

2556R
1987
LBA

oct.

CEQR 1

Copy 1 10/23/87

RECEIVED
ENVIRONMENTAL REVIEW

OCT 23 1987

LANDMARKS PRESERVATION
COMMISSION

87-114R



LOUIS BERGER & ASSOCIATES, INC.

100 Halsted Street
East Orange, New Jersey 07019

762

PHASE IA CULTURAL RESOURCE INVESTIGATION
CHATEAU DU BOIS DEVELOPMENT
STATEN ISLAND, NEW YORK

1987

Submitted to:

RICHMOND VALLEY ESTATES, INC.
Staten Island, New York

Prepared by:

THE CULTURAL RESOURCE GROUP
Louis Berger & Associates, Inc.
East Orange, New Jersey

October 1987

762

ACKNOWLEDGEMENTS

The Cultural Resource Group of Louis Berger & Associates, Inc. is indebted to the staffs of the New York City Landmarks Preservation Commission, New York State Bureau of Parks, Recreation, and Historic Preservation, and the Staten Island Institute of Arts and Sciences for their assistance in compiling the information on which the following report and recommendations are based. This document has been prepared by Amy Friedlander, Jay Cohen, Terry Klein and Ingrid Wuebber.

LIST OF FIGURES

<u>FIGURE</u>		<u>PAGE</u>
1A	Documented Prehistoric Sites Near the Project Area.....	2
1B	Project Area Block and Lots.....	3
2	Project Area and Vicinity, 1859.....	11
3	Project Area and Vicinity, 1874.....	12
4	Project Area and Vicinity, 1898.....	13
5	Project Area and Vicinity, 1907.....	15
6A	Project Area and Vicinity, 1917.....	16
6B	Project Area and Vicinity, 1917.....	17

LIST OF TABLES

<u>TABLE</u>		<u>PAGE</u>
1	Documented Prehistoric Sites North of the Project Area.....	6
2	Documented Prehistoric Sites South of the Project Area.....	7

TABLE OF CONTENTS

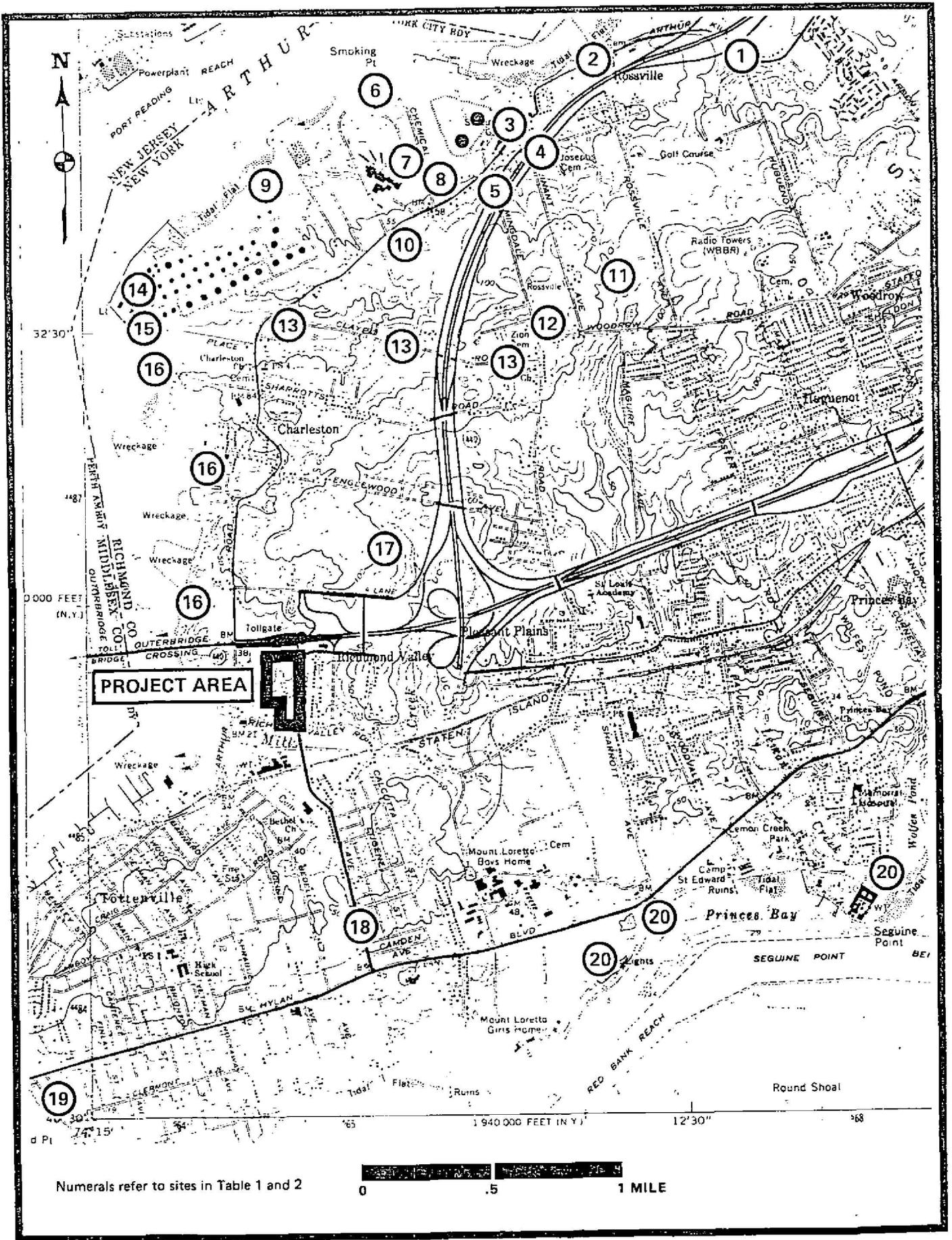
<u>CHAPTER</u>		<u>PAGE</u>
I.	INTRODUCTION.....	1
II.	ENVIRONMENTAL SETTING.....	4
III.	BACKGROUND RESEARCH RESULTS.....	5
	A. PREHISTORIC.....	5
	B. HISTORIC.....	9
IV.	PRELIMINARY FIELD INSPECTION.....	18
V.	RECOMMENDATIONS.....	19
	REFERENCES	

I. INTRODUCTION

The Cultural Resource Group of Louis Berger & Associates, Inc. (LBA) has conducted a Phase IA cultural resource assessment of the proposed Chateau Du Bois development. This development will occur within Block 7580, Lots 1, 12 and 18 facing Page Avenue, in Tottenville, Staten Island, New York.

The Phase IA study has been conducted according to guidelines established by the New York City Landmarks Preservation Commission (NYCLPC) and pursuant to City regulations governing the protection of the cultural environment (CEQRA). This assessment is a preliminary one, based on review of state and city archaeological site files, limited historical research and consideration of known disturbance to the project area. Its purpose is to demonstrate whether or not fieldwork (i.e. a Phase IB Study) is required. A Phase IB Study would determine whether the project area contains intact archaeological remains.

