the background.



## BIBLIOGRAPHY

- Akerly, Samuel  
1843      *Agriculture of Richmond County. Transactions of the New York State Agricultural Society Together with an Abstract of the Proceedings of the County Agricultural Societies for the Year 1842.* Volume II. Albany: E. Mark, Printer to the Senate
- Anonymous  
1783      *Plan du Camp Anglo-Hessois dans Staten Island (Baie de New York) de 1780-1783.*
- Bayles, Richard M. (ed.)  
1887      *History of Richmond County, New York, From its Discovery to the Present Time.* New York: L.E. Preston and Company.
- Beers, J.B. & Co.  
1874      *Atlas of Staten Island, Richmond County, New York.* Section 31.
- Benimoff, Alan I. And Anderson A. Ohan  
2003      The Geology of Staten Island. College of Staten Island.  
<http://www.library.csi.cuny.edu/dept/as/geo/sigeo.htm>
- Bromley, George W. and Walter S.  
1917      *Atlas of the Borough of Richmond, City of New York.* Volume 2. Plate 37. New York: G.W. Bromley and Co.
- Butler, James  
1853      *Map of Staten Island or Richmond County, New York*
- Clute, J.J.  
1877      *Annals of Staten Island, From its Discovery to the Present Time.* New York: Press of Charles Vogt.
- Federal Writers' Project  
1939      *The WPA Guide to New York City.* New York: Pantheon Books.
- Funk, Robert E.  
1991      Late Pleistocene and Early Holocene Human Adaptations in the Lower Hudson Valley. In *The Archaeology and Ethnohistory of the Lower Hudson Valley and Neighboring Regions: Essays in Honor of Louis A. Brennan.* Occasional Publications in Northeastern Anthropology, No. 11. Herbert C. Kraft (ed.).
- Grumet, Robert S.  
1981      *Native American Place Names in New York City.* New York: Museum of the City of New York.
- Hagstrom  
1992      *New York City 5 Borough Pocket Atlas.* New York: Hagstrom Map Company.
- Historical Records Survey  
1942      *Transcriptions of Early Town Records of New York. The Earliest Volume of Staten Island Records 1678-1813.* New York: WPA, Service Division.
- Kolff, Cornelius G.  
1926      *A Short History of Staten Island.*

- Leigh, Irvin and Paul Matus  
2002 Staten Island Rapid Transit: The Essential History. The Third Rail Online.  
<http://www.thethirdrail.net/0201/sirt1.html>
- Leng, Charles W. and William T. Davis  
1930 *Staten Island and Its People: A History 1609-1933*. 5 Volumes. New York: Lewis Historical Publishing Company.
- Leng, Charles W. and Edward C. Delavan, Jr.  
1924 *A Condensed History of Staten Island*. Issued by the Staten Island Edison Corporation.
- Mangino, Angie  
2000 Tottenville Businesses of The Past. Originally published in the Staten Island Register, September 12, 2000. <http://www.geocities.com/tottenville10307/BusinessesOfPast.html>
- Morris, Ira K.  
1898 *Morris's Memorial History of Staten Island.*, 2 Volumes. New York: Memorial Publishing Company.
- McMillen, Loring  
1946 Old roads of Staten Island. *Staten Island Historian* VII(1&2). Staten Island, New York: Staten Island Historical Society.
- New York City Landmarks Preservation Commission  
2005 Bibliography of Archaeological Reports for Staten Island. February 10, 2005.  
<http://www.nyc.gov/html/lpc/downloads/pdf/arch/sisland.pdf>
- New York State Museum  
n.d. *A Guide to the Archaeological Collections of the New York State Museum*. New York Staten Museum Circular 53. Albany: State Education Department.
- Pickman, Arnold  
1997 Archaeological And Historical Intensive Documentary Research Conference House Park, Staten Island, New York, NYC Parks/Pre-CEQR R. Submitted To Jackson & Kihn/South Street Design Company. November 1997
- Reed, Herbert B.  
1965 The Early Staten Island Roads. *The Staten Island Historian* XXVI(3), serial number 103. Staten Island, New York: Staten Island Historical Society.
- Richmond County Borough President's Office  
1901 Staten Island Topographical Bureau Map. Plate 7.
- 1911 Borough of Richmond Topographical Survey. Sheet 93. January 1911.
- Ritchie, William A.  
1980 *The Archaeology of New York State*. Rev. ed. Harrison, N.Y.: Harbor Hill.
- Ritchie, William A. and Robert E. Funk  
1973 *Aboriginal Settlement Patterns in the Northeast*. New York State Museum & Science Service Memoir 20. February 1973. Albany: University of the State of New York.

- Robinson, Elisha R.  
1898                *Atlas of the Borough of Richmond*. Ward 5, plate 23. New York: E. Robinson and Co.
- 1907                *Atlas of the Borough of Richmond*. Ward 5, plate 23. New York: E. Robinson and Co.
- Sanborn Map Company  
1937                *Insurance Maps of the Borough of Richmond, New York City, Staten Island, New York*. Volume 5. Sheet 163.
- Skene, Frederick  
1907                Map of Staten Island Richmond County New York showing Colonial Land Patents from 1668 to 1712. Prepared under the Direction of Frederick Skene State Engineer and Surveyor. C.D. Burrus draftsman.
- Skinner, Alanson Buck  
1909                Staten Island. In: The Indians of Greater New York and the Lower Hudson. *Anthropological Papers, American Museum of Natural History*, Vol. 3:3-61 and map.
- Staten Island Institute of Arts and Sciences  
n.d.                Architecture File - Building Structure Inventory Forms.
- Steinmeyer, Henry G.  
1987                *Staten Island 1524-1898*. First published 1950. New York: Staten Island Historical Society.
- Tottenville Historical Society  
n.d.                Tottenville History: An Overview. <http://www.tottenvillehistory.org/history/index.html>
- United States Coast Survey  
1845                *Map of New York Bay and Harbor and the Environs*.
- United States Department of the Interior Geological Survey  
1966                7.5 Minute Series Topographic Map Arthur Kill Quadrangle. Photorevised 1981.
- Webb, W.S.  
1886                Webb's Consolidated Directory of the North and South Shores, Staten Island.
- Walling, H.F.  
1859                *Map of Staten Island*.