

HISTORICAL
PERSPECTIVES INC.



**Phase IA Archaeological Documentary Study
Woodrow Road Connection from Bloomingdale Road
to Veterans Road East
Staten Island, Richmond County, New York**

**New York City Department of Design + Construction Project
HWR00510**

**NYSOPRHP # 14PR03855
LPC # Dept. of Design & Construction / LA-CEQR-R**

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Prepared For:



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February 2015

MANAGEMENT SUMMARY

SHPO Project Review Number (if available): **14PR03855**

Involved State and Federal Agencies: **NYSDOT**

Phase of Survey: **Phase IA Archaeological Documentary Study**

Location Information

Location: **Woodrow Road from Bloomingdale Road to Veterans Road East.**

Minor Civil Division: **08501, Staten Island**

County: **Richmond**

Survey Area

Length: **ca. 1600 feet**

Width: **100 feet**

Number of Acres Surveyed: **ca. 4 acres**

USGS 7.5 Minute Quadrangle Map: **Arthur Kill**

Archaeological Survey Overview

Number & Interval of Shovel Tests: **N/A**

Number & Size of Units: **N/A**

Width of Plowed Strips: **N/A**

Surface Survey Transect Interval: **N/A, urban area**

Results of Archaeological Survey

Number & name of precontact sites identified: **None**

Number & name of historic sites identified: **None**

Number & name of sites recommended for Phase II/Avoidance: **None**

Report Author(s): **Julie Abell Horn, M.A., R.P.A. and Cece Saunders, M.A., R.P.A., Historical Perspectives, Inc.**

Date of Report: **February 2015**

EXECUTIVE SUMMARY

The New York City Department of Design and Construction (DDC) proposes to widen, realign, and fully construct Woodrow Road from Bloomingdale Road on the east to Veterans Road East on the west, in the Woodrow neighborhood of Staten Island, Richmond County, New York (Figures 1 and 2a-2b, Appendix A). Presently, Woodrow Road extends in an irregular alignment from Bloomingdale Road to just west of Turner Street/Gladwin Avenue. The section west of this intersection to Veterans Road East is unbuilt and exists only as a paper street. The proposed project will align the two sides of Woodrow Road at the Bloomingdale Road intersection, which currently are offset, widen Woodrow Road west of Bloomingdale Road to its full mapped extent (creating a roughly 80-foot wide roadbed and 10-foot wide sidewalks on both the north and south sides), and create the “punch-through” section of Woodrow Road to connect to Veterans Road East. The project is intended to provide enhanced traffic circulation to and from Veterans Road East as well as serve the new school (P.S. 62) under construction at the northwest corner of Bloomingdale Road and Woodrow Road. The improvements will include land clearing, road construction, installation of new sidewalks, and New York State Department of Transportation (NYSDOT) permits and approvals. Full project plans are included as Appendix A. The Area of Potential Effect (APE) is defined as the area that could be directly and physically affected by project development. For this project, the APE includes the entire length and width of the proposed roadbed and sidewalks.

As part of the environmental review process, and since the project is subject to both City Environmental Quality Review (CEQR) and the State Environmental Quality Review Act (SEQRA), the New York City Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) were contacted.

The LPC responded:

LPC review of archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from Native American occupation on the project site. Accordingly, the Commission recommends that an archaeological documentary study be performed for this site to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary (see CEQR Technical Manual 2012) (Santucci 5/7/2014).

The OPRHP responded:

The proposed project area is located in an archaeologically sensitive area. However, portions appear to have suffered significant modern disturbance. Therefore, OPRHP requests that a Phase IA background and sensitivity assessment investigation be performed to evaluate the nature and extent of areas where archaeological resources may be preserved within the project’s Area of Potential Effects (APE) (Perazio 9/29/2014).

Although not explicitly mentioned by either agency response, it also should be noted that the project site is completely within the boundaries of the State and National Register of Historic Places (S/NRHP) listed Sandy Ground Historic Archaeological District. This district is one of only a few archaeological districts in New York City, and the only one on Staten Island. As stated in the NRHP form, “Historically, Sandy Ground is one of the small number of Black American communities in the New York City area that were formed by free Blacks during the Ante-Bellum period” (Florance 1982:Section 8, page 1). The Sandy Ground Historic Archaeological District is concentrated along Bloomingdale and Woodrow Roads with sites located along Winant and Crabtree Avenues, and Clay Pit and Sharrotts Roads. The western boundary of the district is Veterans Road East, the service road that runs alongside the West Shore Expressway and which also is the western edge of the Woodrow Road APE.

Additionally, the project site abuts the Rossville A.M.E. Zion Church Cemetery, which was one of the cemeteries for the Sandy Ground community, established in 1852. It is a New York City Landmark. The cemetery is located on the north side of Woodrow Road and the proposed road widening will extend to its southern boundary.

Appendix B contains the LPC Designation report for the cemetery.

Historical Perspectives, Inc. (HPI) has been contracted by AKRF to complete the requested Phase IA Archaeological Documentary Study for the Woodrow Road project site. This study was prepared to comply with the standards of the LPC and the OPRHP (LPC 2002; CEQR 2014; New York Archaeological Council 1994; NYSOPRHP 2005).

From what is known of precontact period settlement patterns on Staten Island, most habitation and processing sites are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water. This part of Staten Island, in particular, has a large number of precontact sites that have been recorded in the vicinity of the APE, many in proximity to Sandy Creek and the drainages in Clay Pit Ponds Park, and there is general agreement among archaeologists that the entire area was once utilized heavily by Native Americans. Those areas in close proximity to fresh water sources have the greatest likelihood of containing precontact archaeological resources, if not disturbed by later development. Within the APE, the western wooded section, located only about 200 feet to the southeast of one of the Clay Pit Ponds Park drainages, is the closest to a fresh water source.

Precontact archaeological potential is heavily dependent on the degree to which the original landform still survives, and areas where there has been substantial land manipulation have a lessened sensitivity. The APE contains many portions where it is clear that the original landform has been substantially eliminated. These include areas where new houses have been built within the last 10-15 years and where grading and filling have occurred for the construction of Woodrow Road itself, including most notably the installation of extensive subsurface utilities beneath the pavement. HPI concludes that there are only a few discrete sections of the APE that may retain precontact sensitivity. These are limited to the wooded section of the APE at its western terminus (although it is presumed some disturbance from earthmoving is present), an island within the roadway that has mature trees and may not have been substantially altered, and two areas on the north side of Woodrow Road that also have trees that may predate the most recent residential development, suggesting less extensive modern disturbance.

Historic research has shown that there are only two portions of the Woodrow Road APE that have had historic period development. The first is the eastern end of the project site where residences were once located fronting Bloomingdale Road. The former Guyon/Staudt family property overlaps the APE on the north. This parcel, now the site of the new P.S. 62 under construction, was studied extensively by archaeologists (Schuyler 1974, AKRF 2009, 2011, 2012). There is no remaining archaeological sensitivity due to the archaeological mitigation of the parcel and the substantial degree of post-mitigation disturbance from the school construction and its staging area effects. The historic properties fronting Bloomingdale Avenue south of the Guyon/Staudt family property are now covered with extensive modern residences and the existing Woodrow Road with its deep subsurface utilities, which have destroyed any potential archaeological resources associated with these former residences and/or yard areas.

However, the APE also includes the area immediately south of the New York City Landmarked Rossville A.M.E. Zion Church Cemetery. Widening of Woodrow Road within the APE will involve removing the berm behind an existing retaining wall, and constructing a new retaining wall at the cemetery lot line. HPI concludes that this area, between the existing retaining wall and the chain link fence that marks the edge of the cemetery lot, could be sensitive for historic resources associated with the cemetery. Although the cemetery is fenced today, it may not always have been enclosed, and the lot boundaries may not have been clearly marked over time. As the cemetery designation report states: "There are those who lie here without benefit of stone or marker..." and their burial locations within the cemetery are unknown (Zavin 1984:4). The possibility that burials could have been placed within the APE cannot be completely ruled out, nor can the subsurface migration of burial remains through bioturbation or other natural processes be completely discounted. For these reasons, HPI concludes that the strip of land south of the cemetery parcel within the APE may be sensitive for historic period archaeological resources. As noted above, HPI concludes that this strip may also be sensitive for precontact resources.

Based on these conclusions, HPI recommends that a limited program of Phase IB archaeological testing be conducted within those discrete areas of the APE identified as archaeologically sensitive and identified on Figures 11a-11b. In addition, HPI recommends that a construction management plan to protect the integrity of the Rossville A.M.E. Zion Cemetery be filed with and approved by the NYSOPRHP and the LPC. This plan could entail the archaeological monitoring of construction work for Woodrow Road in this location abutting the Rossville A.M.E. Zion Cemetery as well as steps to prevent accidental intrusion and/or damage to the Cemetery during the construction process. All archaeological testing and monitoring should be conducted according to applicable archaeological standards (New York Archaeological Council 1994, NYSOPRHP 2005; LPC 2002; CEQR 2014).

Professional archaeologists, with an understanding of and experience in comparable archaeological excavation techniques and interpretations, would be required to be part of the archaeological team.

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I. INTRODUCTION

The New York City Department of Design and Construction (DDC) proposes to widen, realign, and fully construct Woodrow Road from Bloomingdale Road on the east to Veterans Road East on the west, in the Woodrow neighborhood of Staten Island, Richmond County, New York (Figures 1 and 2a-2b, Appendix A). Presently, Woodrow Road extends in an irregular alignment from Bloomingdale Road to just west of Turner Street/Gladwin Avenue. The section west of this intersection to Veterans Road East is unbuilt and exists only as a paper street. The proposed project will align the two sides of Woodrow Road at the Bloomingdale Road intersection, which currently are offset, widen Woodrow Road west of Bloomingdale Road to its full mapped extent (creating a roughly 80-foot wide roadbed and 10-foot wide sidewalks on both the north and south sides), and create the “punch-through” section of Woodrow Road to connect to Veterans Road East. The project is intended to provide enhanced traffic circulation to and from Veterans Road East as well as serve the new school (P.S. 62) under construction at the northwest corner of Bloomingdale Road and Woodrow Road. The improvements will include land clearing, road construction, installation of new sidewalks, and New York State Department of Transportation (NYSDOT) permits and approvals. Full project plans are included as Appendix A. The Area of Potential Effect (APE) is defined as the area that could be directly and physically affected by project development. For this project, the APE includes the entire length and width of the proposed roadbed and sidewalks.

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Additionally, the project site abuts the Rossville A.M.E. Zion Church Cemetery, which was one of the cemeteries for the Sandy Ground community, established in 1852. It is a New York City Landmark. The cemetery is located on the north side of Woodrow Road and the proposed road widening will extend to its southern boundary. Appendix B contains the LPC Designation report for the cemetery.

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the LPC and the OPRHP (LPC 2002; CEQR 2014; New York Archaeological Council 1994; NYSOPRHP 2005). The HPI project team consisted of Julie Abell Horn, M.A., R.P.A., who completed the research and wrote the report, and Cece Saunders, M.A., R.P.A. who managed the project and provided editorial and interpretive assistance.

II. METHODOLOGY

This study entails review of various resources. Because the majority of the project site is located in areas that were undeveloped during the nineteenth century, many standard resources normally consulted to meet LPC standards were not necessary, as described below.

- Primary and secondary sources concerning the general precontact period and history of Staten Island and specific events associated with the project site were reviewed at the New York Public Library, the Staten Island Historical Society, the Staten Island Museum, and using online resources.
- Historic maps and aerial photographs were reviewed at the New York Public Library, the Staten Island Historical Society, the Staten Island Museum, the Staten Island Topographical Bureau, and using various online websites. An inquiry about resources was made to the Sandy Ground Historical Society.
- Information specifically pertaining to the Sandy Ground Historic Archaeological District and the Rossville A.M.E. Church Cemetery were reviewed using materials from the OPRHP and the LPC.
- Selected deeds and census records were reviewed.
- Information about previously recorded archaeological sites and surveys in the area was compiled from data available at the OPRHP, which includes data files from the New York State Museum (NYSM), and the LPC.
- Certain previous archaeological reports for abutting properties were reviewed in more detail, specifically those recently completed for the Crabtree Avenue school site at the northwest corner of Woodrow Road and Bloomingdale Road (AKRF 2009, 2011, 2012) and the stretch of Bloomingdale Road along the eastern side of the project site (HAA 2013, 2014). The Clay Pit Ponds/Port Mobil Watershed survey also included the present project site and was reviewed carefully (HPI 2002).
- AKRF provided project plans, survey maps and site data for the property.
- Last, a site visit to the project site was conducted by Julie Abell Horn of HPI on December 15, 2014 and again on January 22, 2015 to assess any obvious or unrecorded subsurface disturbance (Photographs 1-28; Figures 2a-b).

III. CURRENT CONDITIONS AND ENVIRONMENTAL SETTING

A. Current Conditions

The Woodrow Road APE consists of existing paved roadway as well as areas that will become part of the new widened roadway and its sidewalks. These areas to be taken include portions of existing properties on both the north and south sides of the existing road, as well as a wooded area on the western end of the APE, adjacent to Veterans Road East. Figure 2a-2b illustrates the project site; full project plans including existing elevations and utilities are included as Appendix A. Current conditions of the APE are as follows:

Block 7092, north side of Woodrow Road

The widening of Woodrow Road on the north will require the taking of portions of city lots on the southern side of Block 7092. From east to west, these lots include:

- Lots 39 and 75 (Photographs 1-4)

The new P.S. 62R building is being constructed on these lots. Prior to the new construction, several archaeological studies were completed, including the portions of the lots that are part of the current APE. Schuyler (1974) conducted archaeological investigations on part of Lot 39, and AKRF completed Phase I, II, and III archaeological investigations on the remaining portions of Lot 39 (AKRF 2009, 2011, 2012). Today, the portions of these lots that are part of the APE are being used as a staging area for the new school construction. Large stockpiles of soil,

construction trailers, and equipment are located here, enclosed by a wooden construction fence. No evidence of the original landscape remains on these lots.

- Lot 33 (Photograph 5)

This lot contains a residence dating to the 1960s originally accessed from Crabtree Avenue, surrounded by a landscaped lawn. A small corner of this lawn will be taken as part of the current project.

- Lot 22 (Photographs 6-9)

This lot contains the historic Rossville A.M.E. Zion Church Cemetery, which is a New York City Landmark. The entrance to the cemetery is on Crabtree Avenue, but the rear of the cemetery abuts the APE. The road widening will extend to the edge of the cemetery boundary, which is marked with a chain link fence. The section of the APE abutting this lot contains trees, grasses, and other woodland understory. The land is higher in elevation than the adjacent Woodrow Road paved roadway, and is held back by a stone retaining wall that was constructed when the road was built less than 20 years ago. This berm will be removed as part of the present project and a new retaining wall will be constructed at the southern side of the cemetery.

- Lot 105 (Photograph 10)

This lot contains a recently constructed residence fronting Peachtree Lane on the west, surrounded by a fence. The APE includes a strip of land between the fence and the existing roadway that is covered with trees, grass and weeds. It is slightly higher in elevation than the roadway.

- Lots 103, 3, 101, and 1 (Photograph 11)

These lots are bounded by Peachtree Lane on the east and Turner Street on the west, and also contain recently constructed residences. The APE includes land between the houses and the existing Woodrow Road roadway. This area currently is enclosed by a fence erected by the homeowners and appears to be used as yard space. Several large trees can be seen behind the fence.

Block 7105, north side of Woodrow Road

The area west of Turner Street is part of Block 7105. The widening of the road will require taking portions of several lots on this block.

- Lots 2, 4, 5, 6, 7, and 8 (Photograph 12)

These lots each contain a recently constructed residence. The APE includes the head-in parking spaces in front of each residence; although the spaces appear to be part of the existing Woodrow Road, are actually part of the private lots.

New roadway to Veterans Road East (Photographs 13-18)

At the terminus of the existing Woodrow Road is a wooded section that extends to Veterans Road East. It contains portions of several lots: Block 7105, Lot 11 on the north side and Block 7105, Lots 670, 674, and 679 on the south side. A narrow section of this wooded area includes the existing Woodrow Road easement, although the road has never been constructed and exists on paper only. The wooded area contains trees and moderate to heavy understory, depending on location. Mounds of soil in various spots attest to prior earthmoving in places. Dumping of household debris and building materials is evident throughout the woods. Several dilapidated sheds and/or storage containers are present as well, along with fencing in various states of integrity. A small wooden barrier separates the APE from Veterans Road East.

Block 7105, south side of Woodrow Road (Photograph 19)

The area west of Gladwin Avenue on the south side of Woodrow Road also is part of Block 7105. Lots 690 and 695 both contain recently constructed residences. The APE includes a strip of land from the front yard and driveway area of each of these lots.

Block 7091, south side of Woodrow Road (Photographs 20-23)

The APE includes strips of land from the front yards and driveways of numerous lots on the south side of Woodrow Road from Block 7091. All of these residences were constructed within the last 10-15 years, including those houses at the eastern end of the block, which replaced earlier residences that fronted Bloomingdale Road in the nineteenth and twentieth centuries.

Existing Woodrow Road roadbed (Photographs 24-28)

The APE also includes the present Woodrow Road paved roadway, extending from Bloomingdale Road to just west of Turner Street/Gladwin Avenue. This road was constructed in stages over the last 10-15 years, in tandem with the new houses that were built privately on the north and south sides of the road. The width of the existing road is irregular, with some areas containing extra parking spaces. The road has its highest elevation at Bloomingdale Road, and then slopes downward to the west. There are numerous privately installed utilities under the roadway, including sewers, water lines, and gas lines. Electric, telephone and cable utility lines run above ground overhead on wooden poles. At the western end of the roadway, there are small, curbed medians separating the traffic lanes, which contain grass and trees. Appendix A shows the locations of all the utilities.

B. Topography and Hydrology

Historic maps show the APE, prior to construction of the existing Woodrow Road in stages during the last 10-15 years, was undeveloped and mostly used as farm fields or woodland. Early topographical maps that depicted general landforms but no specific elevations (e.g. U.S.C.S. 1835-6 [Figure 4], 1844) show that within the APE, the Bloomingdale Road terminus was the highest point, and the Veterans Road East terminus was the lowest point. The 1891 U.S.G.S. map, the first to indicate numeric elevations, shows that elevations ranged from more than 120 feet above sea level on the east to less than 100 feet above sea level on the west. In the early 1910s, when the Borough of Richmond created a detailed set of topographical maps, the APE was shown as ca. 130 feet above sea level on the east and ca. 100 feet above sea level on the west. The sharpest drop in elevation was in the approximate center of the APE, near the cemetery, where there was a sloped area (Borough of Richmond 1913 [Figure 8]). Today, elevations in the APE, as shown on pages 5 and 6 of Appendix A, indicate that while much of the area is still at roughly the same elevations as shown on the 1913 map, there have been areas where construction of the roadway required grading. Specifically, the roadway bordering the retaining wall by the cemetery has been cut down from the natural elevation. Appendix A also shows that utility installation for sewers entailed deep cuts in the roadway that since have been backfilled to grade.

The closest natural fresh water sources to the APE are Sandy Creek ca. 1200 feet to the east and the drainages to the west of the APE in and around Clay Pit Ponds Park, the closest of which was ca. 200 feet northwest of the project site from the Veterans Road East terminus.