The project area (Figures 1A and 1B) consists of a tract, approximately 14.5 acres in size, bounded on the south by Richmond Valley Road and on the east by Page Avenue, just south of the toll plaza that marks the approach to the Outerbridge Crossing. Richmond Valley Road is approximately one tenth of a mile north of Mill Creek and runs roughly parallel to it.



Numerals refer to sites in Table 1 and 2

0 .5 1 MILE

FIGURE 1A: Documented Prehistoric Sites Near the Project Area

BASE MAP: USGS 7 1/2 Minute Series, Arthur Kill, NY, Quadrangle (1966, Photorevised 1981)

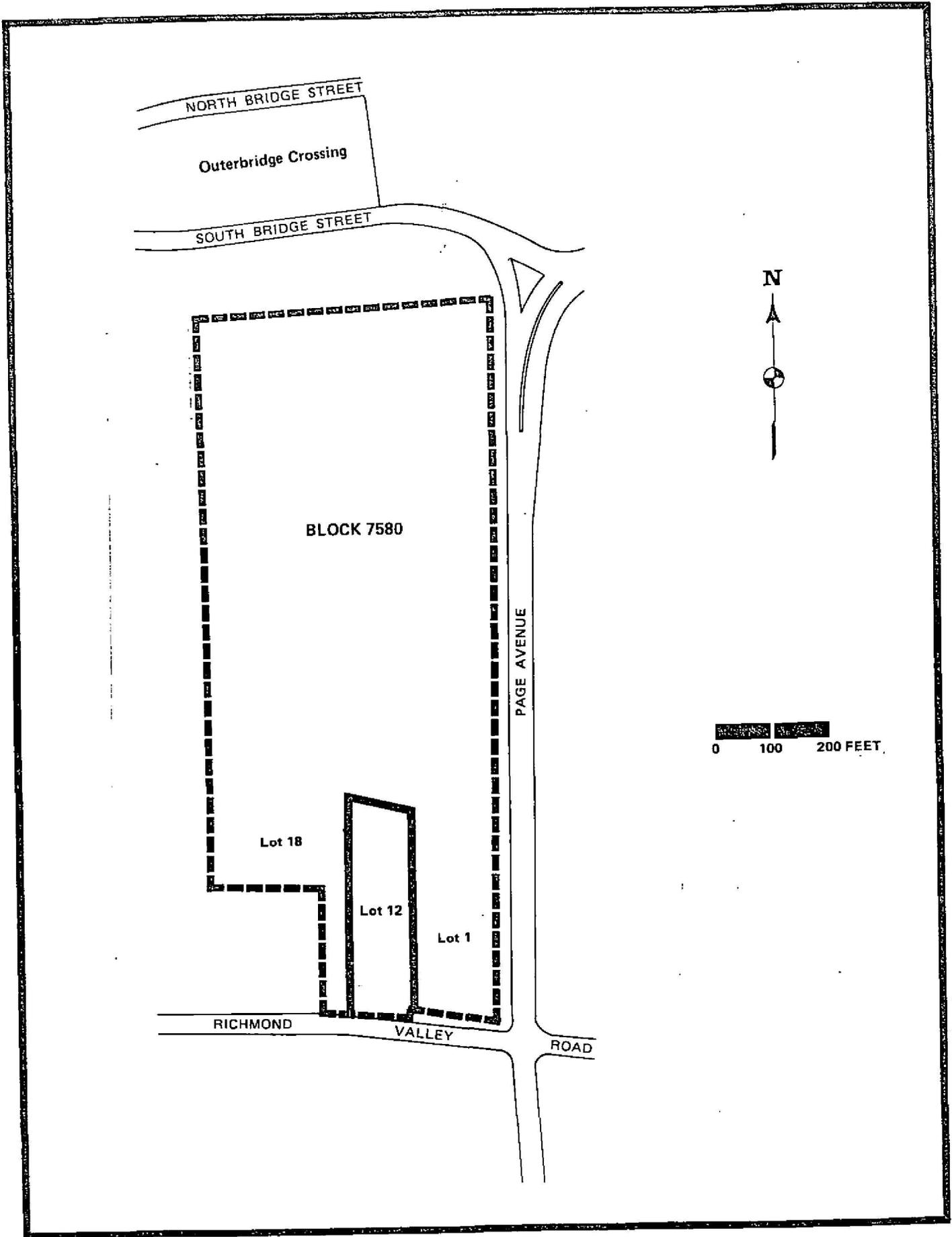


FIGURE 1B: Project Area Block and Lots

II. ENVIRONMENTAL SETTING

The project area lies within the Atlantic Coastal Lowland (Thompson 1977:34). While the core of Staten Island consists of serpentine, the bedrock within the project area probably contains redbeds and diabase of the Newark Series at a depth of 150 to 190 feet (Federal Energy Regulatory Commission 1981:54). Overlying sediments, from bottom to top, comprise preglacial clays, glacial fill, varied clays and fine sands, younger glacial fill, and loose fill with beach deposits.

The Wisconsin Glaciation's final advance covered the project area, and the glacier's terminal moraine can be observed at Harbor Hill. Glaciers in the vicinity of New York City began to retreat some 17,000 to 15,000 years ago. Glacial scarring created a variety of habitats including estuaries, salt and freshwater marshes, bogs, uplands, and midslope zones. Glacial soils contained a diversity of particle sizes allowing for good drainage and adequate water supplies for developing plant and animal communities. At this time, pro-glacial Lake Hackensack deposited a mixture of clay, silts, sands and gravels on western Staten Island. Furthermore, as the lake retreated around 13,000 years ago, a stream began to cut through the sediments and other aeolian deposits to form the Arthur Kill Valley (Silver 1984:2-5).

Humans first inhabited the New York City area about 12,000 BP when sea levels may have been 300 feet lower than present levels and the Atlantic shore had regressed approximately 60 to 90 miles from its modern position (Kraft 1977). River and stream systems then exhibited different configurations as did the plant and animal communities within these environments (Edwards and Merrill (1977)). By 5,000 BP, sea level had risen to just 30 feet below its present level. While the sea rose, the Arthur Kill was merely a narrow, intermittent freshwater stream. Despite its location in a steep valley, the stream would not have been a great obstacle for human passage east and west (Silver 1984:5).

The sea continued to rise to a point some 14 feet below present level by 2,000 BP. During this time, the Arthur Kill gradually became a brackish estuary, lined with marshes and capable of providing new possibilities for human subsistence (Silver 1984:5). Over the 12,000-year course of human occupation of western Staten Island, the immediate environment has changed from an upland and inland location of oak/pine forest and grasses into a coastal lowland zone, where marine resources could be readily obtained (Silver 1984:5).

III. BACKGROUND RESEARCH RESULTS

A. PREHISTORIC

Archaeological studies of the prehistory of western Staten Island began in the first decade of the twentieth century, when Skinner (1909:11) documented numerous prehistoric sites from Rossville to Kreischerville (now Charleston). He observed that the Rossville and Woodrow area of Staten Island was a unique zone, where sites were found both inland on sandy soils as well as along the coast. Shoreline locations had the highest frequency of sites (Skinner 1909:3).

Prehistoric sites have been recorded north and south of the project area. Seventeen sites and/or multicomponent complexes have been reported north of the project area, roughly between Richmond Valley and Rossville (Table 1; Figure 1A). Additionally, three sites and/or site complexes (Table 2) have been recorded south of the project area. The sites represent three major periods of Northeastern prehistory: Paleo-Indian (10,000-8,000 BC), Archaic (8,000-1,000 BC) and Woodland (1,000 BC - AD 1600s). Of these, only Wards Point has as yet been determined eligible for or included in the National Register of Historic Places.

Since Skinner's pioneering investigations, western Staten Island has been subject to recurring scrutiny, resulting in an extensive literature (see, e.g., Jacobson 1980:8-11). In general, localities occupied by Paleo-Indians on southwestern Staten Island were near the incipient stream, later to become the Arthur Kill. During the Archaic period, people still inhabited sites relatively close to the Arthur Kill, but additional settlement occurred further away from the streams (e.g., Wort Farm, Harik's Sandy Ground). Woodland occupation continued to be both adjacent to the Arthur Kill and at inland locations.

The largest burial site in the New York metropolitan area was found along the Arthur Kill at Burial Ridge (Jacobson 1980; Geismar 1985). Skinner (1909:91) reported that burials had also been observed by local farmers in the vicinity of Smoking Point, but no evidence of them has been found. In addition to these burials, archaeological remains included worked stone tools, flakes and debris from their manufacture, shell pockets or middens, fire pits and hearths and ceramic sherds. No village sites with permanent or semi-permanent dwellings have been excavated or "carefully recorded" (Geismar 1985:34).

The complexity of western Staten Island's prehistoric resources is amply demonstrated by the number of multicomponent sites. Smoking Point, for example, contains material relating to the Late Archaic although some Paleo-Indian artifacts may also be

TABLE 1

DOCUMENTED PREHISTORIC SITES NORTH OF THE PROJECT AREA

<u>SITE NAME</u>	<u>PERIOD</u>
1. Huguenot Site	Middle Woodland
2. Cutting Site	Paleo-Indian to Woodland
3. St. Luke's Cemetery	Prehistoric
4. Hammerstone Hill (Rossville Shell Heap)	Woodland
5. Harik's Sandy Ground	Late Archaic
6. Smoking Point	(Paleo-Indian?), Late Archaic Woodland
7. Chemical Lane	Archaic, Woodland
8. Pottery Farm Site	Archaic, Middle or late Woodland
9. Port Socony Site-North	Paleo-Indian to ?
10. Gerike Organic Farm	Archaic to Late Woodland
11. Wort Farm	Late Archaic to Late Woodland
12. Rossville Campsite	Woodland
13. Clay Pit Road Sites	Middle and Late Woodland
14. Port Socony Site-South (Port Mobil Hill)	Paleo-Indian
15. Charleston Beach	Paleo-Indian to Late Woodland
16. Kreischerville Sites	Paleo-Indian to Woodland
17. Canada Hill	Prehistoric

TABLE 2

DOCUMENTED PREHISTORIC SITES SOUTH OF THE PROJECT AREA

<u>SITE NAME</u>	<u>PERIOD</u>
18. Page Avenue Sites I & II	Middle Woodland
19. Wards Point (8 sites)	Archaic, Woodland
Billopp Ridge	
Burial Ridge	
Block bounded by Clermont Crt., Surf Ave., McDonald Crt., and Moon Ave.	
20. Princes Bay	Prehistoric
Sharrott Avenue Site	
Wolfes Pond Site	
Red Bank	

present (Pickman and Yamin 1978:II-7; Silver 1984:21-22). Diagnostic Late Archaic artifacts from the site indicate a Normanskill/Poplar Island and Blue Island occupation from 3,000 to 1,000 BC (Silver 1984). A Transitional Orient phase (1,000 to 700 BC) is also present, in the context of a shell midden. Oystering, the hunting of deer and turkey, and the gathering of nuts seemed to be the major subsistence strategies practiced at the site.

The Page Avenue Sites I and II, located less than one mile from the project area, were the first local sites to produce "Cody Knives," i.e., transverse blades usually shouldered on one side but occasionally characterized by a parallel-sided base without an inset (Anderson 1967:1). One burial, a shell heap, and several types of ceramics were recovered from these sites in addition to stone hammers and scrapers and "the usual rejectage such as cracked-stone and unworked 'chips'" (Anderson 1967:3).

Extensive archaeological materials have also been recovered from Ward's Point and Tottenville (Jacobson 1980). At least 127 pits, burials, and hearths and some 4,000 artifacts have been associated with the Wards Point complex, for example, implying relatively intensive aboriginal occupation spanning the Archaic through Woodland periods. Jacobson (1980:69), in his extensive review of this material, concludes that, collectively, these remains reflect strong ties with Delaware Valley groups, which differ from central and western New York groups. It was, however, a hub for many waterways and its occupants were apparently subject to multiple cultural influences.

In addition to the resources reported to the State of New York and described either in site forms or in professional reports, the Archaeology Section of the News Bulletin of the Staten Island Institute of Arts and Sciences (1962:93) noted that Joseph Bodnar and his sons had "worked" a shell "heap" at an unspecified location in Richmond Valley. The site had also yielded ceramics, tools and projectile points. At other locations along Page Avenue, the remains of an aboriginal child and dog were found as well as projectile points, pottery, a three-fourths grooved axe, and scrapers (Archaeology Section 1962:93, 1965:36).

Numerous prehistoric sites with significant informational potential have been identified all along western Staten Island. The reported presence of prehistoric archaeological materials in the immediate vicinity of the project area, proximity to Mill Creek as well as to the Arthur Kill, together with the relative absence of historic construction activities that would have resulted in disturbance to any extant subsurface resources, demonstrate that the prehistoric cultural resource potential for the project area is high.

B. HISTORIC

The presence of European trade goods at several Native American sites near the project area reflects the relatively early contact between Europeans and the Native American occupants of western Staten Island. Most of the aboriginal groups are believed to have left the island in the third quarter of the seventeenth century. Jacobson (1980:12-13) suggests that some Native Americans may have remained on Bentley Manor, which in 1675 comprised the modern village of Tottenville, until the early eighteenth century. Creation of Bentley Manor by 1675 indicates that there was a European presence in the vicinity of Wards Point by the third quarter of the seventeenth century. Settlement in the vicinity of Smoking Point, north of the project area, is believed to have occurred between 1670 and 1680 (Leng and Davis 1930:124).