C. Geology

The project site is within the Coastal Plain Province. As described by Boesch (after Wolfe 1977),

The portion of Staten Island south of a line running from approximately north of Stapleton to Westerleigh and Bloomfield is part of the inner lowland subprovince of the Coastal Plain Province. Generally this province is a broad, low-lying land form that slopes gently towards the Atlantic Ocean. The inner lowland subprovince consists of generally level to gently undulating terrain that is between 20 and 50 feet in elevation...Most of the inner Coastal Plain is underlain with gently southeastward dipping, unconsolidated marine and fluvial deposits of clay, silt, sand, and gravel of Late Cretaceous and Tertiary age (Wolfe

1977:207). Large area are also covered with interglacial fluvial deposits of Quaternary age (Wolfe 1977: 207) (Boesch 1994: 3)

During the precontact era the woodlands of the Piedmont Lowlands consisted of broadleaf deciduous trees, which provided a habitat for “game birds, small mammals, deer, bear, and during at least a portion of the precontact period, elk” (Boesch 1994: 6). Mixed wetland ecologies provided numerous floral and faunal resources, the most important faunal resources being the shellfish found in saltwater and brackish environments. Freshwater faunal resources include “mussels, fish, certain amphibians and reptiles, migratory fowl, and semi-aquatic mammals. Anadromous fish species would have been present seasonally within Staten Island via streams emptying into the estuary system” (Boesch 1994: 5-6).

D. Soils

The entire footprint of the project site is Wethersfield-Ludlow-Wilbraham complex, 0 to 8 percent slopes (Figure 3), described as:

Nearly level to gently sloping areas of till plains, relatively undisturbed and mostly wooded; a mixture of well drained, moderately well drained, and poorly drained soils developed in red till; located in Staten Island (USDA 2005:16).

The different soil series that make up this mapping unit are further described in the table, below.

Name	Soil Horizon Depth	Color	Texture, Inclusions	Slope %	Drainage	Landform
Wethersfield Series	A 0-3 in Bw1 3-13 in Bw2 13-27 in Cd 27-65 in	7.5YR 3/2 5YR 4/4 5YR 3/3 2.5YR 4/4	Lo Lo GrlLo GrlLo	0-8	Well	Till plains and hills
Ludlow Series	Ap 0-8 in Bw1 8-20 in Bw2 20-26 in Cd 26-65 in	7.5YR 3/2 5YR 4/4 5YR 3/4 2.5YR 3/4	SiLo SiLo SiLo GrlLo	0-8	Moderately well	None given
Wilbraham Series	A 0-4 in Bw1 4-8 in Bw2 8-20 in Cd 20-65 in	10YR 3/1 5YR 3/3 5YR 4/4 5YR 3/3	SiLo SiLo SiLo GrlLo	0-8	Poorly	Till plains and hills

Key: Soils: Lo-Loam, Si-Silt, Grl-Gravelly

No soil borings have been completed for the project site.

IV. BACKGROUND RESEARCH/HISTORICAL OVERVIEW

A. Precontact Summary

For this report, the word precontact is used to describe the period prior to the use of formal written records. In the western hemisphere, the precontact period also refers to the time before European exploration and settlement of the New World. Archaeologists and historians gain their knowledge and understanding of precontact Native Americans on Staten Island from three sources: ethnographic reports, Native American artifact collections, and archaeological investigations.

The Paleo Indian Period (c. 10,500 B.C. - c. 8000 B.C.) represents the earliest known human occupation of Staten Island. Approximately 14,000 years ago the Wisconsin Glacier retreated from the area leading to the emergence of a cold dry tundra environment. Sea levels were considerably lower than modern levels during this period (they did not reach current levels until circa 5,000 B.C., in the Early to Middle Archaic Period). As such, Staten Island was situated much farther inland from the Atlantic Ocean shore than today, and was characterized by higher ground amid

glacial lakes and rivers (Boesch 1994). The material remains of the Paleo Indians include lithic tools such as Clovis-type fluted projectile points, bifacial knives, drills, graters burins, scrapers, flake cores, and flake tools, although sites generally are represented by limited small surface finds. The highly mobile nomadic bands of this period specialized in hunting large game animals such as mammoth, moose-elk, bison, and caribou and gathering plant foods. It has been theorized that the end of the Paleo-Indian Period arose from the failure of over-specialized, big-game hunting (Snow 1980:150-157). Based on excavated Paleo-Indian sites in the Northeast, there was a preference for high, well-drained areas in the vicinity of streams or wetlands (Boesch 1994). Sites have also been found near lithic sources, rock shelters and lower river terraces (Ritchie 1980). Paleo-Indian materials have been recovered at several sites on Staten Island including Port Mobil, the Cutting site, Smoking Point and along the beach in the Kreischerville area.

During the Archaic Period (c. 8000 B.C. - 1000 B.C.) a major shift occurred in the subsistence and settlement patterns of Native Americans. Archaic period peoples still relied on hunting and gathering for subsistence, but the emphasis shifted from hunting large animal species, which were becoming unavailable, to smaller game and collecting plants in a deciduous forest. The settlement pattern of the Archaic people consisted of small bands that occupied larger and relatively more permanent habitations sites along the coast of Staten Island, its estuaries and streams and inland areas (Boesch 1994). Typically such sites are located on high ground overlooking water courses. This large period has been divided up into four smaller periods, the Early, Middle, Late and Terminal Archaic.

The environment during the Early Archaic (c. 8000 B.C. - 6000 B.C.) displayed a trend toward a milder climate and the gradual emergence of a deciduous-coniferous forest with a smaller carrying capacity for the large game animals of the previous period (Ritchie and Funk 1971). The large Pleistocene fauna of the previous period were gradually replaced by modern species such as elk, moose, bear, beaver, and deer. New species of plant material suitable for human consumption also became abundant. The increasing diversification of utilized food sources is further demonstrated by a more complex tool kit. The tool kit of the Early Archaic people included bifurcated or basally notched projectile points generally made of high quality stone. Tool kits were more generalized than during the Paleo-Indian period, showing a wider array of plant processing equipment such as grinding stones, mortars and pestles. Although overall evidence of Early Archaic sites on Staten Island is sparse, it should be noted that the Old Place site, located approximately two and a half miles north of the project site, is recognized as one of the most important Early Archaic component sites in the area (Ritchie and Funk 1971; Ritchie 1980; Cantwell and Wall 2001). Other Early Archaic component sites on Staten Island include the Hollowell, Charleston Beach, Wards Point, Travis (or Long Neck), and Richmond Hill sites (Ritchie and Funk 1971; Boesch 1994).

The archaeological record suggests that a population increase took place during the Middle Archaic Period (c. 6000 - c. 4000 B.C.). This period is characterized by a moister and warmer climate and the emergence of an oak-hickory forest. The settlement pattern during this period displays specialized sites and increasing cultural complexity. The exploitation of the diverse range of animal and plant resources continued with an increasing importance of aquatic resources such as mollusks and fish (Snow 1980). In addition to projectile points, the tool kits of Middle Archaic peoples included grinding stones, mortars, and pestles. Such artifacts have been found throughout Staten Island, including the Old Place and Wards Point sites (Boesch 1994).

Late Archaic people (c. 4000 - c. 1000 B.C.) were specialized hunter-gatherers who exploited a variety of upland and lowland settings in a well-defined seasonal round. The period reflects an increasingly expanded economic base, in which groups exploited the richness of the now established oak-dominant forests of the region. It is characterized by a series of adaptations to the newly emerged, full Holocene environments. As the period progressed, the dwindling melt waters from disappearing glaciers and the reduced flow of streams and rivers promoted the formation of swamps and mudflats, congenial environments for migratory waterfowl, edible plants and shellfish. The new mixed hardwood forests of oak, hickory, chestnut, beech and elm attracted white-tailed deer, wild turkey, moose and beaver. The large herbivores of the Pleistocene were rapidly becoming extinct and the Archaic Indians depended increasingly on smaller game and the plants of the deciduous forest. The projectile point types attributed to this period include the Lamoka, Brewerton, Normanskill, Lackawaxen, Bare Island, and Poplar Island. The tool kit of these peoples also included milling equipment, stone axes, and adzes. A large number of Late Archaic Period sites have been found on Staten Island. These include the Pottery Farm, Bowman's Brook, Smoking Point, Goodrich, Sandy Brook, Wort Farm, and Arlington Avenue sites. In addition, the Old Place Site contained a Late Archaic component (Boesch 1994).

During the Terminal Archaic or Transitional Period (c. 1700 B.C. - c. 1000 B.C.), native peoples developed new and radically different broad bladed projectile points, including Susquehanna, Perkiomen and Orient Fishtail types. The use of steatite or stone bowls is a hallmark of the Terminal Archaic Period. Sites on Staten Island from the Terminal Archaic Period include the Old Place site, as well as the Pottery Farm, Wards Point, and Travis (or Long Neck) sites (Boesch 1994).

The Woodland Period (c. 1000 B.C. - 1600 A.D.) is generally divided into Early, Middle and Late Woodland on the basis of cultural materials and settlement-subsistence patterns. Settlement pattern information suggests that the broad based strategies of earlier periods continued with a possibly more extensive use of coastal resources. The Early Woodland was essentially a continuation of the tool design traditions of the Late Archaic. However, several important changes took place. Clay pottery vessels gradually replaced the soapstone bowls during the Early Woodland Period (c. 1000 B.C. to A.D. 1). The earliest ceramic type found on Staten Island is called Vinette 1, an interior-exterior cordmarked, sand tempered vessel. The Meadowood-type projectile point is a chronological indicator of the Early Woodland Period.

Cord marked vessels became common during the Middle Woodland Period (c. A.D. 1 to c. 1000 A.D.). Jacks Reef and Fox Creek-type projectile points are diagnostic of the Middle Woodland. Another characteristic projectile point of the Early to Middle Woodland Period is the Rossville type, named for the site at Rossville where it predominated. It is believed to have originated in the Chesapeake Bay area and is found in New Jersey, southeastern New York and southern New England (Lenik 1989:29). The Early and Middle Woodland periods display significant evidence for a change in settlement patterns toward a more sedentary lifestyle. The discovery of large storage pits and larger sites in general supports this theory. Some horticulture may have been utilized at this point but not to the extent that it was in the subsequent Late Woodland period.

In the Late Woodland period (c. 1000 A.D. - 1600 A.D.), triangular projectile points such as the Levanna and Madison types, were common throughout the Northeast, including Staten Island (Lenik 1989:27). Made both of local and non-local stones, brought from as far afield as the northern Hudson and Delaware River Valleys, these artifacts bear witness to the broad sphere of interaction between groups of native peoples in the Northeast. Additionally, during this period collared ceramic vessels, many with decorations, made their appearance.

Woodland Period Native Americans in Staten Island and surrounding regions shared common attributes. The period saw the advent of horticulture and with it, the appearance of large, permanent or semi-permanent villages. Plant and processing tools became increasingly common, suggesting an extensive harvesting of wild plant foods. Maize cultivation may have begun as early as 800 years ago. The bow and arrow, replacing the spear and javelin, pottery vessels instead of soap stone ones, and pipe smoking, were all introduced at this time. A semi-sedentary culture, the Woodland Indians moved seasonally between villages within palisaded enclosures and campsites, hunting deer, turkey, raccoon, muskrat, ducks and other game and fishing with dug-out boats, bone hooks, harpoons and nets with pebble sinkers. Their shellfish refuse heaps, called "middens," sometimes reached immense proportions of as much as three acres (Ritchie 1980:80, 267). Habitation sites of the Woodland Period Indians increased in size and permanence. A large number of Woodland Period archaeological sites have been found on Staten Island in a variety of environmental settings. A favored setting for occupation during this period was well-drained ground near stream drainages and coastal waterways. The Old Place Site, which also had a Woodland component, exhibited all of these locational characteristics. Another such site, dating to the Middle Woodland period and including net and fabric impressed pottery, was discovered within DEP Bluebelt property overlooking Lemon Creek and was excavated in 2009 and 2010 (HPI 2009a, 2009b, 2010a, 2010b).

During the early Contact period (1500 to 1700 A.D.) there was a continuation of the Late Woodland settlement patterns of the coastal Algonquians. By the 17th century the Dutch settlers of lower New York were in frequent contact with the many Native Americans who lived in the vicinity. Historic accounts describe both peaceful and violent interchanges between these two groups (Brasser 1978, Flick 1933). Through at least the 1650s, Native Americans known as the Raritans occupied portions of Staten Island and New Jersey's Raritan Valley (Ruttenber 1872). The Raritans were but one of many native groups which as a whole were known as the Delaware Indians by the European settlers. As the European population increased, and internecine warfare due to increased competition for trade with the Europeans intensified, the Raritans, and the Delaware in general, retreated inland away from the eastern coast. By the 1800s their migration had scattered them across the Midwest and even into Canada (Weslager 1972), where they have continued living to the present day. Journal accounts by European explorers, settlers, and

travelers describe Native settlements and lifeways. However, only a few Historic Contact Period sites have been found on Staten Island. Sites include those at Wards Point, Old Place, Corsons Brook, Travis (or Long Neck), New Springfield, and at the PS56R Site in Woodrow (Boesch 1994; HPI 1996).

B. Previously Recorded Archaeological Sites and Surveys

Records on file at the OPRHP and the NYSM as well as the Boesch (1994) *Archaeological and Sensitivity Assessment of Staten Island, New York* indicate that numerous archaeological sites have been documented within one mile of the APE, and some of these sites overlap the APE. The following table summarizes archaeological sites that are on file at the OPRHP and have data on the recently released Cultural Resources Information System (CRIS). There are also large numbers of NYSM sites mapped within a one mile radius of the APE on CRIS, but data (other than locations) are not included here, excepting those that specifically are mapped as overlapping or abutting the APE. Of note, NYSM site locations and descriptions often are vague, due to the fact that many of these sites were documented based on early or non-professional records (such as information from local landowners, avocational collectors, or historic accounts). Again, due to the very large number of archaeological sites within a one mile radius of the APE, those sites recorded by Boesch (1994), many of which are duplicates of those also recorded by the other agencies, are not included here.

Site # and Site Name	Location	Time Period	Site Type
OPRHP 8501.000061 Sandy Ground	Includes project site	Nineteenth-twentieth century	Free Black community archaeological district
OPRHP 8501.000073 Canada Hill	0.8 mile southwest	Historic and prehistoric deposits	Camp
OPRHP 8501.000074 Chemical Lane	0.7 mile northwest	Archaic and Woodland	Camp
OPRHP 8501.000075 Pottery Farm Site	0.7 mile northwest	Woodland	Camp
OPRHP 8501.000079 Anderson Brick Works Site	1.0 mile southwest	Nineteenth century	Industrial
OPRHP 8501.000080 Dubois House Site	0.7 mile west	Nineteenth century	Domestic
OPRHP 8501.000081 Liss House Site	0.5 mile northwest	Nineteenth century	Domestic
OPRHP 8501.000082 Porzio House Site	0.3 mile southwest	Nineteenth century	Domestic
OPRHP 8501.000083 Winant House and Prehistoric Site	0.2 mile northwest	Nineteenth century	Domestic
OPRHP 8501.000118 T and J Site (Preh)	0.5 mile northwest	Precontact	Unknown
OPRHP 8501.000119 Rossville Site	0.7 mile north	Historic and precontact	Unknown
OPRHP 8501.000120 Greicke Farm Site (Preh)	0.5 mile northwest	Precontact	Unknown
OPRHP 8501.000121 Clay Pit Pond East Site (Preh)	0.3 mile northwest	Precontact	Unknown
OPRHP 8501.000122 NYSM STD-21-3	0.9 mile northwest	Paleo-Indian to Woodland	Camp
OPRHP 8501.000123 Clay Pit Rd Bluff North Site (Preh)	0.2 mile northwest	Precontact	Unknown

Site # and Site Name	Location	Time Period	Site Type
OPRHP 8501.000124 Clay Pit Rd Site (Preh)	0.6 mile northwest	Precontact	Unknown
OPRHP 8501.000130 Park Headquarters Site (Preh)	0.5 mile west	Precontact	Unknown
OPRHP 8501.000131 Junkyard Site	0.3 mile northwest	Precontact	Unknown
OPRHP 8501.000878 Abraham's Pond Locus A (Preh)	0.4 mile west	Precontact	Unknown
OPRHP 8501.000879 Abraham's Pond Locus B (Preh)	0.4 mile west	Precontact	Unknown
OPRHP 8501.000880 Abraham's Pond Locus C (Preh)	0.4 mile west	Precontact	Unknown
OPRHP 8501.002258	0.1 mile south	Form missing	Unknown
OPRHP 8501.002260 Barragher House Lot	Overlaps project site on south	Historic site, 1963 house built on old foundations	Domestic, no artifacts
OPRHP 8501.002264 Pedro House Lot	0.2 mile north	Late nineteenth century	Domestic
OPRHP 8501.002378	0.1 mile south	Both prehistoric and historic	Unknown
OPRHP 8501.002569 NYCSCA P.S. 56R Prehistoric	0.2 mile northeast	Middle to Late Archaic, Woodland	Camp
OPRHP 8501.002766 Prehistoric Site C4-MCB-1	0.6 mile southwest	Precontact	Unknown
OPRHP 8501.002767 Prehistoric Site A7-MCB-1	0.8 mile southwest	Precontact	Unknown
OPRHP 8501.002814 Balthasar Kreischer Estate Ruins	0.8 mile southwest	Nineteenth century	Domestic
OPRHP 8501.002815 Canada Hill Site	0.8 mile southwest	Precontact	Unknown
OPRHP 8501.002970 Staudt Family Farm Site	Overlaps project site at new school site	Nineteenth and twentieth century	Domestic
NYSM 4604	Overlaps entire project site	Precontact	Village
NYSM 4603	0.1 mile northwest	Precontact	Fields
NYSM 7271	Abuts on east	Precontact	Village
NYSM 8497	0.1 mile southeast	Precontact	Village

Several of the archaeological sites listed in the table are worth describing in further detail.

Sandy Ground Historic Archaeological District

As noted in the Introduction, the entire project site is within the large Sandy Ground Historic Archaeological District, which represents the archaeological remains associated with an antebellum to early twentieth century Free Black community. The district was first studied in the 1970s by Robert L. Schuyler and further work was conducted by William Askins in the 1980s. The National Register of Historic Places inventory form (Florance 1982) is based on data compiled by both scholars. In the more than 30 years since the district was listed, there has been significant

change in the Sandy Ground area as new residential development has occurred on most streets, including the Woodrow Road APE.

Staudt Family Farm Site

The northwest corner of what is now the Bloomingdale Road and Woodrow Road intersection contained the former Guyon farm, which later became home to the Staudt family. The southern side of this large lot is part of the current APE, where street widening will occur. Schuyler (1974) excavated a portion of the property, and recently AKRF completed Phase I, II, and III archaeological investigations for additional portions of the property (AKRF 2009, 2011, 2012), including areas that are part of the present Woodrow Road APE. The P.S. 62 reports have been approved and are on file with city and state agencies. All buildings associated with the former Guyon and Staudt family farm have been demolished and the site has been cleared. The current P.S. 62 school building is under construction (as of 2015) on the portion of the lot just north of the Woodrow Road APE.

Barragher House Lot

This property was located at what is now the southwestern corner of Bloomingdale Road and Woodrow Road, and a portion of this once large lot is within the current APE (but the site location appears to be mapped incorrectly on CRIS). Although it was recorded as an archaeological site (as part of the Sandy Ground district), it does not appear that any excavations or surface collections were conducted at the time. The house on the lot was constructed in 1963 on foundations from a previous residence. Today, this 1963 house also has been demolished and new houses have been built fronting Woodrow Road, in areas that once were the rear yard of the large lot.

Precontact sites

As the above table indicates, there have been many precontact period archaeological sites recorded in this part of Staten Island, especially in proximity to local water sources such as Sandy Brook to the east of the APE and the drainages to the west of the APE in and around Clay Pit Ponds Park. Further west, along the Arthur Kill shoreline and generally west of Arthur Kill Road, there have been significant Paleo-Indian resources recovered. Most precontact deposits at inland sites, with landforms similar to the APE, have been found within the first several feet of the natural soil column, with many sites exhibiting artifacts on or close to the original ground surface. Of note, however, extensive excavations at the Staudt Family Farm Site (described above) revealed only one precontact flake in a disturbed context, suggesting that despite the overwhelming number of precontact sites recorded in the vicinity, not every parcel contains surviving precontact resources or intact natural landforms.