During the eighteenth century, Staten Island developed as an agricultural and fishing area. The products of a mixed agricultural economy included beef, pork, wheat, rye and apples. Fish, oysters and clams were harvested from waters around the island and salt hay gathered from the extensive salt meadows. Prior to 1772, Cornelius Disoway's gristmill was constructed on Mill Creek, across from Perth Amboy. This is the only mill on record to serve a large portion of the western section of Staten Island; it was razed shortly after 1900. The mill was located 150 feet west of Arthur Kill Road on the northern bank of Mill Creek (McMillen 1951). This is outside of the project area. The Disoway homestead and cemetery were located near the approaches to the Outerbridge Crossing. The dwelling was destroyed in about 1920; the disposition of the family cemetery is unknown (Davis Collection, Photograph of Disoway Homestead, ca. 1920).

British forces consolidated their control of Staten Island in the summer of 1776 and retained control of it until the conclusion of the war in 1783. It was used as a staging area for British forays into New Jersey and across to Long Island and was a source, as well, for produce, wood and fodder (Cohn 1962). The ferry near the modern location of Rossville, north of the project area, was one of their embarkation points. Along Page Avenue in Tottenville, a cannon ball, two George II coins, one mid-eighteenth century Spanish silver real, and unidentified ceramics were recovered as well as prehistoric artifacts (Archaeology Section 1962:93). Both the cannon ball and the English coins suggest that the British military presence may have pervaded the island. The excavations undertaken at the Conference House suggest another side to the Revolutionary War and its impact on the civilian population. Baugher and Venables (1987:49-50) attribute the absence of items reflective of Christopher Billopp's high social status to British confiscation and American looting. Billopp, a loyalist, relocated his family during the war to a safer locale, presumably taking many of their possessions with them.

In the early decades of the nineteenth century, wealthy New Yorkers "discovered" Staten Island and with the advent of increased leisure established fashionable bathing resorts and summertime retreats. They built large summer houses along the shores and gradually began to create year-round residences, particularly in such communities as New Bright, Stapleton and Clifton. Construction of the Staten Island Railroad between Vanderbilts Landing (Clifton) and Tottenville in 1860 re-directed development away from the vicinity of Rossville, where there had been a ferry, and toward the southwestern part of the island.

Richmond Valley, at this point, was still a relatively undeveloped locale, given an identity, however, when the railroad company established a station there (Garnice 1976:86-87). Walling's map (1859; Figure 2) shows the area at this time. One residence associated with "W. Odell" appears to have been located on Richmond Valley Road, within the boundaries of the project area. Richmond Valley Road dates, however, to the eighteenth century, when it was a part of Arthur Kill Road (McMillen 1951). Given the regional historic settlement pattern in which residences tended to cluster near roads, it is possible that the occupation associated with Odell in 1859 was, in fact, substantially older (Louis Berger & Associates, Inc. 1986a).

Agriculture and oystering supported the local economy in the post-Civil War period, although there was increasing evidence of industrialization in the form of isolated manufacturing plants (Weingartner 1967). Balthazar Kreischer's brick works in Kreischerville (Charleston), begun in 1845, continued to expand to include a chemical works and ultramarine-blue factory, reaching a peak in the late nineteenth century (Bayles 1887). The works closed in 1927, but the company town that had been established survived.

As industrial development proceeded in New Jersey in the vicinity of Elizabeth and Newark, the oyster beds became contaminated. The pollution was initially observed in the 1880s but the New York Department of Health did not condemn the Staten Island oyster beds until 1916 (Board of Education 1964:181). In 1938, the Outerbridge Crossing and Goethels Bridges were opened, and rezoning permitted construction of liquid natural gas tanks, petroleum storage facilities, a marine junkyard and a sanitary landfill along the Arthur Kill (Geismar 1985:38).

The project area and vicinity witnessed development of increasing intensity, roughly parallel to the history of western Staten Island. Between 1859 and 1874, the project area and vicinity was subdivided into residential rural properties of between 10 and 25 acres (Figure 3). Development outside the project area at the intersection of Arthur Kill Road and Richmond Valley Road intensified between 1874 and the turn of the century (Figure 4), possibly due to the establishment of a silk mill between Richmond Valley Road and Mill Creek Pond. Areas peripheral to the