Surveys

The current Woodrow Road project site has been included in whole or in part, in several prior archaeological surveys.

- South Richmond Drainage Plan

The project site was included in the Phase IA Archaeological Sensitivity Evaluation of the South Richmond Drainage Plan, Clay Pit Ponds/Port Mobil Watershed report (HPI 2002). For that project, a new storm and sanitary sewer line was proposed for the line of Woodrow Road, which is the same as the present project site. That study recommended that Phase IB archaeological testing for precontact period resources be conducted within the Woodrow Road alignment (which at the time had not been constructed). Additionally, the 2002 study recommended archaeological monitoring for the Crabtree Avenue frontage of the Rossville Zion A.M.E. Cemetery, which abuts the present APE. It does not appear that the NYC DEP/DDC contracted for archaeological testing and/or monitoring when the utilities were installed.

- School Construction Authority Crabtree Avenue Site

As described above, AKRF completed Phase I, II, and III archaeological studies for the property at the northwest corner of Bloomingdale Road and Woodrow Road (which has its main frontage on Crabtree Avenue) (AKRF 2009, 2011, 2012). A portion of this parcel will be taken for the Woodrow Road widening for the current project. This

area has been thoroughly investigated and mitigated by AKRF and no additional archaeological work should be necessary within this section of the present APE.

- Bloomingdale Road Reconstruction Project

Hartgen Archaeological Associates completed Phase IA and Phase IB studies for the section of Bloomingdale Road from Arthur Kill Road to Amboy Road, including the section of Bloomingdale Road where the present project intersects at Woodrow Road (HAA 2013, 2014). The project concluded that there had been prior disturbance throughout the majority of the roadway right-of-way; limited shovel testing along the corridor also revealed disturbed soils and no archaeological resources. No additional archaeological work should be necessary within this section of the present APE.

C. Historic Period Summary

Staten Island was the most sparsely settled portion of New York City during early Euro-American settlement. In 1630, while Staten Island was under Dutch rule, Michael Pauw purchased land from the Native Americans. Five years later, he sold it to the Dutch West India Company, which sold land rights to Pietersz De Vries in 1639. Native hostilities and Governor Kieft's War forced the abandonment of these settlements in 1643. In 1657, the Dutch repurchased the island. However, when the British gained control of the island in 1664, only a small group of settlers were present at South Beach on the northeastern shore. Labadist missionaries traveling through Staten Island in 1679 observed that "there are now about a hundred families on the island, of which the English constitute the least portion, and the Dutch and French divide between them about equally the greatest portion. They have neither church nor minister and live rather far from each other" (Dankers and Sluyter 1867:142). By 1683, when the island was organized as the County, two hundred families were living here. They were shortly joined by additional Huguenot families from France, fleeing persecution after the revocation of the Edict of Nantes in 1685.

In a 1690 treaty English Governor Lovelace extinguished all Native American rights to Staten Island (Leng and Delavan 1924; Leng and Davis 1930). Although some tracts of land had been patented to individual owners prior to 1690 after this period land ownership increased. According to a reconstructed map of colonial patents, the general area of Staten Island where the project site is located was divided into numerous parcels (Skene 1907). Many oblong or wedge shaped lots fronted the Arthur Kill shoreline and extended inland. What is now Woodrow Road marked the approximate dividing line between the shoreline lots and the interior lots, which were laid out in a more north-south orientation. The project site runs along the former dividing line of unpatented lands of Thomas Williams and George Lockhart on the north and John Shedden on the south (Skene 1907).

Eighteenth-century development in this part of Staten Island concentrated along the Arthur Kill shoreline, where an early ferry landing was located at Smoking Point, as well as along Arthur Kill Road, which was first laid out in the 1690s. Bloomingdale Road was laid out in the 1760s from Rossville on the north to Woodrow Road on the south (McMillen 1946). The area between Arthur Kill Road on the west and Bloomingdale Road on the east, where the project site is located, remained vacant through the eighteenth and early nineteenth centuries, as shown on historic maps (Anglo-Hessian 1780-1783; Taylor and Skinner 1781; Connor and Sprong 1797).

The earliest depiction of any development within the project site was on the west side of Bloomingdale Road, near the present intersection of Woodrow Road. The 1835-6 U.S.C.S. map (Figure 4) shows a single unlabeled structure here, with the remainder of the present APE depicted as undeveloped. Similar conditions are shown on the updated 1844 U.S.C.S. map. The 1850 Dripps map and the 1853 Butler map (Figure 5) indicate this structure belonged to J. Guyon, and also show the remainder of the APE as undeveloped. Extensive research by AKRF (2009, 2011, 2012) for the SCA Crabtree Avenue site, a portion of which includes the APE, has documented the history of the Guyon family occupancy of the site during the nineteenth century and the subsequent Staudt family occupation in the twentieth century.

As has been written by many others previously, the project site is within what is now known as the historic Sandy Ground neighborhood. By the 1850s, increasing numbers of free African-Americans from both the New York/New Jersey area and the Chesapeake Bay region had begun to populate the neighborhood, alongside local white residents. The intersection of Bloomingdale Road and Woodrow Road became known as "Bogardus Corners" after local landowner Charles Bogardus; other names for the area during the period included Harrisville (after a local black

family) and Little Africa. Occupations of the residents included oyster farming and agricultural pursuits (Florance 1982).

The 1859 and 1860 Walling maps show that by this period, there were three structures at or near the Bloomingdale Road terminus of the project site. The Guyon property was depicted on the northern side, followed by structures attributed to G. Winant and Mrs. Drinker to the south. The Winant property likely overlapped the southern edge of the APE. The 1874 Beers map (Figure 6) indicates a slightly different order, with the Drinker property south of the Guyon property, overlapping the APE. The southernmost property, off the APE, was attributed to Charles Bogardus. Despite the documented occupation of the neighborhood by free black residents, census records indicate that all of these families – the Guyons, Winants, Drinkers, and Bogarduses – were whites, not African-Americans.

It appears that one concentration of free black families during the second half of the nineteenth century was further to the north of the APE. Crabtree Avenue was once known as Guyon Avenue, and was the road leading from Bloomingdale Road west to the African Methodist Episcopal (A.M.E.) Zion Church, which had been founded in 1850. The associated cemetery dates to 1852 (the full LPC Designation Report is included as Appendix B). The Guyon family deeded land to the church in this year, which became the site of the 1850s church building as well as the extant cemetery. The Guyons also gave permission for the church members to access the site via the road (AKRF 2009). Comparison of family names shown on the 1859, 1860, and 1874 maps with data from the Sandy Ground NRHP listing indicates that several of the structures along Crabtree Avenue belonged to African-American families.

The 1874 Beers map (Figure 6) clearly shows these structures along what is now Crabtree Avenue, along with the A.M.E. Church School and cemetery. However, other than the buildings at the Bloomingdale Road terminus, the remainder of the present APE is depicted as vacant, and likely was used for farm fields or woodland. Several informal paths are shown crossing the western end of the APE, connecting to Arthur Kill Road on the north and additional properties on the west.

There appears to have been little change to the overall Woodrow Road APE during the last decades of the nineteenth century and through much of the twentieth century, other than a turnover in ownership for several abutting properties. As noted above, the Guyon family farm became home to the Staudt family during the twentieth century. The Winant/Drinker residence south of the Guyon/Staudt property was attributed to J. Crusar in 1887, was unattributed in 1898, and was owned by the Methodist Church in 1907 (Beers 1887; Robinson 1898 [Figure 7], 1907). These maps all show that other than the structures at the Bloomingdale Road terminus, the entire APE remained undeveloped.

The 1913 Borough of Richmond topographical map (Figure 8) is perhaps the most detailed depiction of the conditions in the APE prior to modern development. It shows the buildings at the eastern end of the APE fronting Bloomingdale Road, and that the APE passed through the rear yards of these parcels, which contained outbuildings and, in the case of the property on the southern side of the APE, a vineyard. The central stretch of the APE remained undeveloped, although it passed next to the southern edges of the lots fronting Crabtree Avenue. Several small outbuildings were located at the far western end of the APE as well, likely associated with properties fronting the dirt roads that criss-crossed the area to the north and south of the APE during this period.

Review of aerial photographs through the twentieth century (e.g. 1924 [Figure 9], additional years on historicaerials.com) shows that there still was little change to the APE over time. Other than the buildings fronting Bloomingdale Avenue, the APE remained undeveloped woodland or farm fields, although the West Shore Expressway and Veterans Road East were in place by the early 1970s. In fact, a 1996 aerial photograph (Figure 10) shows that even as recently as less than 20 years ago, the APE was remarkably similar to its nineteenth-century condition, with undeveloped woodland comprising the majority of the expanse.

The extensive residential development visible today within the APE was quite recent. Department of Building records show that many of the houses on the south side of the present Woodrow Road were constructed in ca. 2000. Because Woodrow Road had not been opened prior to this time (although it existed on paper), the road and its underground utilities were constructed in tandem with the new houses, and at private expense. The section of Woodrow Road from Bloomingdale Road to the eastern edge of the cemetery parcel was in place after ca. 2000, as was the section at the far western end, near Gladwin Avenue. Residents accessed this area from Clay Pit Road, to

the south. The final, central section of present Woodrow Road, parallel to the cemetery, was not built until ca. 2006, in conjunction with those houses on the south side of the road that were erected then. The residences on the north side of Woodrow Road, near Turner Street and Peachtree Lane, were built only within the last few years.

V. CONCLUSIONS

A. Precontact Archaeological Sensitivity and Disturbance Record

From what is known of precontact period settlement patterns on Staten Island, most habitation and processing sites are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water. This part of Staten Island, in particular, has a large number of precontact sites that have been recorded in the vicinity of the APE, many in proximity to Sandy Creek and the drainages in Clay Pit Ponds Park, and there is general agreement among archaeologists that the entire area was once utilized heavily by Native Americans. Those areas in close proximity to fresh water sources have the greatest likelihood of containing precontact archaeological resources, if not disturbed by later development. Within the APE, the western wooded section, located only about 200 feet to the southeast of one of the Clay Pit Ponds Park drainages, is the closest to a fresh water source.

Precontact archaeological potential is heavily dependent on the degree to which the original landform still survives, and areas where there has been substantial land manipulation have a lessened sensitivity. The APE contains many portions where it is clear that the original landform has been substantially eliminated. These include areas where new houses have been built within the last 10-15 years and where grading and filling have occurred for the construction of Woodrow Road itself, including most notably the installation of extensive subsurface utilities beneath the pavement. HPI concludes that there are only a few discrete sections of the APE that may retain precontact sensitivity. These are limited to the wooded section of the APE at its western terminus (although it is presumed some disturbance from earthmoving is present), an island within the roadway that has mature trees and may not have been substantially altered, and two areas on the north side of Woodrow Road that also have trees that may predate the most recent residential development, suggesting less extensive modern disturbance.

B. Historic Period Archaeological Sensitivity and Disturbance Record

Historic research has shown that there are only two portions of the Woodrow Road APE that have had historic period development. The first is the eastern end of the project site where residences were once located fronting Bloomingdale Road. The former Guyon/Staudt family property overlaps the APE on the north. This parcel, now the site of the new P.S. 62 under construction, was studied extensively by archaeologists (Schuyler 1974, AKRF 2009, 2011, 2012). There is no remaining archaeological sensitivity due to the archaeological mitigation of the parcel and the substantial degree of post-mitigation disturbance from the school construction and its staging area effects. The historic properties fronting Bloomingdale Avenue south of the Guyon/Staudt family property are now covered with extensive modern residences and the existing Woodrow Road with its deep subsurface utilities, which have destroyed any potential archaeological resources associated with these former residences and/or yard areas.

However, the APE also includes the area immediately south of the New York City Landmarked Rossville A.M.E. Zion Church Cemetery. Widening of Woodrow Road within the APE will involve removing the berm behind an existing retaining wall, and constructing a new retaining wall at the cemetery lot line. HPI concludes that this area, between the existing retaining wall and the chain link fence that marks the edge of the cemetery lot, could be sensitive for historic resources associated with the cemetery. Although the cemetery is fenced today, it may not always have been enclosed, and the lot boundaries may not have been clearly marked over time. As the cemetery designation report states: "There are those who lie here without benefit of stone or marker..." and their burial locations within the cemetery are unknown (Zavin 1984:4). The possibility that burials could have been placed within the APE cannot be completely ruled out, nor can the subsurface migration of burial remains through bioturbation or other natural processes be completely discounted. For these reasons, HPI concludes that the strip of land south of the cemetery parcel within the APE may be sensitive for historic period archaeological resources. As noted above, HPI concludes that this strip may also be sensitive for precontact resources.

VI. RECOMMENDATIONS

Based on these conclusions, HPI recommends that a limited program of Phase IB archaeological testing be conducted within those discrete areas of the APE identified as archaeologically sensitive and identified on Figures 11a-11b. In addition, HPI recommends that a construction management plan to protect the integrity of the Rossville A.M.E. Zion Cemetery be filed with and approved by the NYSOPRHP and the LPC. This plan could entail the archaeological monitoring of construction work for Woodrow Road in this location abutting the Rossville A.M.E. Zion Cemetery as well as steps to prevent accidental intrusion and/or damage to the Cemetery during the construction process. All archaeological testing and monitoring should be conducted according to applicable archaeological standards (New York Archaeological Council 1994, NYSOPRHP 2005; LPC 2002; CEQR 2014). Professional archaeologists, with an understanding of and experience in comparable archaeological excavation techniques and interpretations, would be required to be part of the archaeological team.

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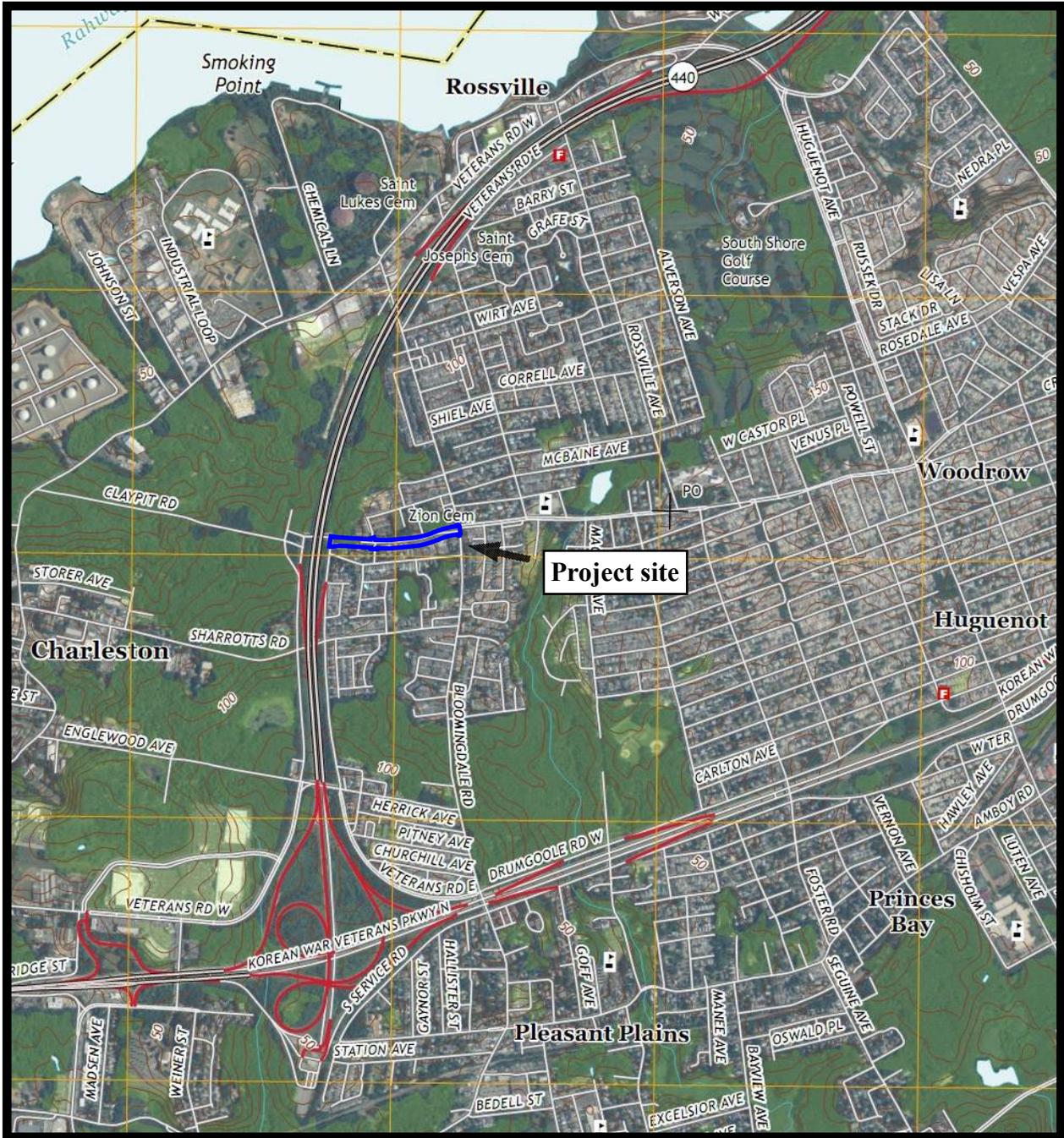
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FIGURES



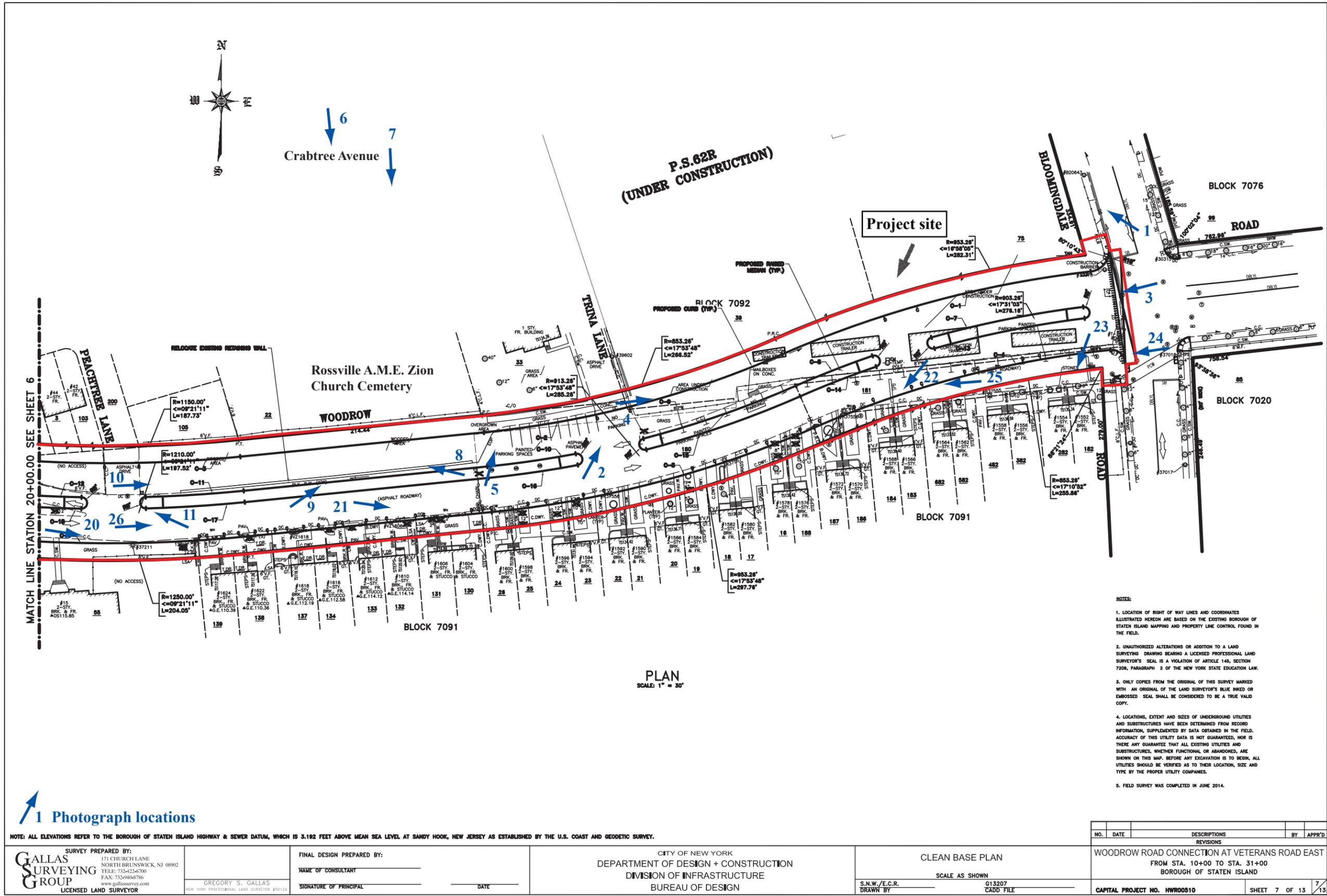
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 Woodrow Road Connection from Bloomingdale Road to
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Figure 1: Project site on *Arthur Kill*, N.Y-N.J. topographic quadrangle (U.S.G.S. 2013).