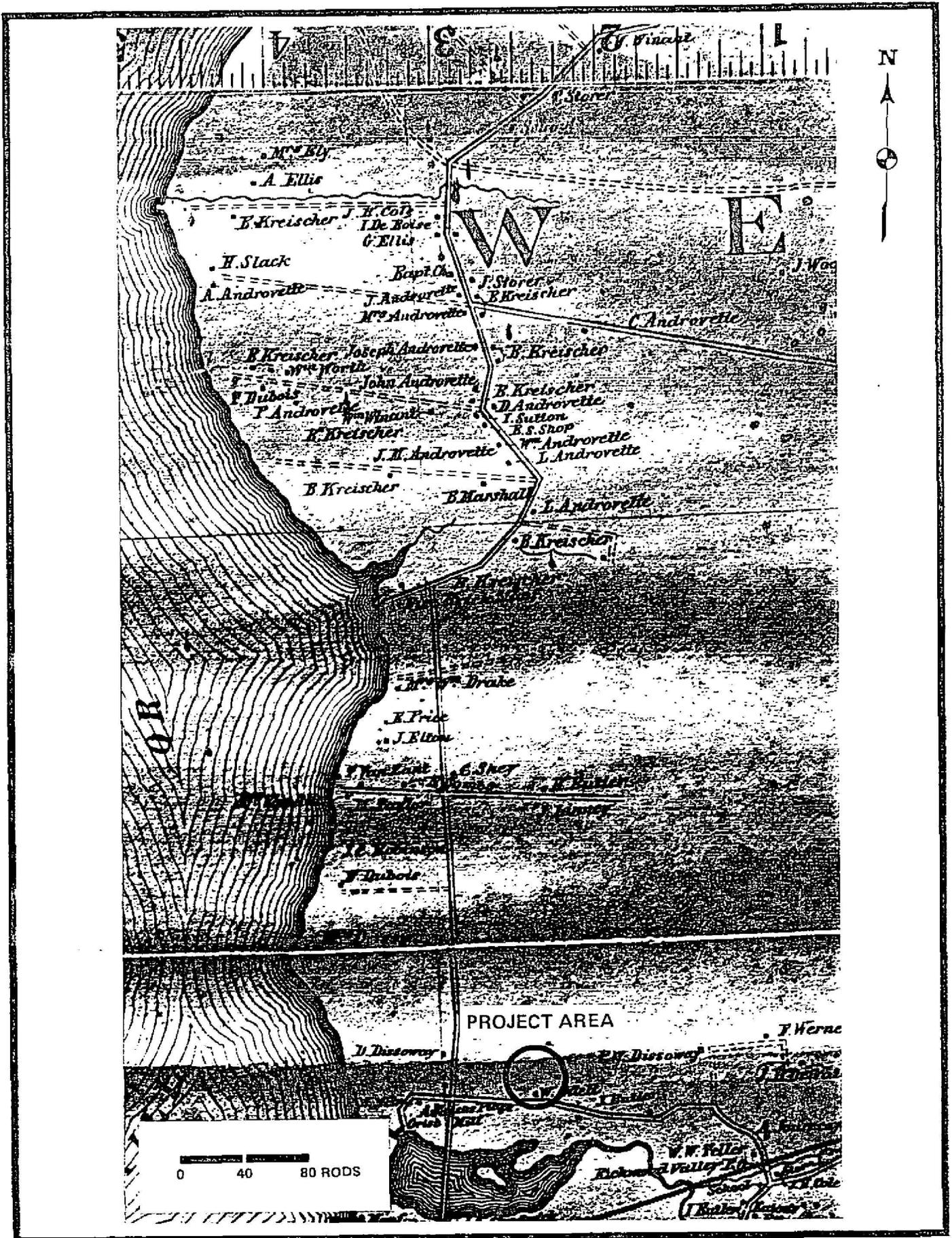


FIGURE 2: Project Area and Vicinity, 1859

SOURCE: Walling, 1859

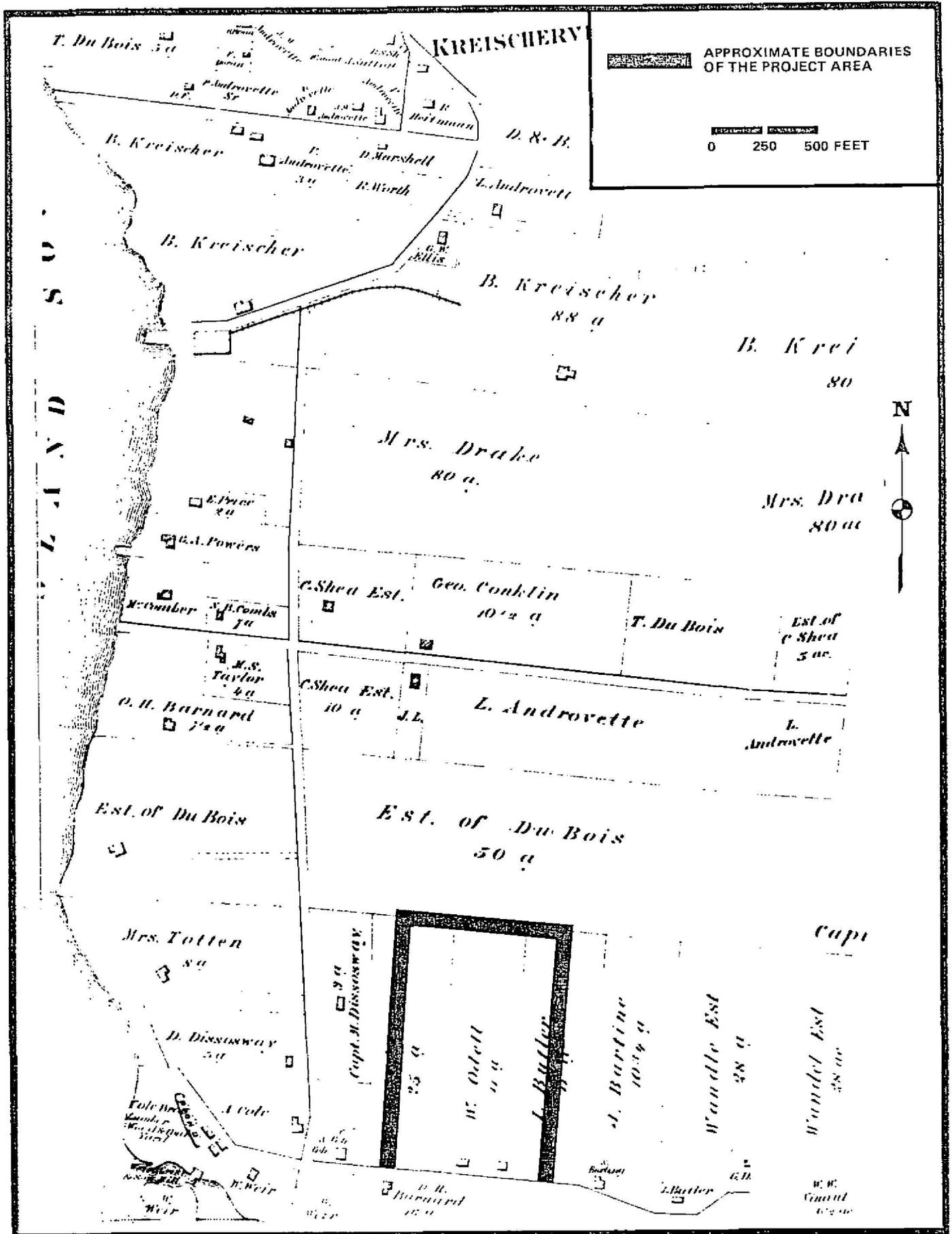


FIGURE 3: Project Area and Vicinity, 1874

SOURCE: Beers, 1874

historic lots comprising the study area were partitioned into smaller lots between 1907 and 1917 (Figures 5, 6A, and 6B), in the expectation, perhaps, of expanding industry and/or urbanization. In the 1920s, new streets and sidewalks were laid out in Tottenville and adjacent areas along Page Avenue in the hope that completion of the Outerbridge Crossing would stimulate development (Wilk 1978). This, however, did not materialize, although Page Avenue was extended to become the principal feeder from southwestern Staten Island to the bridge.

Because the project area was not intensively developed in the late nineteenth and early twentieth centuries, it is probable that the subsurface historic cultural resources, indicated by the historic maps, are present. At least one of the house lots indicated on the late nineteenth century plats contains the earlier occupation indicated on the Walling (1859) map. LBA has identified significant historic archaeological resources in similar contexts on Staten Island at the Fountain-Mouquin Site (Louis Berger & Associates, Inc. 1985).

The significance of mid-nineteenth-century rural historic sites continues to vex cultural resource planners. However, recent research has demonstrated that if residential deposits from these sites can be assigned to known historic households, then their informational potential is very significant (cf. Louis Berger & Associates, Inc. 1986b and Spencer-Wood 1987). It is quite likely that additional historical research could identify households to which surviving archaeological materials could be linked. Thus, the potential for significant historic archaeological resources is considered high.