0 1000 2000 3000 4000 5000 FEET





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 5. FIELD SURVEY WAS COMPLETED IN JUNE 2014.

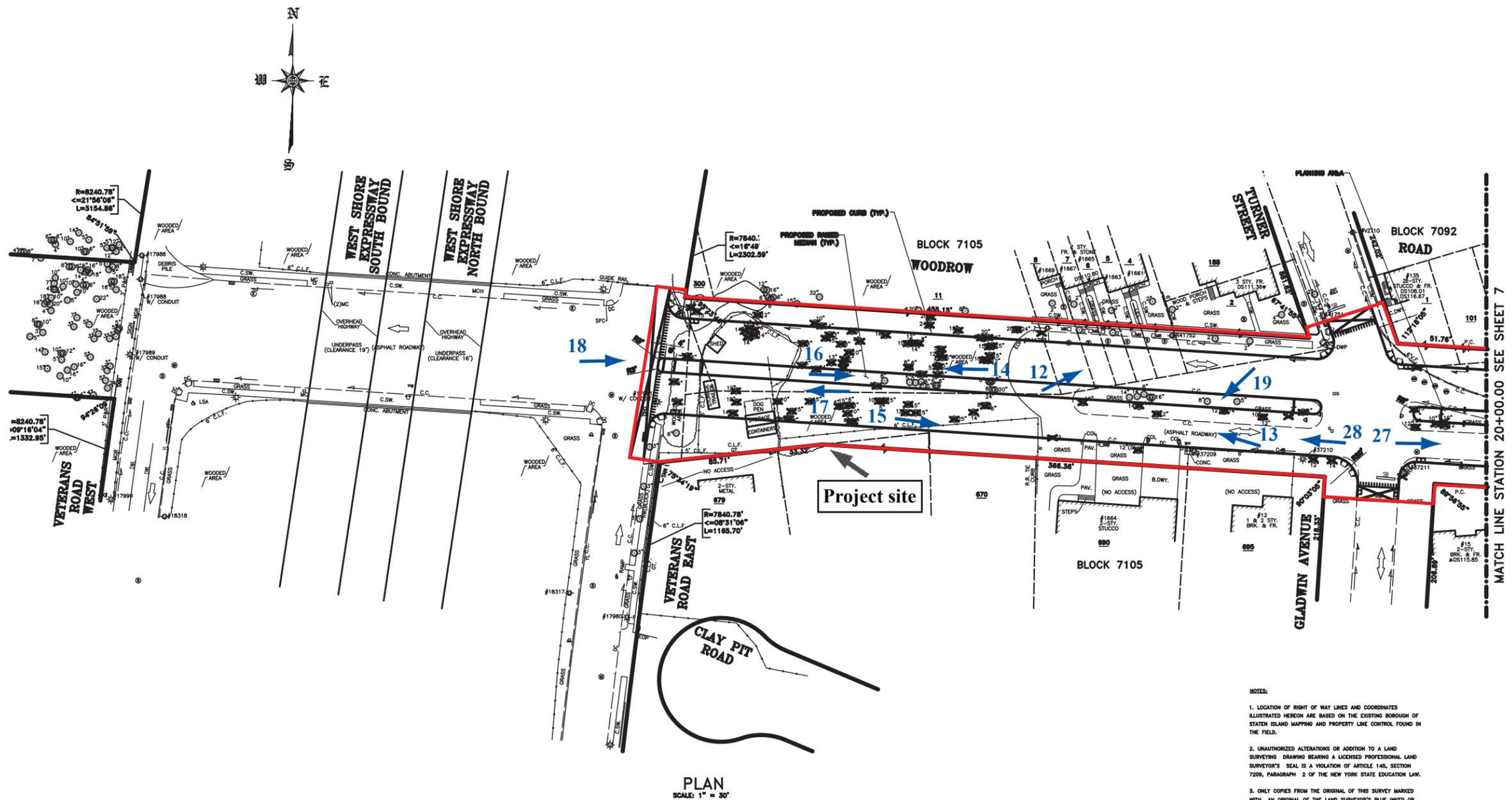
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Figure 2a: Eastern side of project site and photograph locations on modern survey (HPI 2015 and Gallas Surveying Group 2014).

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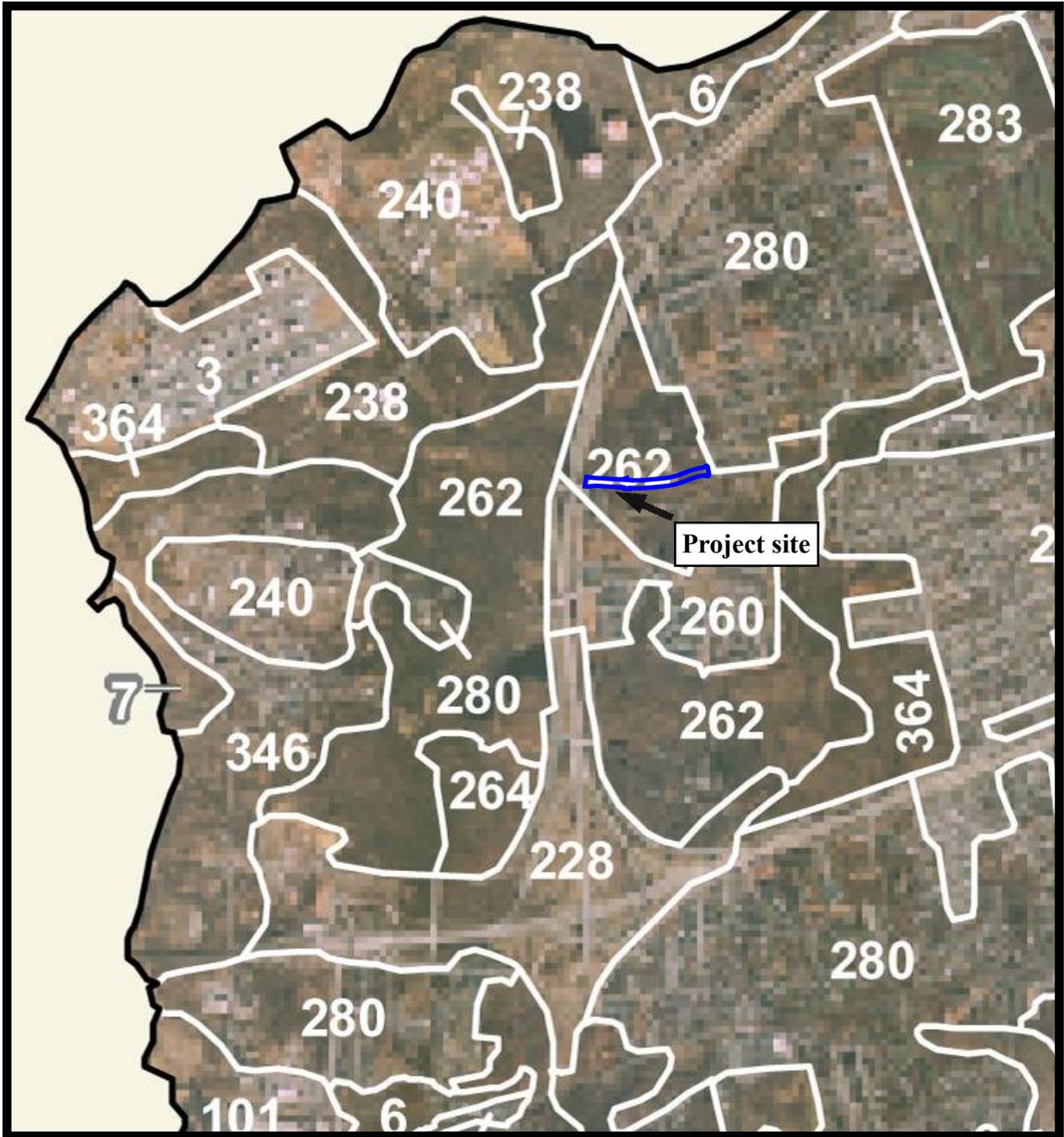
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Figure 2b: Western side of project site and photograph locations on modern survey (HPI 2015 and Gallas Surveying Group 2014).

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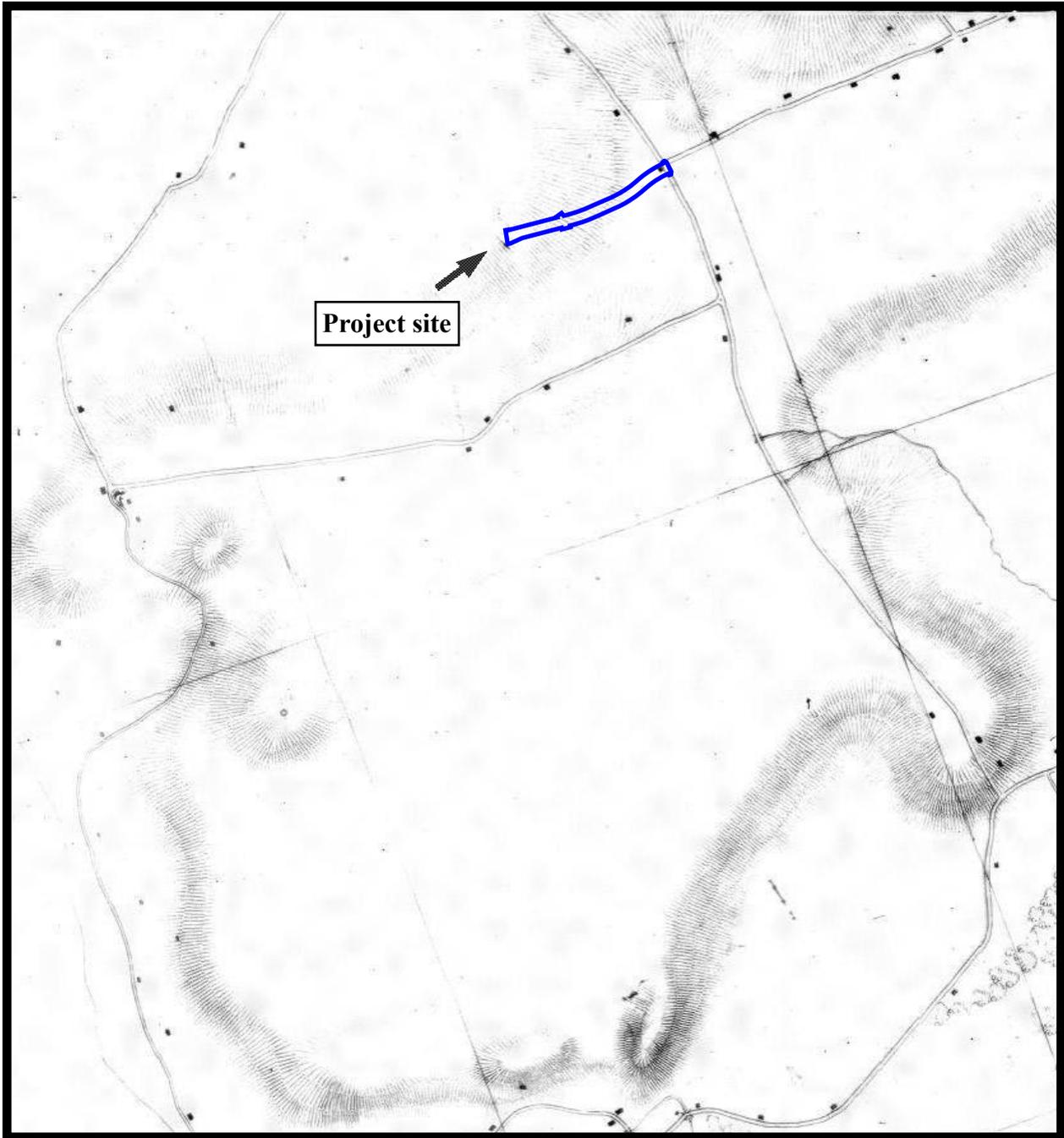
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Figure 3: Project site on *New York City Reconnaissance Soil Survey* (U.S.D.A. 2006).

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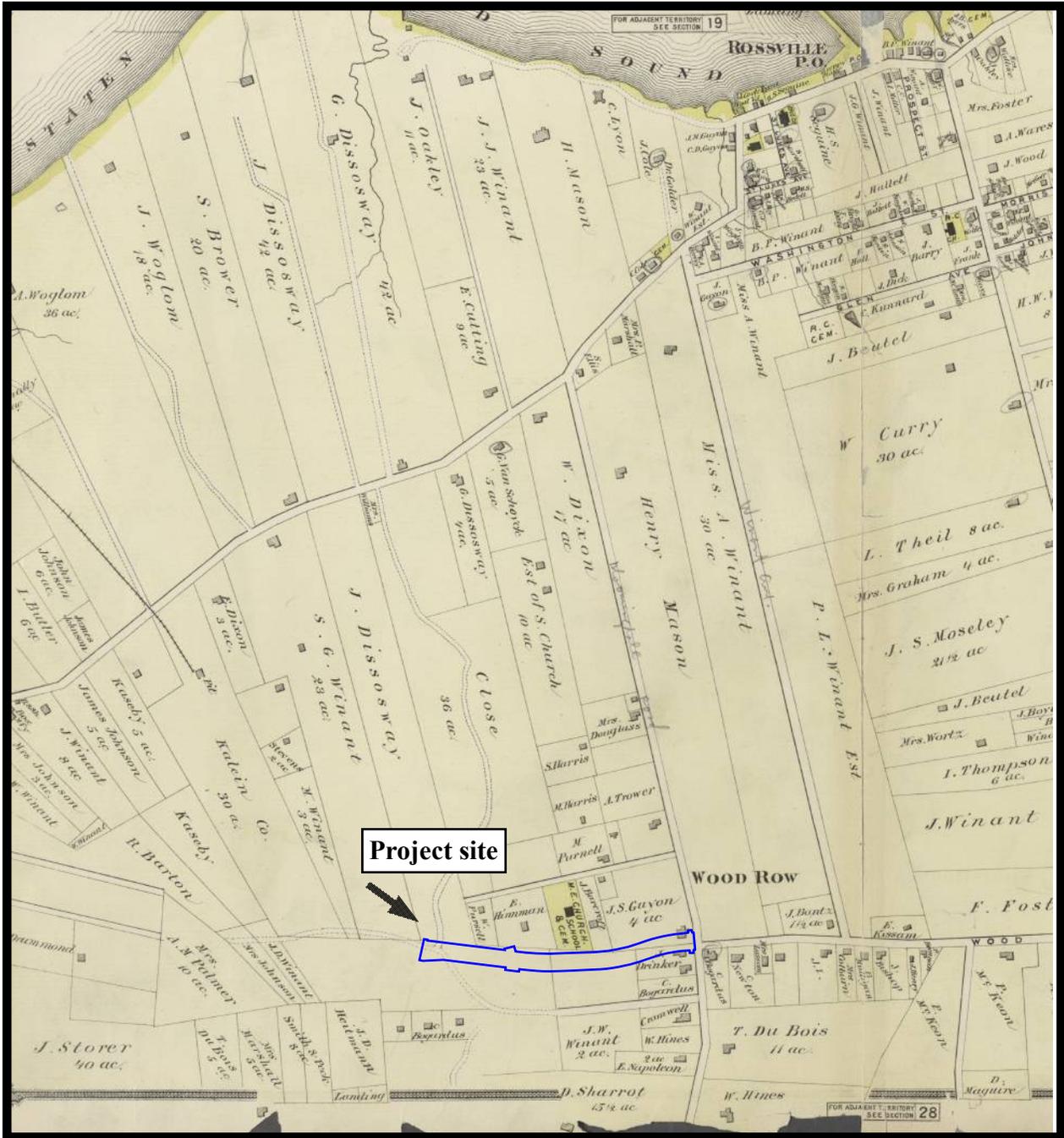


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Figure 4: Project site on *Staten Island* (vicinity of *Fresh Kills* and *Island of Meadows*) (U.S.C.S. 1835-36).





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Woodrow Road Connection from Bloomindgale Road to
Veterans Road East
Staten Island, Richmond County, New York**

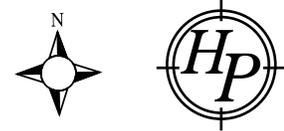
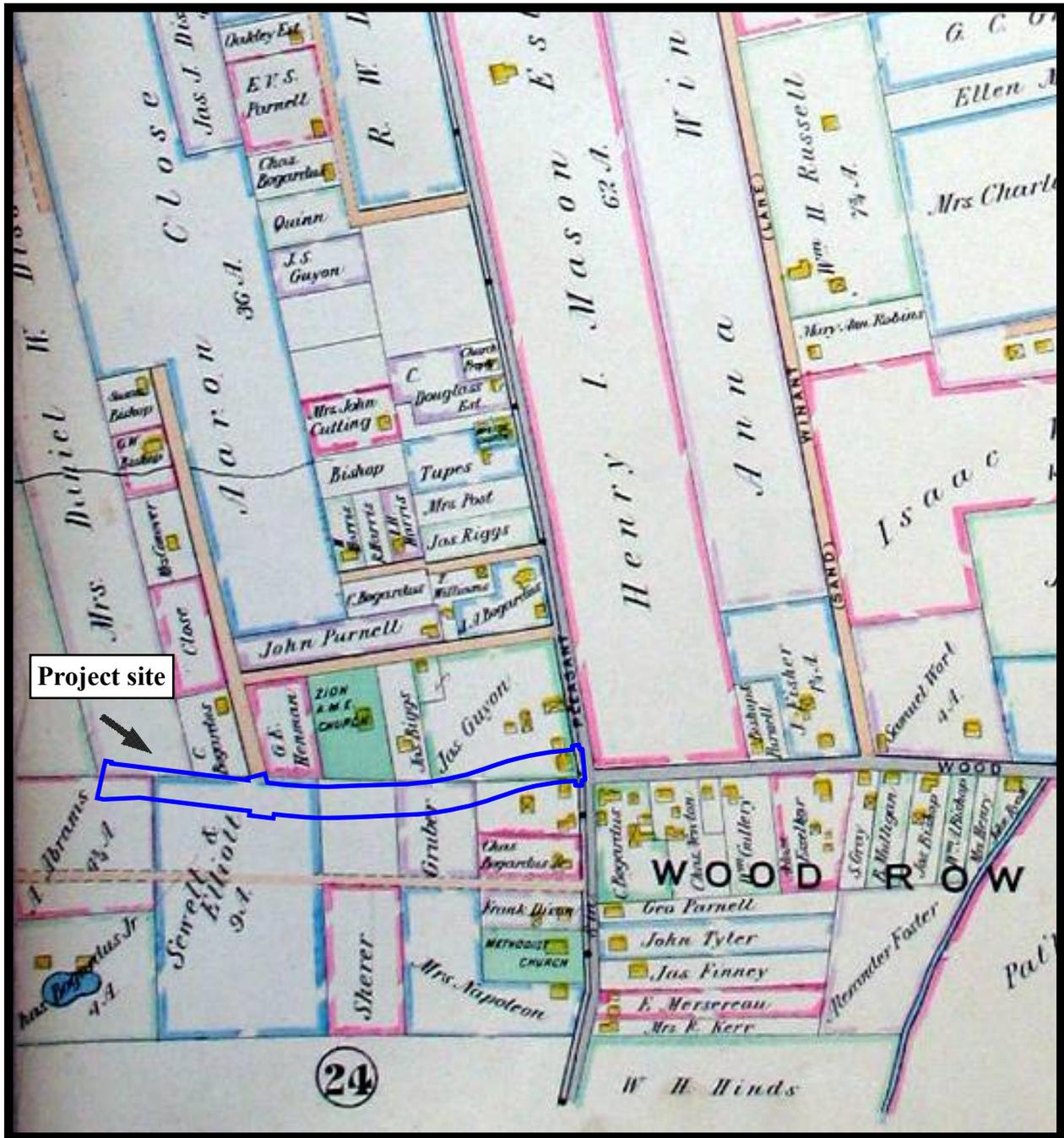


Figure 6: Project site on *Atlas of Staten Island, Richmond County, New York...* (Beers 1874).

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 Woodrow Road Connection from Bloomingdale Road to
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 Staten Island, Richmond County, New York

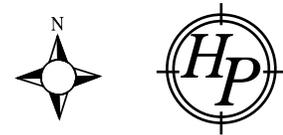
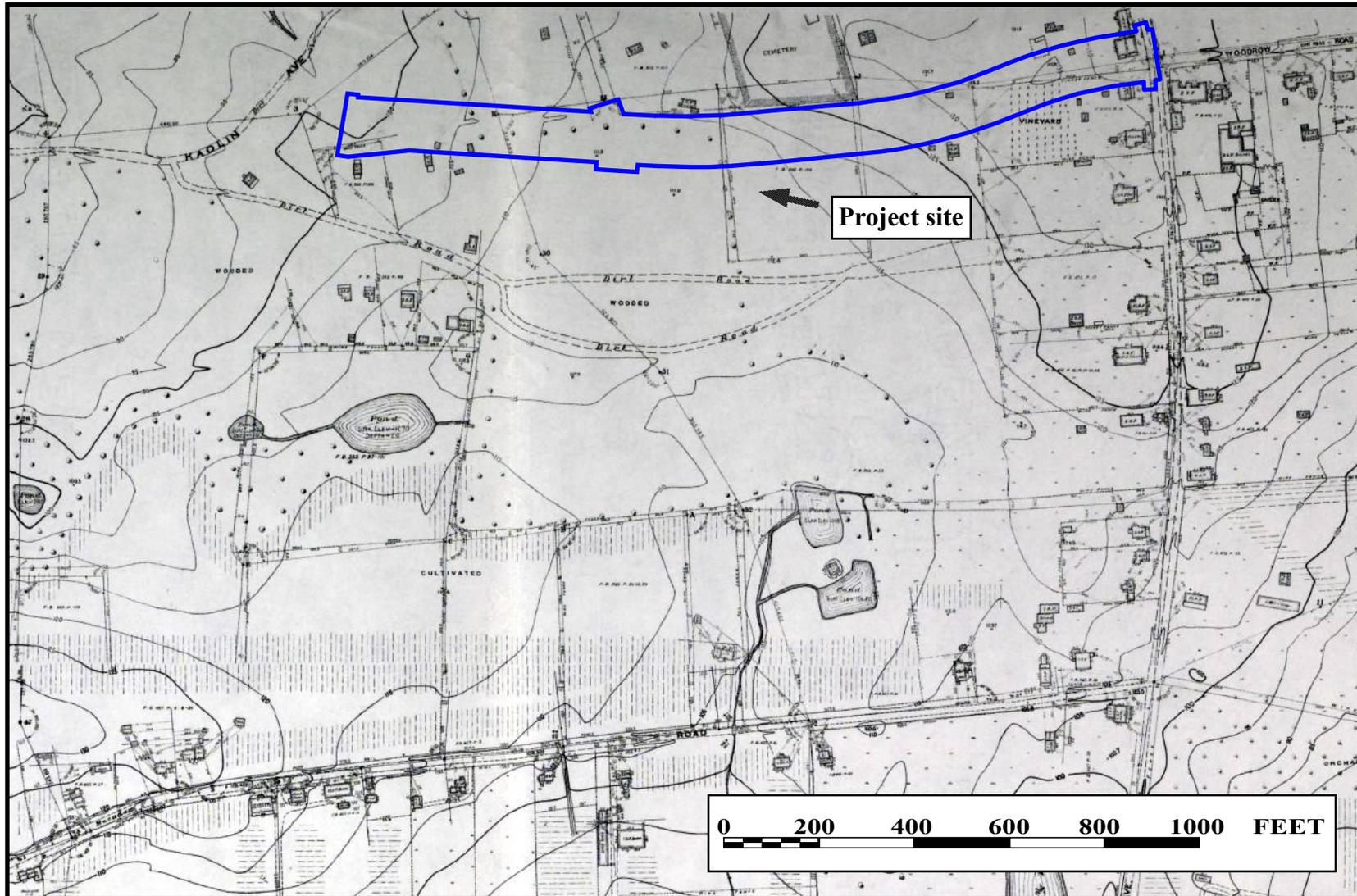


Figure 7: Project site on *Atlas of the Borough of Richmond, City of New York* (Robinson 1898).

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Staten Island, Richmond County, New York

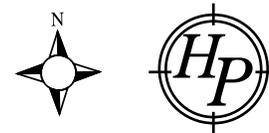
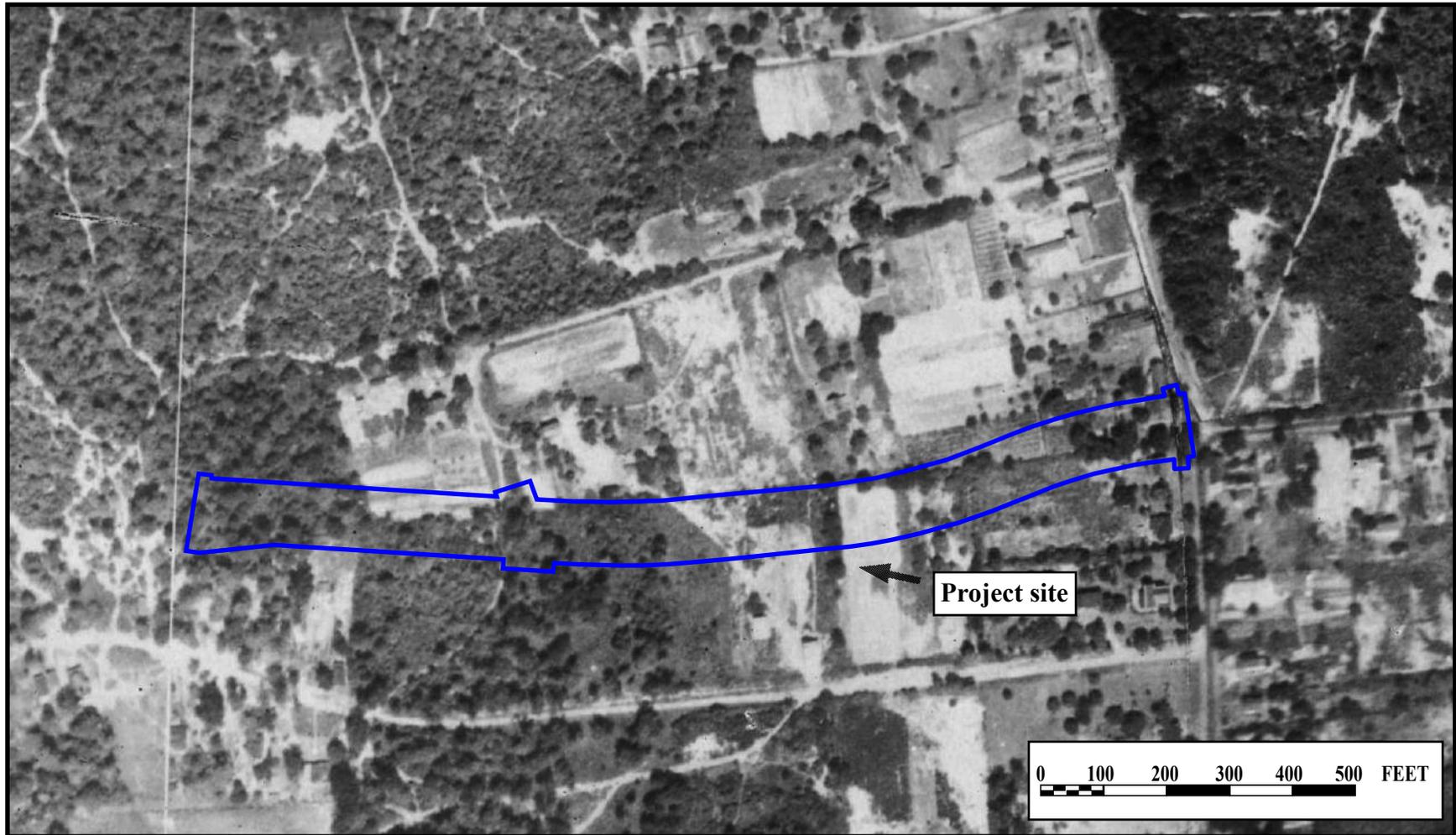


Figure 8: Project site on *Borough of Richmond Topographical Survey* (Borough of Richmond 1913).



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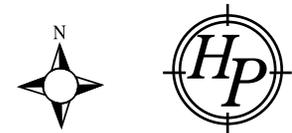
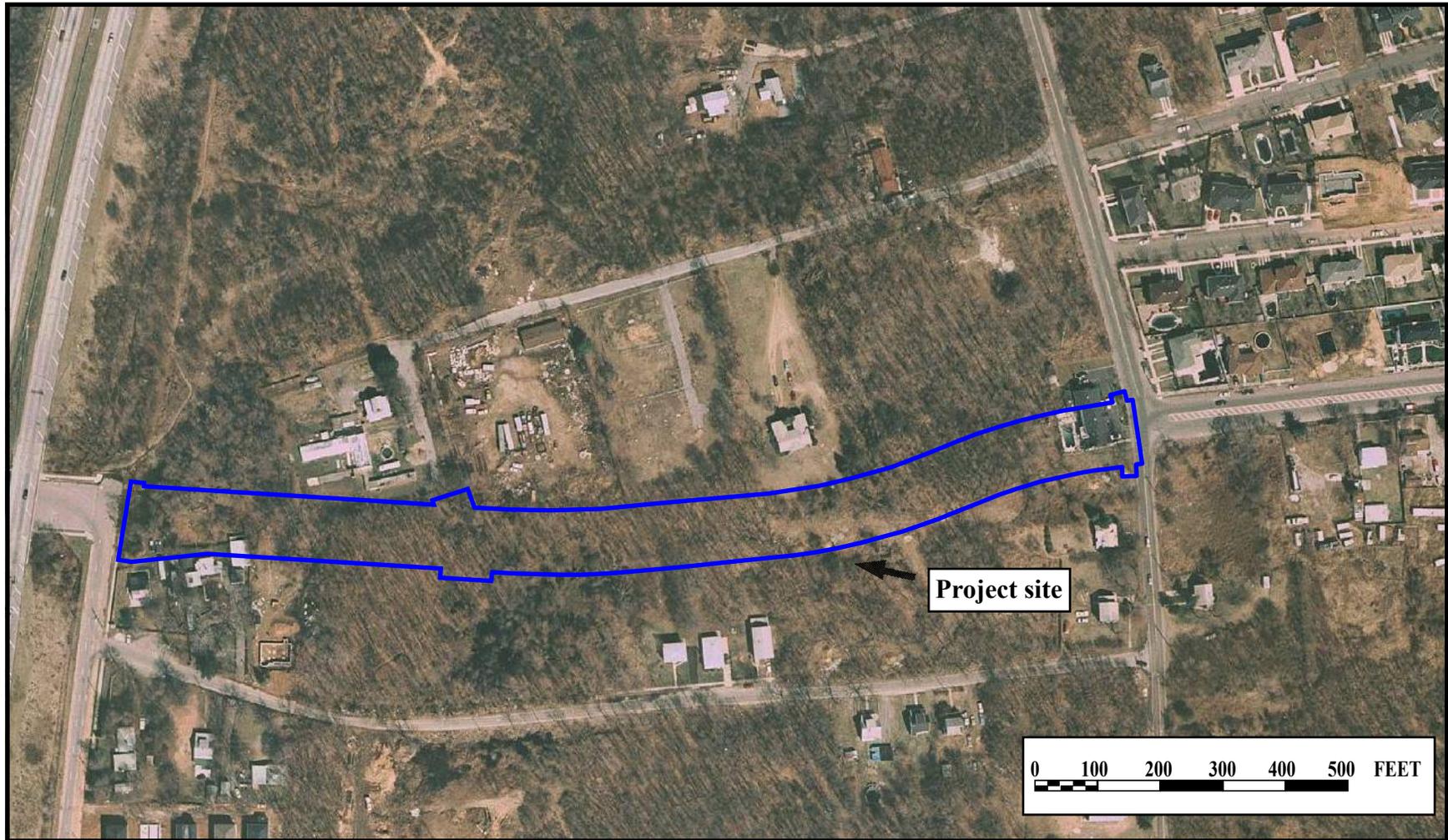


Figure 9: Project site on *Sectional Aerial Maps of the City of New York* (Bureau of Engineering 1924).



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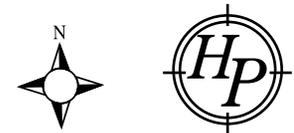
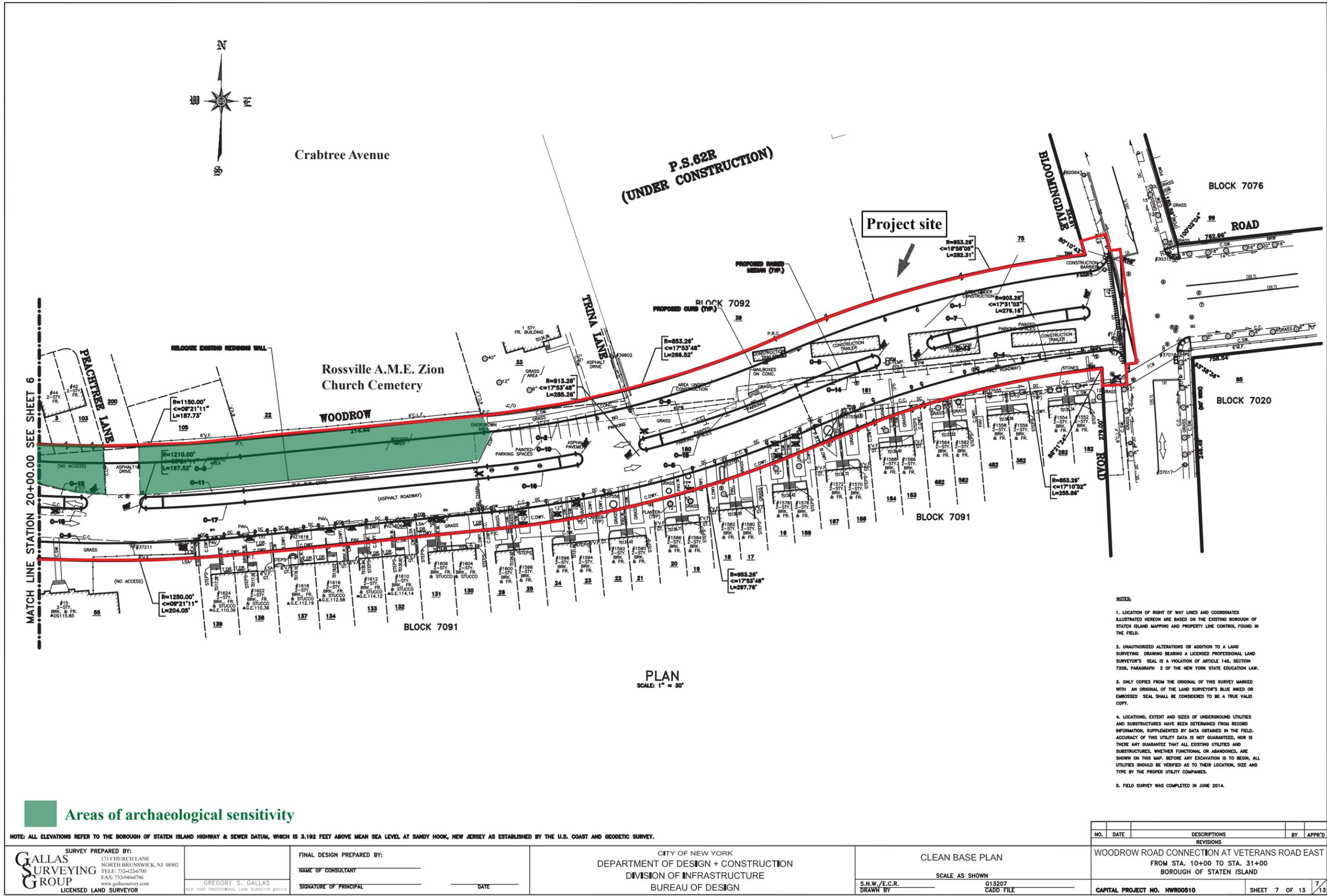


Figure 10: Project site on 1996 aerial photograph.