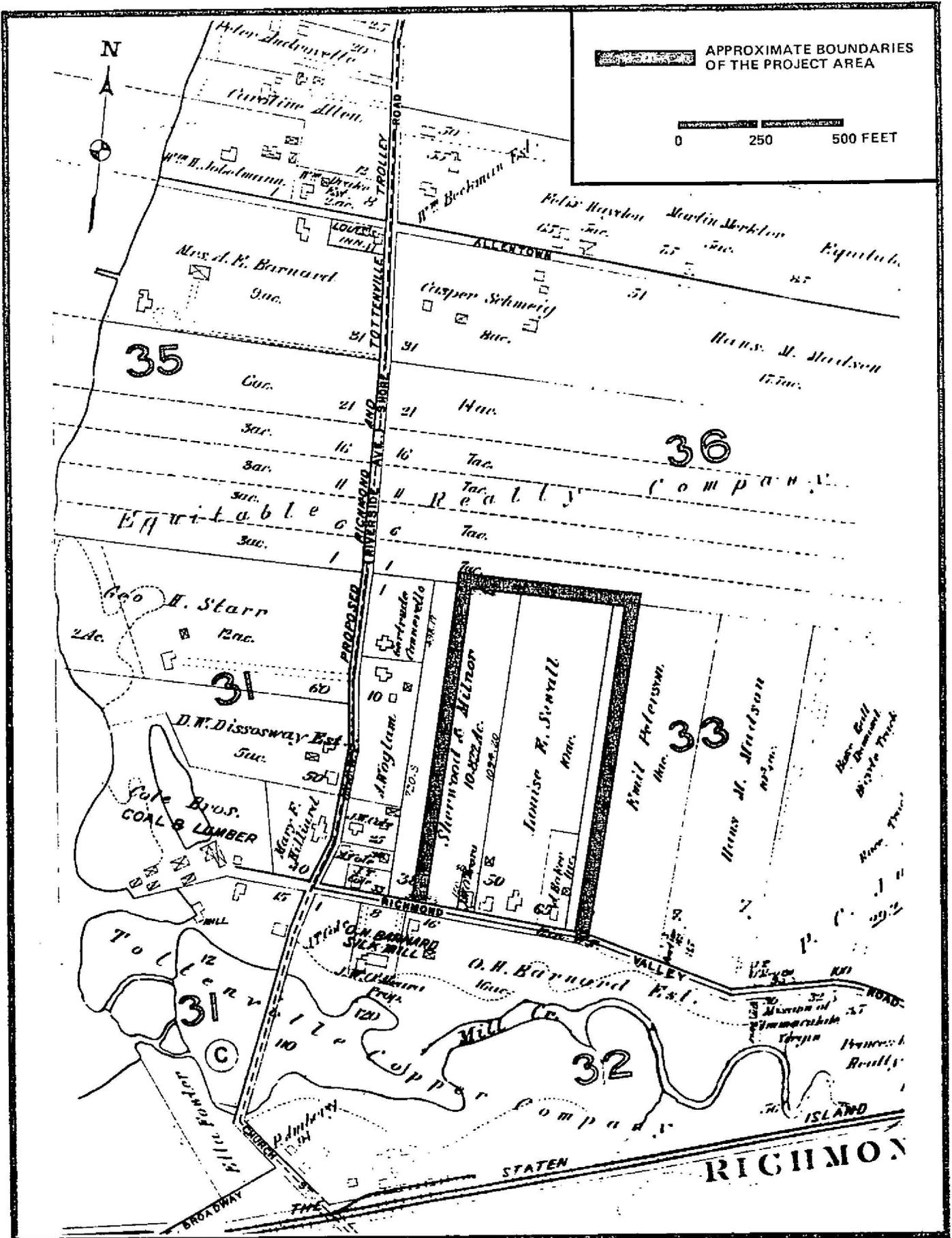


FIGURE 5: Project Area and Vicinity, 1907

SOURCE: Robinson and Pidgeon, 1907

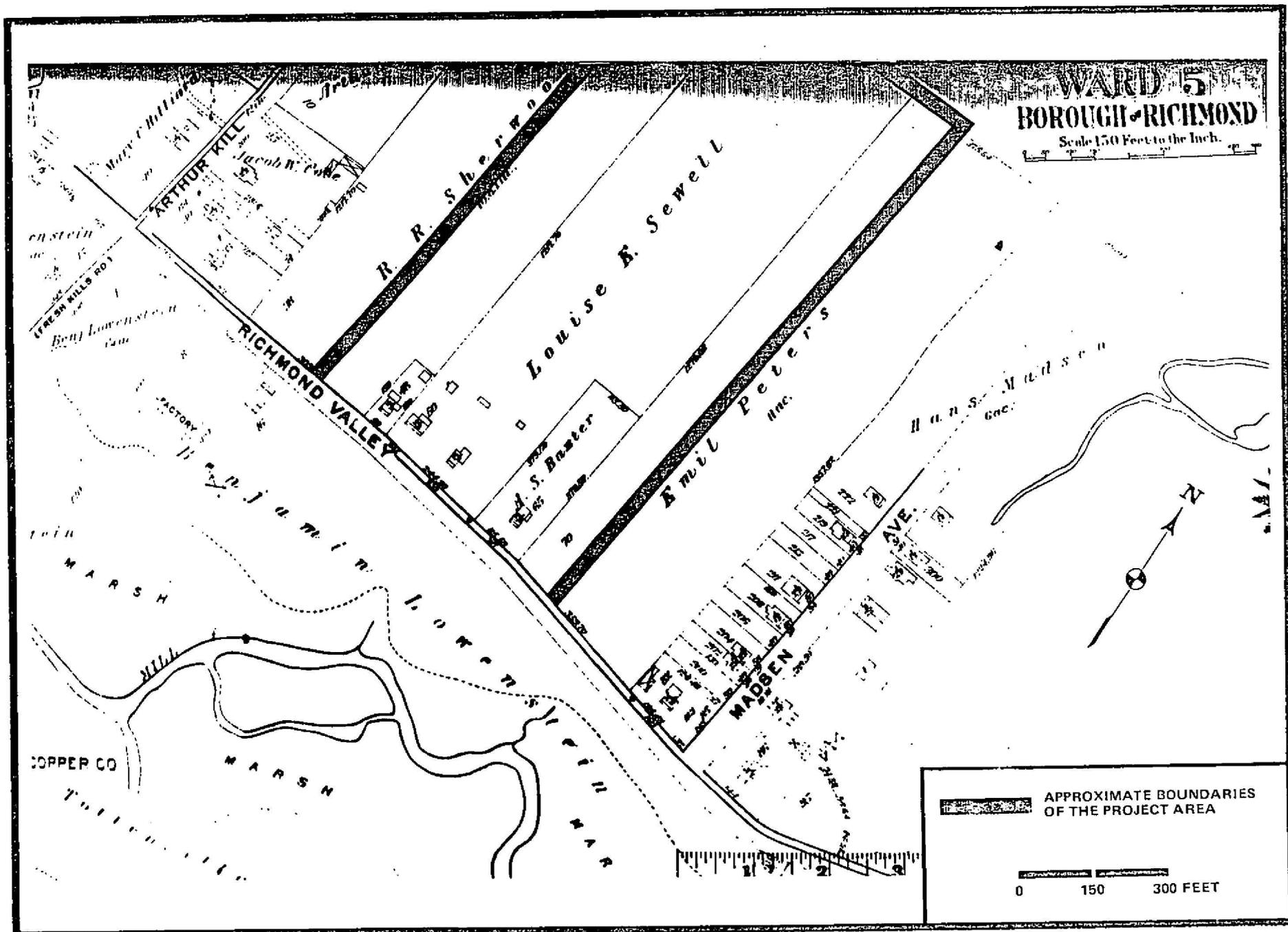


FIGURE 6A: Project Area and Vicinity, 1917

SOURCE: Bromley, 1917

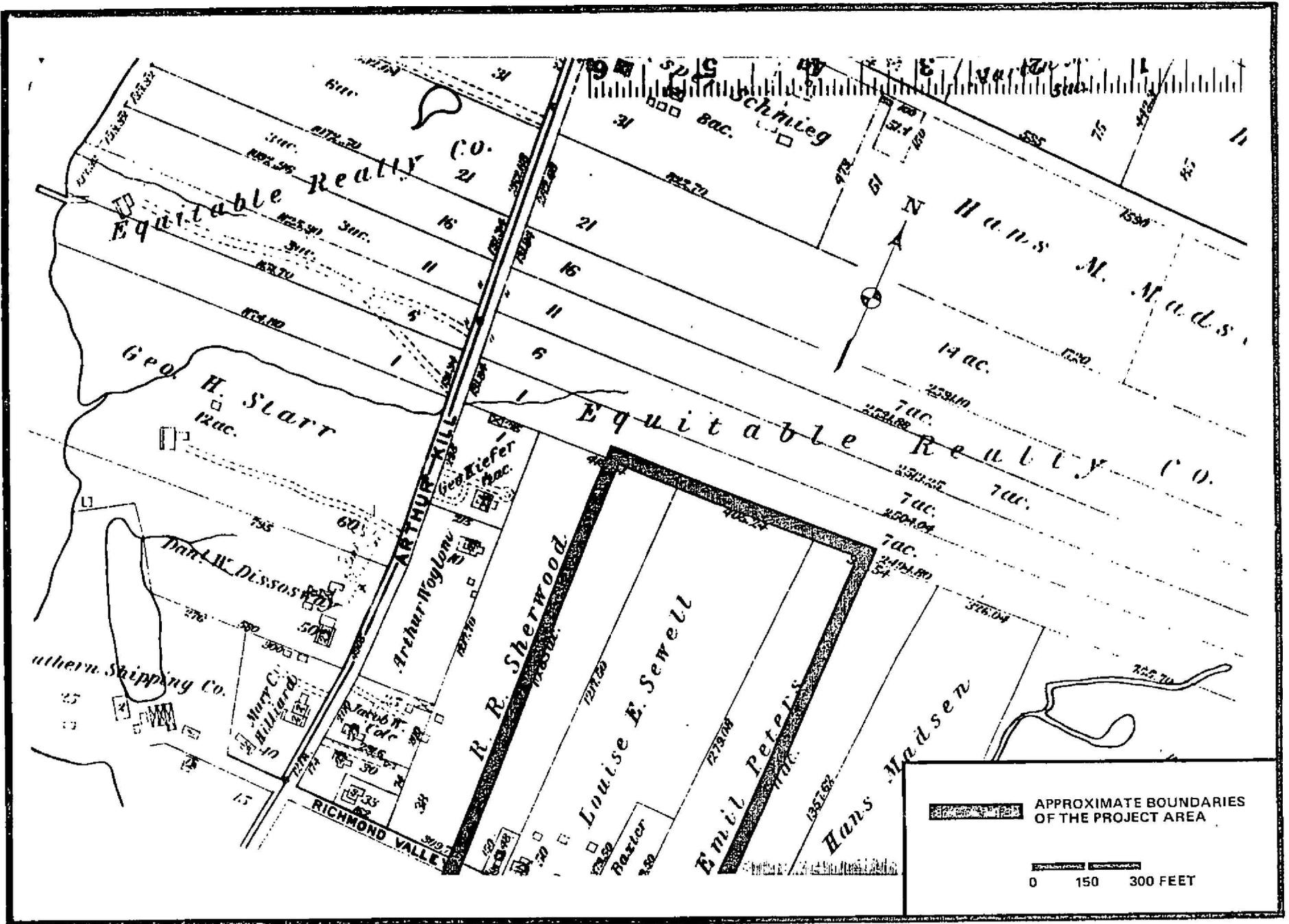


FIGURE 6B: Project Area and Vicinity, 1917

SOURCE: Bromley, 1917

IV. PRELIMINARY FIELD INSPECTION

LBA staff visited the proposed Richmond Valley Estates project area on August 3, 1987. The tract is relatively flat, and for the most part undeveloped, with the exception of Lot 12. There is a large wetland area within the center of the tract, and several smaller wetlands along the southwestern section. The eastern side of the project area appears to exhibit the highest elevation, and slopes down to the west and south. The tract is predominantly wooded, with dense brush.

As noted above, Lot 12 appears to be the only developed portion of the project area. A wooden house is extant within the lot, along Richmond Valley Road and the remains of at least two structures are visible in the rear yard. These structures appear to be built on fill. One septic tank cover is located approximately 30 feet north and a second lies approximately 10 feet east of the house.

Surface disturbances were noted along the northern portion of the tract. These included shallow, slumped-in ditches, probably left by large land moving equipment. There is little evidence of land filling along the northern section of the parcel, bordering Lots 117, 122, and 150 of Block 7584.

Several auger tests were excavated along the Page Avenue side of the project area. These tests exposed intact soil stratigraphy, consisting of a thin sandy humic soil overlying a coarse sandy subsoil. These preliminary tests, and the overall surface inspection, suggest that the project area has the potential to contain intact soils. As a result, there is also the potential for intact subsurface archaeological remains.

V. RECOMMENDATIONS

The results of the records check and limited historical research indicate that the project area has the potential to contain significant subsurface cultural resources dating to both the pre-historic and historic periods. Given this potential, LBA recommends that a Phase IB survey be conducted to identify the specific locations and configurations of these potential resources. This recommendation follows the procedures set forth in the NYCLPC guidelines for archaeology.

Phase IB archaeological fieldwork should involve a program of systematic shovel tests. These tests, consisting of hand dug holes, approximately one foot in diameter, should be placed along parallel transects spaced 50 to 100 feet apart. The distance between shovel tests along each transect should be at 50 to 100-foot intervals.