MATCH LINE STATION 20+00.00 SEE SHEET 6

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SCALE: 1" = 30'

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Areas of archaeological sensitivity

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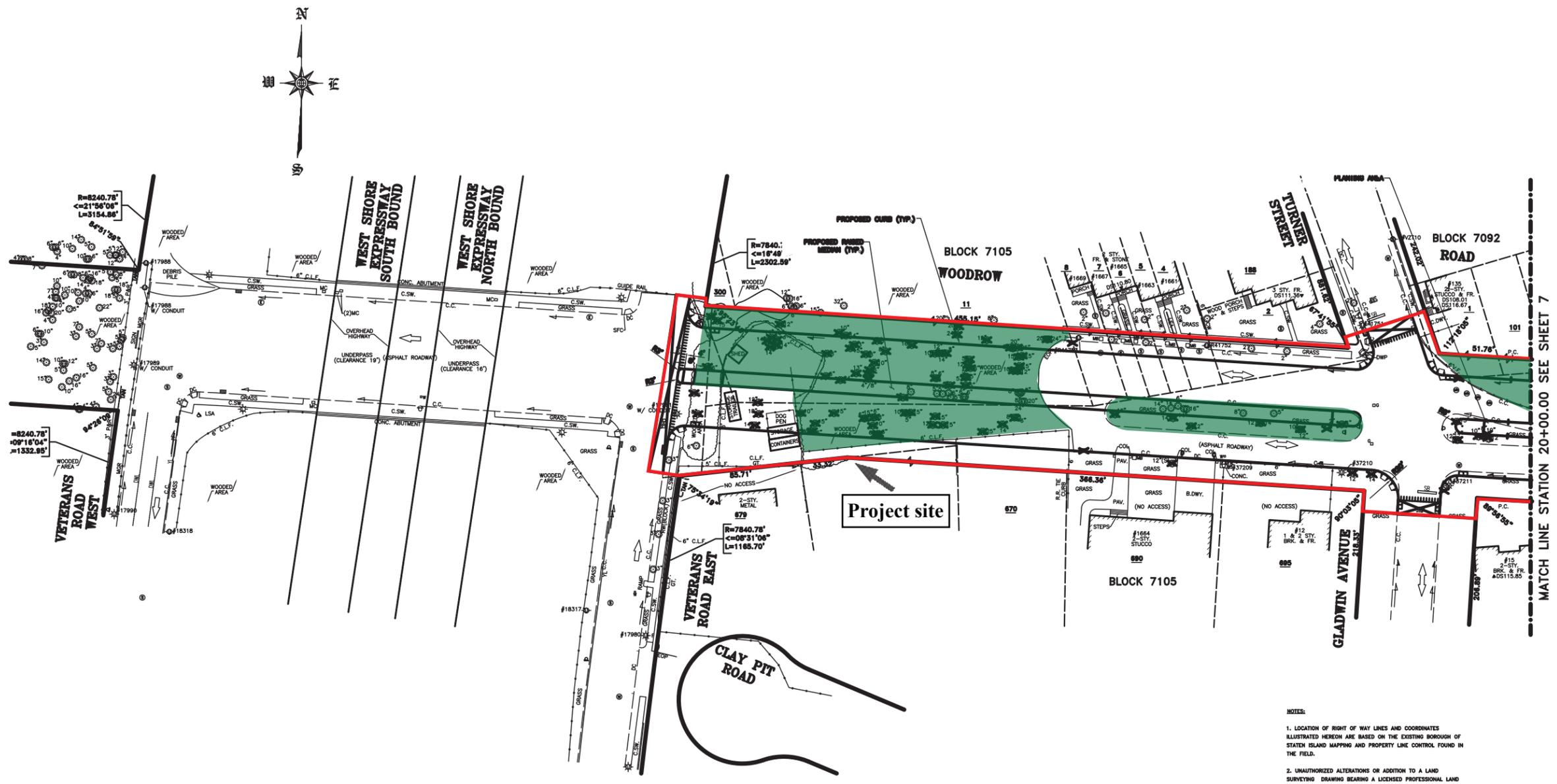
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Figure 11a: Eastern side of project site showing archaeological sensitivity on modern survey (HPI 2015 and Gallas Surveying Group 2014).

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Areas of archaeological sensitivity

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NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
WOODROW ROAD CONNECTION AT VETERANS ROAD EAST FROM STA. 10+00 TO STA. 31+00 BOROUGH OF STATEN ISLAND				
CAPITAL PROJECT NO. HW000510			SHEET 6 OF 13	6/13

Figure 11b: Western side of project site showing archaeological sensitivity on modern survey (HPI 2015 and Gallas Surveying Group 2014).

CONSULTANT DESIGN

PHOTOGRAPHS



Photograph 1: Block 7092, Lots 39 and 75. North side of Woodrow Road at Bloomingdale Road, where new P.S. 62 is being constructed. View looking northwest.



Photograph 2: Block 7092, Lot 39. View of new P.S. 62 construction behind green fence as seen from Woodrow Road. View looking northeast.



Photograph 3: Block 7092, Lots 39 and 75. View of APE used for staging area for P.S. 62 construction. View looking west.



Photograph 4: Block 7092, Lots 39 and 75. View of APE used for staging area for P.S. 62 construction. View looking east.



Photograph 5: Block 7092, Lot 33, with 1960s residence. APE includes paved road and parking area in foreground and existing sidewalk. View looking north.



Photograph 6: Block 7092, Lot 22, Rossville A.M.E. Zion Cemetery, a New York City Landmark. View looking south from entrance on Crabtree Avenue. APE is at tree line in far background.



Photograph 7: Block 7092, Lot 22, detail of Rossville A.M.E. Zion Cemetery, a New York City Landmark. Former church building is in approximate location of paved pathway. View looking south from Crabtree Avenue.



Photograph 8: APE including roadway and area behind retaining wall abutting Block 7092, Lot 22, Rossville A.M.E. Zion Cemetery, a New York City Landmark. View looking northwest from Woodrow Road. Chain link fence in far right background marks edge of cemetery property.



Photograph 9: APE including roadway and area behind retaining wall abutting Block 7092, Lot 22, Rossville A.M.E. Zion Cemetery, a New York City Landmark. View looking northeast from Woodrow Road. Chain link fence in far left background marks edge of cemetery property.



Photograph 10: Block 7092, Lot 105 located behind white fence in left background. APE includes roadway and wooded section in center. View looking east from Peachtree Lane.



Photograph 11: Block 7092, Lots 103, 3, 101, and 1. APE includes paved roadway as well as the area enclosed by white fence in center. View looking northwest.



Photograph 12: Block 7105, Lots 2, 4, 5, 6, 7, and 8. APE includes roadway and parking area in front of residences. View looking northeast.



Photograph 13: Western terminus of existing Woodrow Road, with wooded area portion of APE in background.



Photograph 14: Wooded portion of APE showing trees marked for removal. View looking west.



Photograph 15: Wooded portion of APE showing residences on Block 7105 in background. View looking southeast.



Photograph 16: Wooded portion of APE showing mounded areas and dumping. View looking east.



Photograph 17: Wooded area of APE showing shed in left background and Veterans Road East in center background. View looking west.



Photograph 18: Western end of APE at Veterans Road East showing access to wooded portion. View looking east.



Photograph 19: Block 7105, south side of Woodrow Road showing modern residences. APE includes roadway, median, and strip of land in front of buildings. View looking southwest.



Photograph 20: Block 7091, south side of Woodrow Road, showing modern residences. APE includes roadway and strip of land in front of buildings. View looking east.



Photograph 21: Block 7091, south side of Woodrow Road, showing additional modern residences. APE includes roadway and strip of land in front of buildings. View looking southeast.



Photograph 22: Block 7091, south side of Woodrow Road, showing additional modern residences. APE includes roadway and strip of land in front of buildings. View looking southwest.



Photograph 23: Block 7091, south side of Woodrow Road at Bloomingdale Road, showing modern residence that replaced a nineteenth-century house in this approximate location. View looking southwest.



Photograph 24: Existing Woodrow Road at Bloomingdale Road intersection. Note multiple utilities under roadway. View looking west.



Photograph 25: Existing Woodrow Road west of Bloomingdale Road. Note sewer and gas utilities under pavement. Blue fence on right encloses the P.S. 62 construction site. View looking west.



Photograph 26: Existing Woodrow Road APE. Note wide utility trench in foreground. Cemetery parcel is in left rear, behind retaining wall. View looking east.

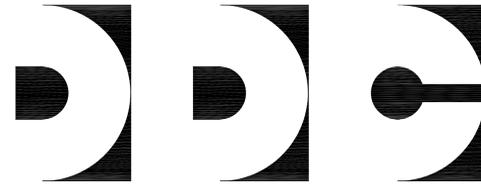


Photograph 27: Existing Woodrow Road APE. Note wide utility trench in foreground. View looking east.



Photograph 28: Existing Woodrow Road APE. Note island/median in center. View looking west.

APPENDIX A: COMPLETE PROJECT PLANS

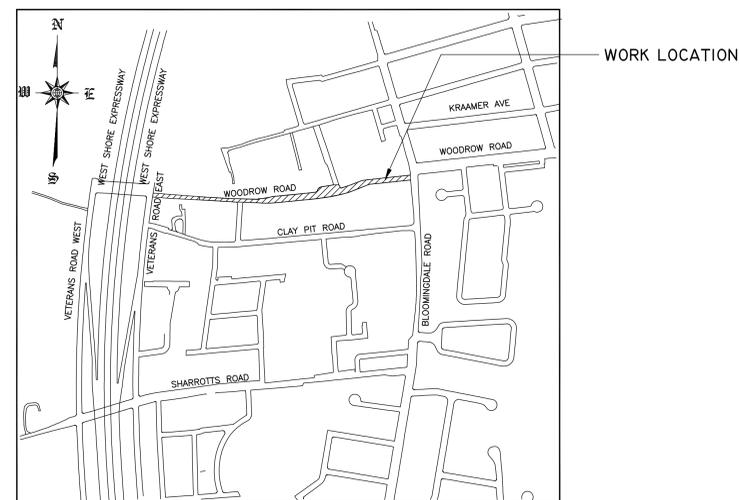
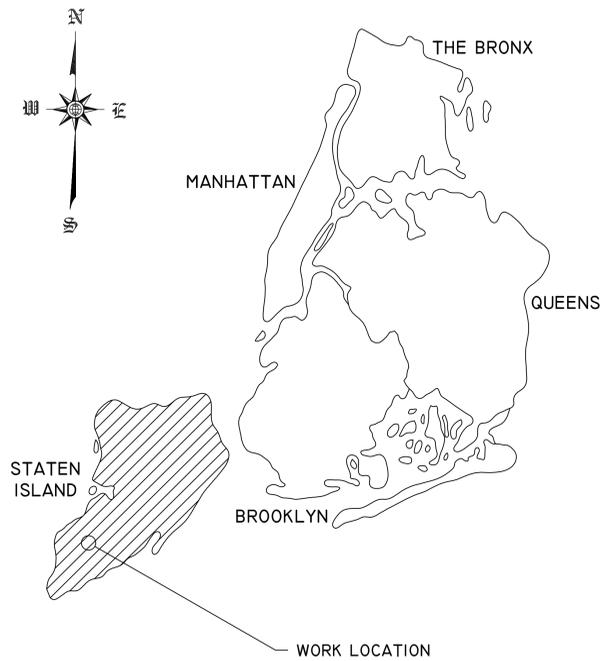


**NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION**

DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN
PROJECT ID: HWR00510

TOPOGRAPHICAL SURVEY FOR WOODROW ROAD CONNECTION AT VETERAN'S ROAD EAST

FROM BLOOMINGDALE ROAD TO VETERAN'S ROAD EAST
BOROUGH OF STATEN ISLAND



LOCATION PLAN
N.T.S.
COMMUNITY BOARD NO. 3

ERIC MACFARLANE, P.E. DEPUTY COMMISSIONER	DATE
YUN FOY (DINO) NG, P.E. ASSOCIATE COMMISSIONER	DATE
MOHSEN ZARGARELAHI, P.E. ASSISTANT COMMISSIONER	DATE
ALI MALLICK, P.E. DEPUTY ASSISTANT COMMISSIONER	DATE
REVIEWED AND APPROVED BY:	
BAHMAN FOUR-AZAR DIRECTOR	DATE
MING WONG, P.E. ENGINEER-IN-CHARGE	DATE

FINAL DESIGN PREPARED BY:

P.E. NO. DATE

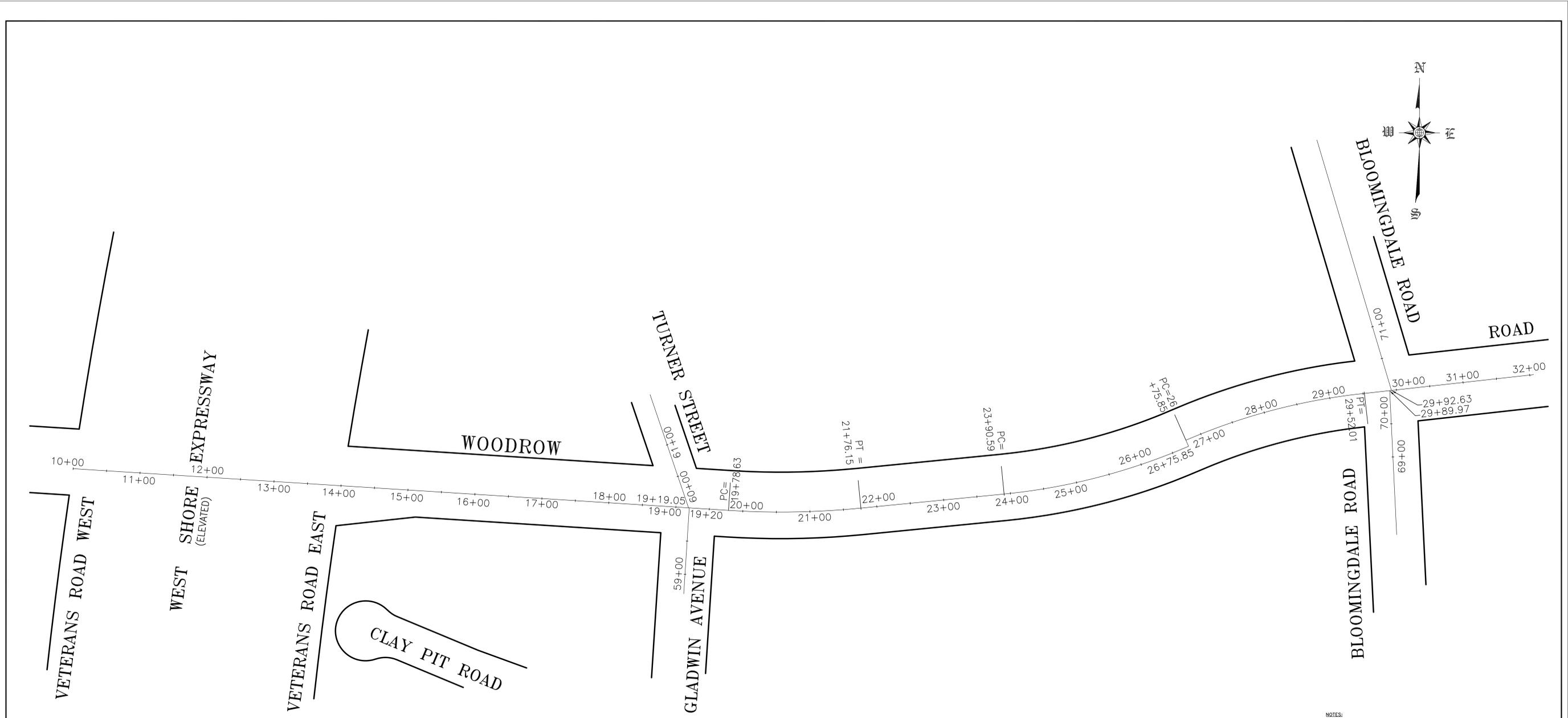
SURVEY PREPARED BY:

**GALLAS
SURVEYING
GROUP**
LICENSED LAND SURVEYOR

171 CHURCH LANE
NORTH BRUNSWICK, NJ 08902
TELE: 732-422-6700
FAX: 732-940-8786
www.gallasurvey.com

NO.	DATE	DESCRIPTIONS	BY	APPR'D
PROJECT ID: HWR00510		DATE: 9-19-2014	SHEET 1 OF 14	1/14

PROJECT ID HWR00510



KEY PLAN
SCALE: 1" = 60'

TABLE OF CONTENTS		
SECTION	SHEETS	DESCRIPTION
2	2	KEY PLAN
3	3	LEGEND AND ABBREVIATIONS
4	4	SURVEY CONTROL
5	5 - 6	TOPOGRAPHIC PLAN
6	7 - 8	CLEAN BASE PLAN
7	9 - 10	UTILITY PLAN AND PROFILE
8	11 - 14	HIGHWAY PROFILE
	14	TOTAL

- NOTES:
1. LOCATION OF RIGHT OF WAY LINES AND COORDINATES ILLUSTRATED HEREON ARE BASED ON THE EXISTING BOROUGH OF STATEN ISLAND MAPPING AND PROPERTY LINE CONTROL FOUND IN THE FIELD.
 2. UNAUTHORIZED ALTERATIONS OR ADDITION TO A LAND SURVEYING DRAWING BEARING A LICENSED PROFESSIONAL LAND SURVEYOR'S SEAL IS A VIOLATION OF ARTICLE 145, SECTION 7209, PARAGRAPH 2 OF THE NEW YORK STATE EDUCATION LAW.
 3. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S BLUE INKED OR EMBOSSED SEAL SHALL BE CONSIDERED TO BE A TRUE VALID COPY.
 4. LOCATIONS, EXTENT AND SIZES OF UNDERGROUND UTILITIES AND SUBSTRUCTURES HAVE BEEN DETERMINED FROM RECORD INFORMATION, SUPPLEMENTED BY DATA OBTAINED IN THE FIELD. ACCURACY OF THIS UTILITY DATA IS NOT GUARANTEED, NOR IS THERE ANY GUARANTEE THAT ALL EXISTING UTILITIES AND SUBSTRUCTURES, WHETHER FUNCTIONAL OR ABANDONED, ARE SHOWN ON THIS MAP. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES.
 5. FIELD SURVEY WAS COMPLETED IN JUNE 2014.

SURVEY PREPARED BY:
GALLAS SURVEYING GROUP
 171 CHURCH LANE
 NORTH BRUNSWICK, NJ 08902
 TELE: 732-422-6700
 FAX: 732-948-8786
 www.gallasurvey.com
 LICENSED LAND SURVEYOR

FINAL DESIGN PREPARED BY:
 NAME OF CONSULTANT _____
 SIGNATURE OF PRINCIPAL _____
 DATE _____
 GREGORY S. GALLAS
 NEW YORK PROFESSIONAL LAND SURVEYOR #50124

CITY OF NEW YORK
 DEPARTMENT OF DESIGN + CONSTRUCTION
 DIVISION OF INFRASTRUCTURE
 BUREAU OF DESIGN

KEY PLAN
 SCALE AS SHOWN
 S.N.W./E.C.R. _____
 DRAWN BY _____
 G13207
 CADD FILE

NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
WOODROW ROAD CONNECTION AT VETERANS ROAD EAST FROM STA. 10+00 TO STA. 20+00 BOROUGH OF STATEN ISLAND				
CAPITAL PROJECT NO. HWR00510			SHEET 2 OF 14	2/14

ABBREVIATIONS

ABANDONED	ABDN.
APARTMENT	APT.
ASPHALT	ASPH.
BASEMENT	BSMT.
BITUMINOUS	BIT.
BLOCK	BLK.
BLUESTONE	B.S.
BLUESTONE CURB	B.S.C.
BLUESTONE WALK	B.S.W.
BOTTOM	BOT.
BOTTOM OF CURB	BC
BOTTOM OF WALL	BW
BRICK	BRK.
BRICK WALL	BRW.
BRICK DRIVEWAY	B.DWY.
BUILDING	BLDG.
BUILT	BLT.
CAST IRON	C.I.
CENTER LINE	C.L.
CHAIN LINK FENCE	C.L.F.
CHAMBER	CH.
CLASS NUMBER	CL. #
COMBINED	COMB.
COMMERCIAL	COMM.
CONCRETE	CONC.
CONCRETE CURB	C.C.
CONCRETE DRIVEWAY	C.DWY.
CONCRETE SIDEWALK	C.SW.
CONCRETE WALL	C.W.
DASHED WHITE LINE	DWL
DEPRESSED CURB	DC
DIAMETER	DIA.
DOOR SILL	DS
DOUBLE BARREL	D.B.
DOUBLE YELLOW LINE	DBLYL
DOWN	DN.
DRAWING	DWG.
DUCTILE IRON PIPE	D.I.P.
E.O.P.	E.O.P.
EXISTING	EXIST.
EXTRA STRENGTH VITRIFIED PIPE	E.S.V.P.
FIRE ALARM	F.A.
FINISHED FLOOR	FF
FIRE DEPARTMENT	F.D.
FLAG POLE	FP
FLARED END SECTION	FES
FLAT TOP REINFORCED CONCRETE	F.T.R.C.
FRAME	FR.
GE	GARAGE ENTRANCE
GATE	GT.
GRANITE	GRAN.
GRANITE CURB	GRAN. C.
GRATE	GRT.
INACCESSIBLE	INACC.
INTERCEPTOR	INT.
INVERT ELEVATION	INV.
IRREGULAR	IRR.
LANDSCAPED AREA	LSA
MANHOLE	MH
METAL FENCE	M.F.
NOT IN CONTRACT	N.I.C.
NOT TO SCALE	N.T.S.
PAVEMENT	PVMT.
PAVED DRIVEWAY	PDW
PAVED SIDEWALK	PSW
PAVER WALK	PAV.W.
PLYWOOD	P.W.
POINT OF CURVATURE	P.C.
POINT OF INTERSECTION	P.I.
POINT OF TANGENCY	P.T.
POINT OF REVERSE CURVATURE	P.R.C.
PORCH ELEVATION	PE
RADIUS	R
RAILROAD TIE	R.R. TIE
REINFORCED CONCRETE PIPE	R.C.P.
RETAINING WALL	R.W.
ROADWAY	R.DWY.
SANITARY SEWER	SAN. SWR.
SIDEWALK	SW.
STANDARD	STD.
STEAM	ST.
STEEL	STL.
STEEL FACED CURB	SFC
STEEL NOSED CURB	S.N.C.
STOP BAR	SB
STONE	STN.
STORM	STM.
STORY	STY.
TOP OF CURB	TC
TOP OF WALL	TW
TRAFFIC SIGN	T.S.
TRENCH DRAIN	T.D.R.
VACANT	VAC.
VINYL FENCE	V.F.
WORKING POINT	W.P.
YELLOW LINE	YL

LEGEND

MANHOLES	EXISTING
ELECTRIC	ⓔ
CABLE TV	ⓐ
TELEPHONE	Ⓣ
TRAFFIC	Ⓣ
NYC MH	Ⓜ NYC
GAS	ⓐ
WATER	ⓐ
FIRE DEPT.	ⓐ
SUBWAY	ⓐ
COAL CHUTE	ⓐ
STORM SEWER	ⓐ
COMBINED SEWER	ⓐ
SANITARY SEWER	ⓐ
INTERCEPTOR SEWER	ⓐ
UNIDENTIFIED MANHOLE (NO RECORD AVAILABLE)	ⓐ
BUILT MANHOLE REPLACED BY NEW MANHOLE	ⓐ
RECORD MANHOLE	ⓐ
HARDWARE RIM EL. & INV. EL. (SEWER, ETC.)	ⓐ
BASINS	
CATCH BASIN WITH CURB PIECE - TYPE 1	— 1
CATCH BASIN WITHOUT CURB PIECE - TYPE 2	— 2
CATCH BASIN WITHOUT CURB PIECE - TYPE 3	— 3
EXISTING CATCH BASIN TO BE REMOVED	—
TO BE ABANDONED	—
TO BE MODIFIED	—
TO BE ADJUSTED	—
CATCH BASIN - NON-STANDARD	—
NEW CATCH BASIN TO BE CONSTRUCTED IN SAME LOCATION AS OLD BASIN	—
INLET	—
SEEPAGE BASIN	—
FLARED END SECTION	—
HYDRANTS	
LOW PRESSURE HYDRANT	—
HIGH PRESSURE HYDRANT	—
LOW PRESSURE HYDRANT TO BE RELOCATED	—
HIGH PRESSURE HYDRANT TO BE RELOCATED	—
LOW PRESSURE HYDRANT TO BE ADJUSTED (VERTICALLY)	—
HIGH PRESSURE HYDRANT TO BE ADJUSTED (VERTICALLY)	—
SIAMESE CONNECTION	—
STREET LIGHTING AND TRAFFIC SIGNALS	
LIGHT POLE BASE	—
TRAFFIC SIGNAL	—
PEDESTRIAN SIGNAL	—
TRAFFIC SIGNAL W/PEDESTRIAN SIGNAL	—
WOOD UTILITY POLE	—
WOOD UTILITY POLE W/FIRE ALARM BOX	—
WOOD UTILITY POLE W/PEDESTRIAN SIGNAL	—
WOOD UTILITY POLE W/TRAFFIC SIGNAL	—
WOOD UTILITY POLE W/TRAFFIC SIGNAL & PED. SIGNAL	—
WOOD UTILITY POLE W/STREET LIGHT	—
WOOD UTILITY POLE W/STREET LIGHT & FIRE ALARM BOX	—
WOOD UTILITY POLE W/STREET LIGHT & PEDESTRIAN SIGNAL	—
WOOD UTILITY POLE W/STREET LIGHT & TRAFFIC SIGNAL	—
WOOD UTILITY POLE W/STREET LIGHT, TRAF. SIGNAL & PED. SIGNAL	—
METAL STREET LIGHT	—
METAL STREET LIGHT W/PEDESTRIAN SIGNAL	—
METAL STREET LIGHT W/TRAFFIC SIGNAL	—
METAL STREET LIGHT W/TRAFFIC SIGNAL & PEDESTRIAN SIGNAL	—

LEGEND

VALVE BOXES	EXISTING
GAS	ⓐ
WATER	ⓐ
STEAM	ⓐ
TREES	
EXISTING TREE (SIZE AS LABELED)	—
EXISTING TREE TO BE REMOVED	—
NEW TREE TO BE PLANTED	—
SHRUB	—
HEDGE (HEIGHT AS LABELED)	—
MISCELLANEOUS	
VAULT (SIDEWALK)	—
CELLAR WINDOW GRATING	—
CELLAR DOOR	—
SUBWAY GRATING	—
SURFACE WATER FLOW	—
TRAFFIC DIRECTION	—
PARKING METER	—
OIL FILL CAP OR OIL VENT	—
FIRE ALARM BOX	—
POLICE CALL BOX	—
MAIL BOX, PUBLIC PHONE	—
COLUMN - FOUNDATION (OF ELEVATED STRUCTURES)	—
HEADER	—
BUS PAD	—
SIGN (GROUND MOUNTED)	—
SIGN (OVERHEAD)	—
TRAIN STATION ENTRANCE	—
SHAFT TO BUILDING BASEMENT	—
PEDESTRIAN RAMP	—
CURB (CONCRETE UNLESS OTHERWISE INDICATED)	—
CURB WITH DROP CURB (DRIVEWAY)	—
RADIUS OF CURB CORNER (IF NOT STANDARD 12')	—
EDGE OF PAVEMENT WITHOUT CURB	—
PROPOSED CONSTRUCTION (TOP OF CURB) ELEVATION AND STATION	—
ROCK OUTCROP	—
NORTH ARROW	—
BARRIERS	
BEAM TYPE WALL BARRIER	—
PORTABLE PRECAST CONCRETE BARRIER	—
CAST IN PLACE CONCRETE BARRIER	—
RETAINING WALL (W/TYPE)	—
RAILROAD/TROLLEY TRACK	—
FENCE (WITH HEIGHT AND TYPE)	
CHAIN LINK FENCE	—
VINYL FENCE	—
IRON PICKET FENCE	—
WIRE FENCE	—
IRON ON CONCRETE COPING	—
WOOD PICKET FENCE	—
GUARD POST	—
BUILDINGS	
HOUSE INFORMATION	—
STAIRS OR STOOPS	—
CANOPY	—

LEGEND

CONDUITS	EXISTING
6" WATER MAIN	—
8" WATER MAIN	—
12" WATER MAIN	—
16" WATER MAIN	—
20" WATER MAIN	—
24" WATER MAIN	—
30" WATER MAIN	—
36" WATER MAIN	—
42" WATER MAIN	—
48" WATER MAIN	—
54" WATER MAIN	—
60" WATER MAIN	—
66" WATER MAIN	—
72" WATER MAIN	—
84" WATER MAIN	—
96" WATER MAIN	—
STORM SEWER (WITH SIZE - LESS THAN 24")	—
STORM SEWER (WITH SIZE - 24" AND GREATER)*	—
SANITARY SEWER (WITH SIZE - LESS THAN 24")	—
SANITARY SEWER (WITH SIZE - 24" AND GREATER)*	—
COMBINED SEWER (WITH SIZE - LESS THAN 24")	—
COMBINED (WITH SIZE - 24" AND GREATER)*	—
INTERCEPTOR SEWER (WITH SIZE - LESS THAN 24")	—
INTERCEPTOR SEWER (WITH SIZE - 24" AND GREATER)*	—
CATCH BASIN CONNECTION	—
GAS LINE (WITH SIZE)	—
STEAM (WITH SIZE)	—
ELECTRIC	—
TELEPHONE	—
CABLE	—
FIRE ALARM	—
OVERHEAD (AERIAL) UTILITY LINE	—
TA SUBWAY CONDUIT	—

LEGAL DATA

LOT & BLOCK NUMBER	39 BLOCK 2109
ESTABLISHED/LEGAL GRADE	—
ANGLE	86°30'48"
BLOCK LENGTH	167.01' (65.75 m)
INTERPOLATED/CALCULATED ANGLE OR LENGTH	[86°30'48"] [167.01'(65.75 m)]
PROPERTY POSSESSION LINE	—
MAPPED PROPERTY LINE (RIGHT-OF-WAY LINE)	—
LOT LINE	—
SURVEY MONUMENT (CITY) - IDENTIFY BY TOPO NUMBER	BM#
BENCH MARK (LABEL)	BM#
SURVEY CONTROLS	
CONTROL SURVEY TRAVERSE	—
CENTER LINE BASE LINE	—

* LINE SPACING IN SYMBOL TO BE SCALED TO CONDUIT SIZE

GALLAS SURVEYING GROUP
 SURVEY PREPARED BY:
 171 CHURCH LANE
 NORTH BRUNSWICK, NJ 08902
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 FAX: 732-940-8786
 www.gallasurveying.com
 LICENSED LAND SURVEYOR

GREGORY S. GALLAS
 NEW YORK PROFESSIONAL LAND SURVEYOR #50124

FINAL DESIGN PREPARED BY:
 NAME OF CONSULTANT
 SIGNATURE OF PRINCIPAL
 DATE

CITY OF NEW YORK
 DEPARTMENT OF DESIGN + CONSTRUCTION
 DIVISION OF INFRASTRUCTURE
 BUREAU OF DESIGN

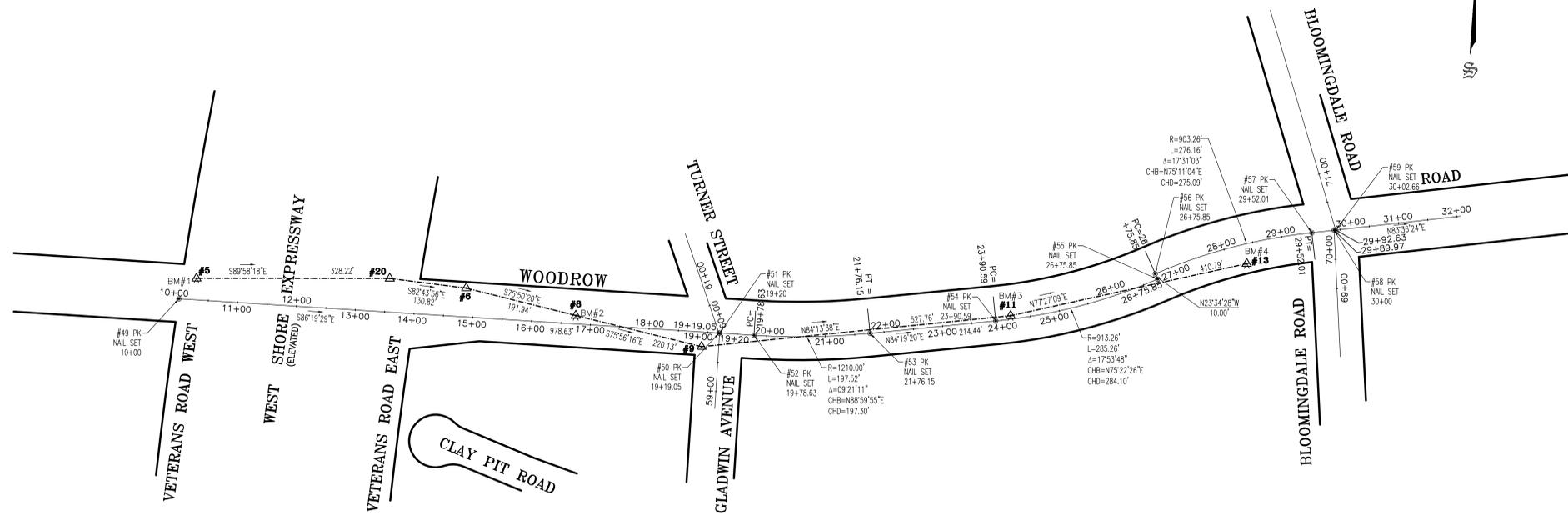
LEGEND
 SCALE AS SHOWN
 S.N.W./E.C.R.
 DRAWN BY
 G13207
 CADD FILE

WOODROW ROAD CONNECTION AT VETERANS ROAD EAST
 FROM STA. 10+00 TO STA. 20+00
 BOROUGH OF STATEN ISLAND
 CAPITAL PROJECT NO. HWR00510
 SHEET 3 OF 14
 3/14

TRAVERSE STATION TABLE							
STREET	POINTS	RADIUS LENGTH/ DISTANCE	DELTA ANGLE/ BEARING	POINT NUMBER	SOUTHERLY COORDINATE	WESTERLY COORDINATE	STATION (OFFSET R OR L)
WOODROW ROAD	5 TO 20	328.22	S 89-58-18 E	20	42643.1170	50540.5220	10+27.48 L
	20 TO 6	130.82	S 82-43-56 E	6	42659.8280	50082.5360	14+85.59 L
	6 TO 8	191.94	S 75-50-20 E	8	42706.7860	49896.4280	16+74.33 L
	8 TO 9	220.13	S 75-56-16 E	9	42760.2720	49682.8970	18+90.85 R
	9 TO 11	527.76	N 84-13-38 E	11	42707.1870	49157.8130	24+16.75 L
	11 TO 13	410.79	N 77-27-09 E	13	42617.9420	48756.8310	28+31.61 R

BENCHMARK TABLE		
BENCHMARK	ELEVATION	DESCRIPTION
BM1	87.63	X PK NAIL IN ASPHALT ROADWAY AT NORTH SIDE OF VETERANS ROAD WEST
BM2	107.20	X PK NAIL IN ASPHALT ROADWAY (WOODROW ROAD) WEST OF GRASS & WOODED ISLAND
BM3	126.06	X PK NAIL IN ASPHALT ROADWAY (WOODROW ROAD) NORTH OF HOUSE #1598
BM4	132.01	X PK NAIL IN ASPHALT ROADWAY (WOODROW ROAD) NORTH OF HOUSE #1558

BASELINE STATION TABLE							
STREET	POINTS	RADIUS LENGTH/ DISTANCE	DELTA ANGLE/ BEARING	POINT NUMBER	SOUTHERLY COORDINATE	WESTERLY COORDINATE	STATION (OFFSET R OR L)
WOODROW ROAD	49 TO 50	919.05	S 86-19-29 E	49	42678.1000	50570.3045	10+00
	50 TO 51	0.96	S 86-19-29 E	51	42737.0126	49653.1452	19+19.05
	51 TO 52	58.62	S 86-19-29 E	52	42737.0738	49652.1920	19+20
	52 TO 53	R=1210.00/L=197.52	Δ 09-21-11	53	42737.3838	49396.4176	21+76.15
	53 TO 54	214.44	N 84-19-20 E	54	42716.1684	49183.0296	23+90.59
	54 TO 55	R=913.26/L=285.26	Δ 17-53-48	55	42644.4293	48908.1325	26+75.85
	55 TO 56	10.00	N 23-34-28 W	56	42635.2639	48912.1318	26+75.85
	56 TO 57	R=903.26/L=278.18	Δ 17-31-03	57	42564.9213	48646.1900	29+52.01
	57 TO 58	37.96	N 83-36-24 E	58	42560.6942	48608.4647	30+00
	58 TO 59	2.66	N 83-36-24 E	59	42560.3980	48605.8210	30+02.66



SURVEY CONTROL PLAN
SCALE: 1" = 100'

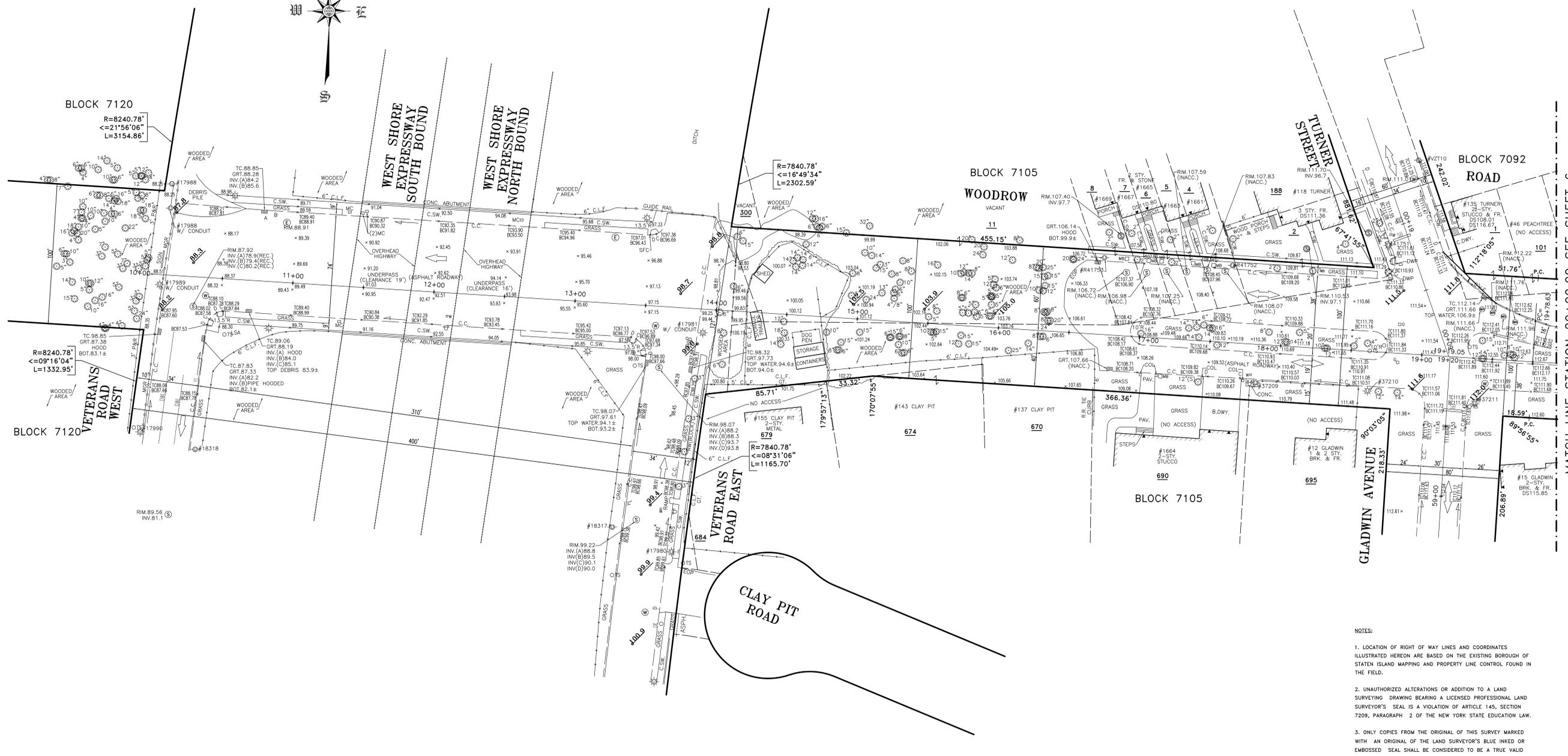
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<p>#5 SOUTH WEST ELEV. STA. OFFSET 42643.1170 50540.5220 87.63 10+27.48 36.82' L PK NAIL IN ASPHALT ROADWAY AT NORTH SIDE OF VETERANS ROAD WEST PK NAIL IN UP #17988 - 19.80' NW PK NAIL IN AERIAL TARGET - 18.85' E X-CUT IN WATER MH RIM - 49.32' S</p>	<p>#20 SOUTH WEST ELEV. STA. OFFSET 42643.2790 50212.2960 97.53 13+55.04 57.70' L X-CUT IN CONCRETE SIDEWALK AT NORTH CORNER OF VETERANS ROAD EAST X-CUT IN LAMP POST - 8.73' NW X-CUT IN METAL GUARD RAIL - 10.65' N X-CUT IN CURB - 4.34' SE</p>	<p>#6 SOUTH WEST ELEV. STA. OFFSET 42659.8280 50082.5360 99.98 14+85.59 49.50' L DOCK SPIKE IN WOODED AREA BETWEEN VETERANS ROAD EAST & WOODROW ROAD PK NAIL IN 15" TREE - 13.35' N PK NAIL IN 32" TREE - 25.60' NE PK NAIL IN 10" TREE - 16.85' E</p>	<p>#8 SOUTH WEST ELEV. STA. OFFSET 42706.7860 49896.4280 107.20 16+74.33 14.57' L PK NAIL IN ASPHALT ROADWAY (WOODROW ROAD) WEST OF GRASS & WOODED ISLAND PK NAIL IN UP #R41753 - 39.77' N PK NAIL IN 16" TREE - 29.30' E X-CUT IN INLET (WOODROW ROAD) - 38.46' S</p>	<p>#9 SOUTH WEST ELEV. STA. OFFSET 42760.2720 49682.8970 111.32 18+90.85 25.12' R PK NAIL IN CONC. CURB AT THE INTERSECTION OF SOUTH SIDE OF WOODROW ROAD AND WEST SIDE OF GLADWIN AVENUE X-CUT IN GAS VALVE - 19.68' NW PK NAIL IN UP #37211 - 49.00' E PK NAIL IN UP #37210 - 27.86' W</p>	<p>#11 SOUTH WEST ELEV. STA. OFFSET 42707.1870 49157.8130 126.06 24+16.75 6.07' R PK NAIL IN ASPHALT ROADWAY (WOODROW ROAD) NORTH OF HOUSE #1598 X-CUT IN MH RIM - 3.18' N X-CUT IN MH RIM - 19.35' E PK NAIL IN UP #R37559 - 30.55' SW</p>	<p>#13 SOUTH WEST ELEV. STA. OFFSET 42617.9420 48756.8310 132.01 28+31.61 33.33' R PK NAIL IN ASPHALT ROADWAY (WOODROW ROAD) NORTH OF HOUSE #1558 X-CUT IN MH RIM - 1.00' N X-CUT IN CURB - 22.53' NE PK NAIL IN UP #R37555 - 25.25' SE</p>
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TRAVERSE TIE
SCALE: 1" = 30'