Shovel tests would be dug by natural and/or culturally defined strata. All soils from the shovel tests would be screened through 1/4-inch mesh hardware cloth. Measurements would be taken to document changes in soil texture, color, and content. Cultural material recovered from the excavated soils would be properly provenienced. Every attempt should be made to extend each shovel test into sterile subsoil. At the completion of each test, all screened soil would be redeposited into the hole.

Data on the individual tests would be recorded on a shovel test form. These data would include soil stratum color, texture, and beginning and ending depths below surface. All tests would be mapped into existing landmarks within and adjacent to the project area.

All artifacts recovered from the shovel tests should be cleaned. Prehistoric tools, utilized flakes, and other artifacts which could be analyzed for use wear should be bagged separately in the field and should receive considerable care pending appropriate analyses. All diagnostic materials should be fully provenienced and labeled. Recovered artifacts should be identified, so far as is possible, to cultural and temporal affiliation, material, style, function, form, etc. Analysis should be sufficient to provide a functional site type definition.

No further historical research is recommended at this point. If, however, intact historic archaeological resources are identified, then site specific research, covering deeds, census, directory and tax records is recommended.

REFERENCES CITED

- Anderson, Albert J.
 1965 The Page Avenue Site, Tottenville, Staten Island, New York. The Chesopiean III(3):61-70.
- 1967 "Cody Knives" from Tottenville, Page Avenue, Site II, Staten Island, New York. The Chesopiean V(1):1-2.
- Archaeology Section
 1961 The News Bulletin of the Staten Island Institute of Arts and Sciences 11(4):38.
- 1962 The News Bulletin of the Staten Island Institute of Arts and Sciences 11(8):93.
- 1965 The News Bulletin of the Staten Island Institute of Arts and Sciences 15(3):36.
- Baughner, Sherene and Robert W. Venables
 1987 Ceramics as Indicators of Status and Class in Eighteenth-Century New York. In Suzanne M. Spencer-Wood, ed., Consumer Choice in Historical Archaeology. Plenum Press, New York, and London.
- Bayles, Richard M.
 1887 History of Richmond County, Staten Island, New York, from its Discovery to the Present Time. L. E. Preston, New York.
- Beers, F. W.
 1874 Atlas of Staten Island, Richmond County, New York. J. B. Beers & Co., New York.
- Board of Education, Staten Island
 1964 A Resource Manual for School and Community. New York City.
- Bromley, George W.
 1917 Atlas of the City of New York, Borough of Richmond, Staten Island, vol. II. G. W. Bromley & Co., Philadelphia.
- Cohn, Michael
 1962 Fortifications of New York During the Revolutionary War, 1776-1782. New York City Archaeological Group.
- Edwards R., and A. Merrill
 1977 A Reconstruction of the Continental Shelf Areas of Eastern North America for the Times 9,500 BP and 12,500 BP. Archaeology of Eastern North America 5:1-42.

- Federal Energy Regulatory Commission
1981 Staten Island LNG Project Environmental Impact Statement, Draft Supplement. Ms. on file, N.Y.S. Office of Parks, Recreation, and Historic Preservation.
- Garnice, Victor
1976 Local Place Names of Staten Island. Staten Island Historian XXXII(8):86-87.
- Geismar, Joan H.
1985 An Archaeological Assessment of the Muss Waterfront Housing Development Project, Prince's Bay, Staten Island, New York. Submitted to AKRF, Inc., New York, New York.
- Jacobson, Jerome
1980 Burial Ridge, Tottenville, Staten Island, New York; Archaeology at New York City's Largest Prehistoric Cemetery. Proceedings of the Staten Island Institute of Arts and Sciences 55(3).
- Kraft, Herbert C.
1977 Paleo-Indians in New Jersey. In Amerinds and their Paleoenvironments in Northeastern North America, edited by W. Newman and B. Salwen. Annals of the New York Academy of Sciences, vol. 2:88, pp. 264-281.
- Leng, Charles W. and William T. Davis
1930 Staten Island and Its People; A History, 1609-1929. Lewis Historical Publishing Company, Inc., New York.
- Louis Berger & Associates, Inc.
1985 Phase II Historical and Archaeological Investigations of the Fountain-Mouquin House Site (A085-01-0007), Fort Wadsworth, Staten Island, New York. Louis Berger & Associates, Inc., East Orange, New Jersey. Submitted to the Department of the Navy, Northern Division.
- 1986a A Cultural Resource Overview and Management Plan for U.S. Army Property, Fort Hamilton, Brooklyn, New York, Fort Totten, Queens, New York. Louis Berger & Associates, Inc., East Orange, New Jersey. Submitted to the National Park Service, Mid-Atlantic Region, Philadelphia.
- 1986b Hamlin Site (28Wa532) Archaeological Data Recovery, I-78, (103) Section Four Pohatcong Township, Borough of Alpha, Warren County, New Jersey. Louis Berger & Associates, Inc., East Orange, New Jersey. Submitted to the Federal Highway Administration and New Jersey Department of Transportation, Bureau of Environmental Analysis.

- McMillen, Loring
1951 Disoway's Mill. The Staten Island Historian
XII(4):25-26.
- Pickman, Arnold, and Rebecca Yamin
1978 EIS Background Document, Preliminary Cultural Resources
Assessment: Literature Search and Windshield Survey,
Oakwood Beach Water Pollution Control Project, Phase
III and Future Phases, Contract #68-01-4616, DOW #1.
WAPORA, Inc. Submitted to USEPA Region II, New York, New
York.
- Robinson, E.
1898 Atlas of the Borough of Richmond, City of New York. E.
Robinson & Co., New York.
- Robinson, E. and R. H. Pidgeon
1907 Atlas of the Borough of Richmond, City of New York. E.
Robinson, New York.
- Rutsch, Edward S.
1968 A Petrological Study of Aboriginal Projectile Points
from Staten Island. Proceedings, Staten Island Institute
of Arts and Sciences 23:75-81.
- Silver, Annette
1984 The Smoking Point Site (STD 14-3), Staten Island, New
York. Proceedings, Staten Island Institute of Arts and
Sciences 33:1-46
- Skinner, Alanson
1909 The Lenape Indians of Staten Island. Anthropological
Papers of the American Museum of Natural History 3:1-62.
- Spencer-Wood, Suzanne M.
1987 Consumer Choice in Historical Archaeology. Plenum Press,
New York and London.
- Thompson, John H. (editor)
1977 Geography of New York State. Syracuse University Press,
Syracuse, New York.
- Walling, H. F.
1859 Map of Staten Island, Richmond County, New York. D. A.
Fox, New York.
- Weingartner, Mathilde P.
1967 Changes at Ward's Point, Staten Island, Part 1. Staten
Island Institute of Arts and Sciences 22(2):39-46.
- Wilk, Kathleen
1978 The Streets Where Nobody Lives. Staten Island Advance,
August 24, 1978.