NOTE: ALL ELEVATIONS REFER TO THE BOROUGH OF STATEN ISLAND HIGHWAY & SEWER DATUM, WHICH IS 3.192 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

SURVEY PREPARED BY: GALLAS SURVEYING GROUP 171 CHURCH LANE NORTH BRUNSWICK, NJ 08902 TELE: 732-422-6700 FAX: 732-940-8786 www.gallasurvey.com LICENSED LAND SURVEYOR	FINAL DESIGN PREPARED BY: NAME OF CONSULTANT SIGNATURE OF PRINCIPAL DATE	CITY OF NEW YORK DEPARTMENT OF DESIGN + CONSTRUCTION DIVISION OF INFRASTRUCTURE BUREAU OF DESIGN	SURVEY CONTROL SCALE AS SHOWN S.N.W./E.C.R. DRAWN BY G13207 CADD FILE	NO. DATE DESCRIPTIONS REVISIONS BY APPR'D WOODROW ROAD CONNECTION AT VETERANS ROAD EAST FROM STA. 10+00 TO STA. 20+00 BOROUGH OF STATEN ISLAND CAPITAL PROJECT NO. HWR00510 SHEET 4 OF 14
	GREGORY S. GALLAS NEW YORK PROFESSIONAL LAND SURVEYOR #05124			

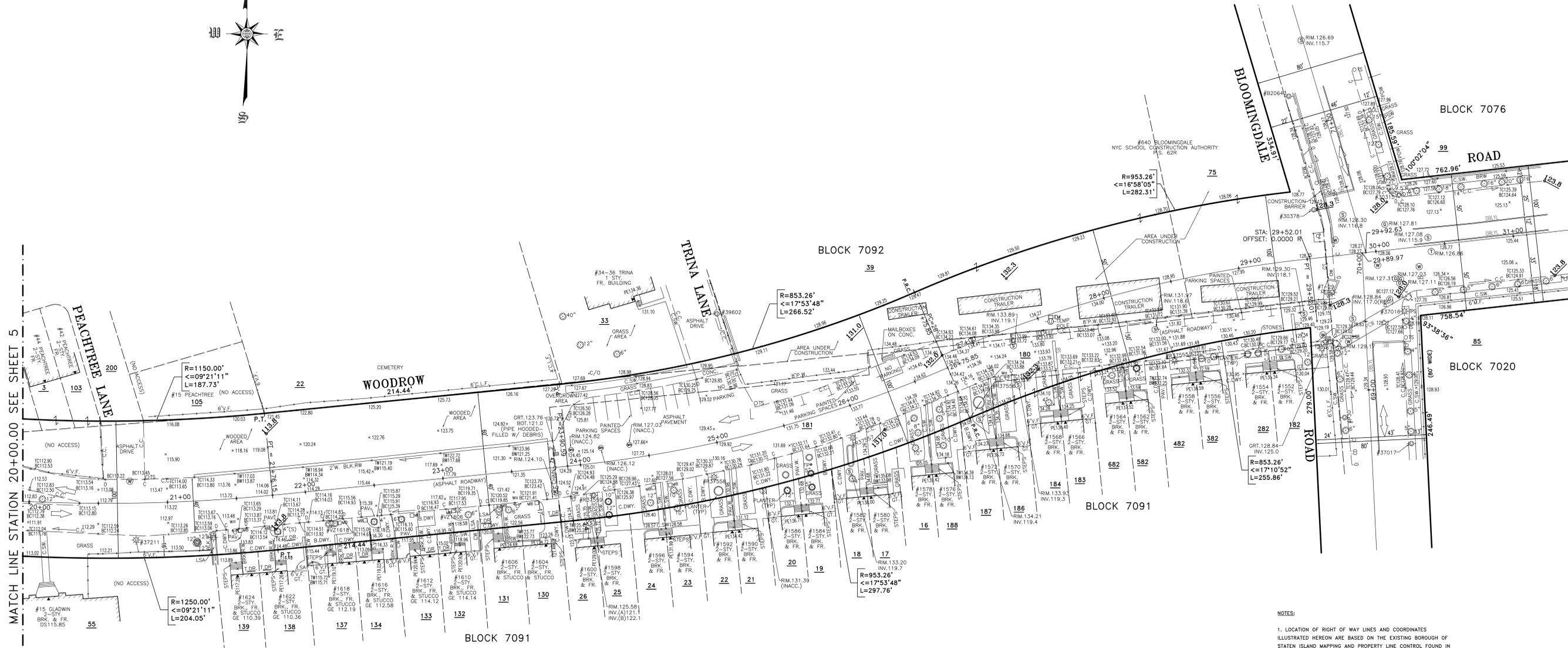


PLAN
SCALE: 1" = 30'

- NOTES:
1. LOCATION OF RIGHT OF WAY LINES AND COORDINATES ILLUSTRATED HEREON ARE BASED ON THE EXISTING BOROUGH OF STATEN ISLAND MAPPING AND PROPERTY LINE CONTROL FOUND IN THE FIELD.
 2. UNAUTHORIZED ALTERATIONS OR ADDITION TO A LAND SURVEYING DRAWING BEARING A LICENSED PROFESSIONAL LAND SURVEYOR'S SEAL IS A VIOLATION OF ARTICLE 145, SECTION 7209, PARAGRAPH 2 OF THE NEW YORK STATE EDUCATION LAW.
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 5. FIELD SURVEY WAS COMPLETED IN JUNE 2014.

NOTE: ALL ELEVATIONS REFER TO THE BOROUGH OF STATEN ISLAND HIGHWAY & SEWER DATUM, WHICH IS 3.192 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

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				GREGORY S. GALLAS NEW YORK PROFESSIONAL LAND SURVEYOR #50124	CAPITAL PROJECT NO. HWR00510 SHEET 5 OF 14



- NOTES:
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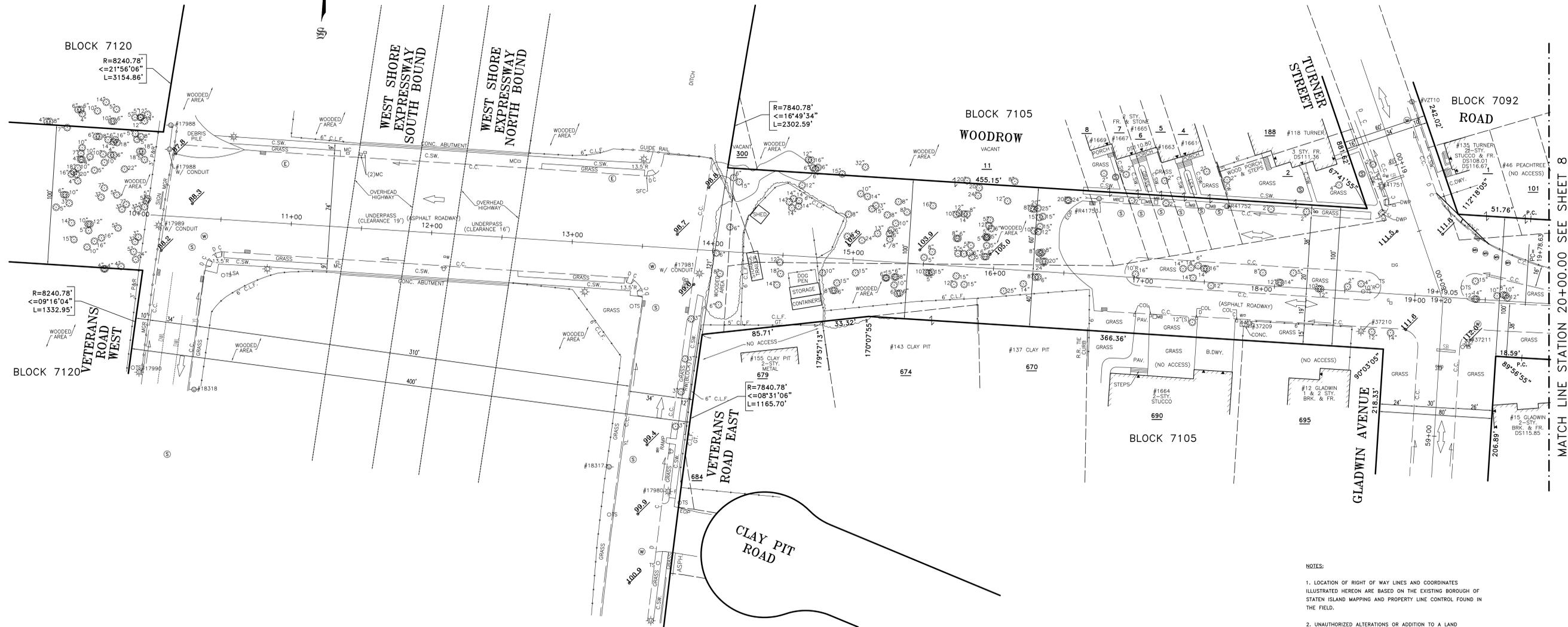
SURVEY PREPARED BY:
GALLAS SURVEYING GROUP
171 CHURCH LANE
NORTH BRUNSWICK, NJ 08902
TEL: 732-422-6700
FAX: 732-940-8776
www.gallasurvey.com
LICENSED LAND SURVEYOR

FINAL DESIGN PREPARED BY:
NAME OF CONSULTANT
SIGNATURE OF PRINCIPAL
DATE

CITY OF NEW YORK
DEPARTMENT OF DESIGN + CONSTRUCTION
DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

TOPOGRAPHIC PLAN
SCALE AS SHOWN
S.N.W./E.C.R.
DRAWN BY
G13207
CADD FILE

NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
WOODROW ROAD CONNECTION AT VETERANS ROAD EAST				
FROM STA. 10+00 TO STA. 20+00				
BOROUGH OF STATEN ISLAND				
CAPITAL PROJECT NO. HWR00510				6
SHEET 6 OF 14				14



PLAN
SCALE: 1" = 30'

- NOTES:
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 www.gallasurvey.com
 LICENSED LAND SURVEYOR

GREGORY S. GALLAS
 NEW YORK PROFESSIONAL LAND SURVEYOR #50124

FINAL DESIGN PREPARED BY:

NAME OF CONSULTANT

SIGNATURE OF PRINCIPAL

DATE

CITY OF NEW YORK
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 BUREAU OF DESIGN

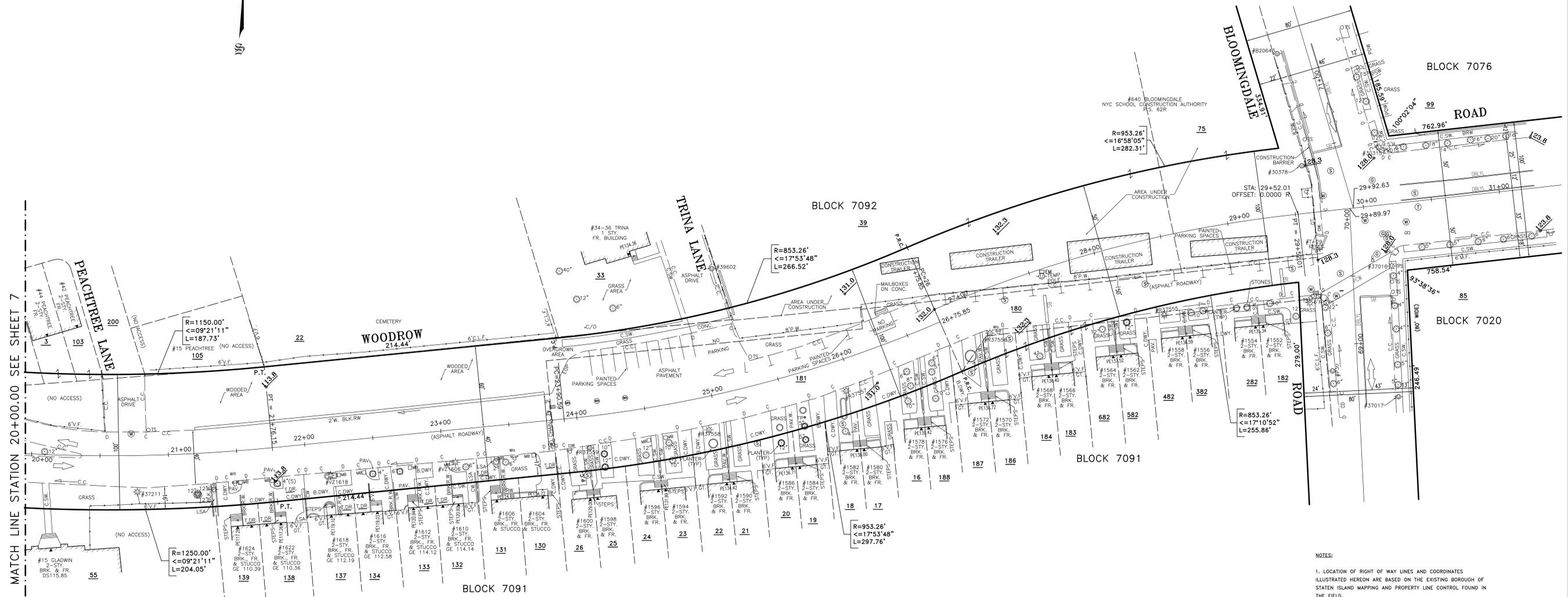
CLEAN BASE PLAN

SCALE AS SHOWN

S.N.W./E.C.R.
 DRAWN BY

G13207
 CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D
WOODROW ROAD CONNECTION AT VETERANS ROAD EAST FROM STA. 10+00 TO STA. 20+00 BOROUGH OF STATEN ISLAND				
CAPITAL PROJECT NO. HWR00510				7/14
SHEET 7 OF 14				



PLAN
SCALE: 1" = 30'

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 TELE: 732-422-6700
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 www.gallasurvey.com
 LICENSED LAND SURVEYOR

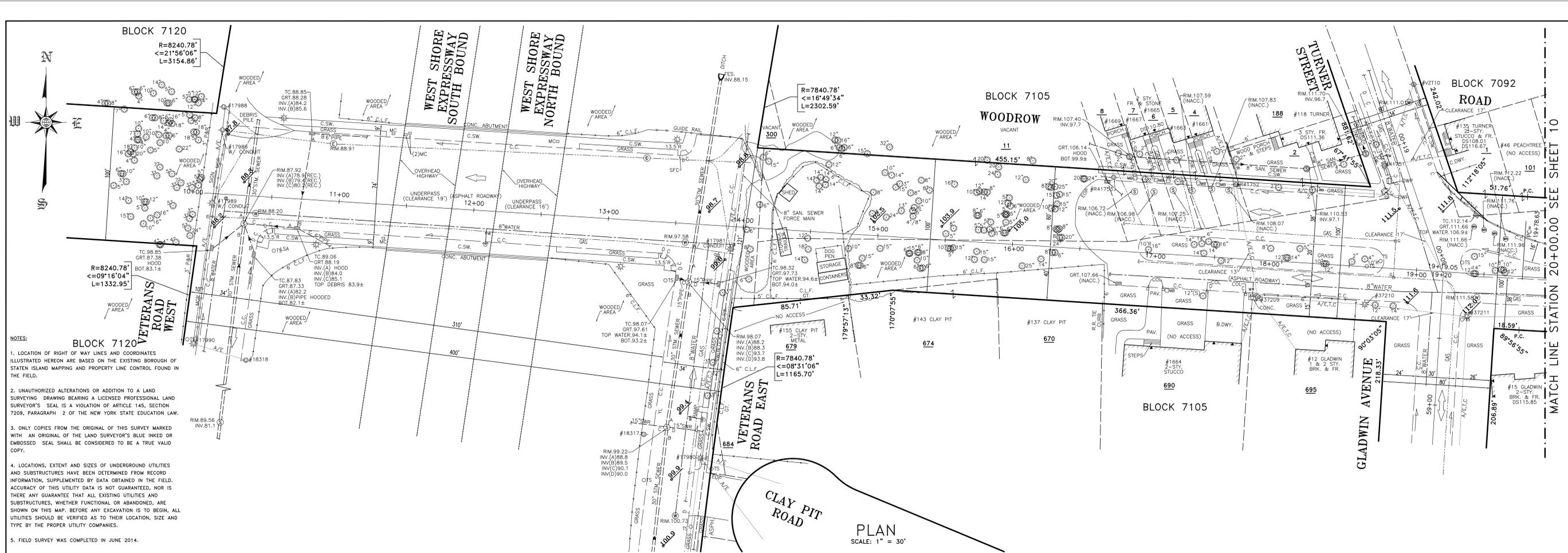
FINAL DESIGN PREPARED BY:
 NAME OF CONSULTANT
 SIGNATURE OF PRINCIPAL
 DATE

CITY OF NEW YORK
 DEPARTMENT OF DESIGN + CONSTRUCTION
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 BUREAU OF DESIGN

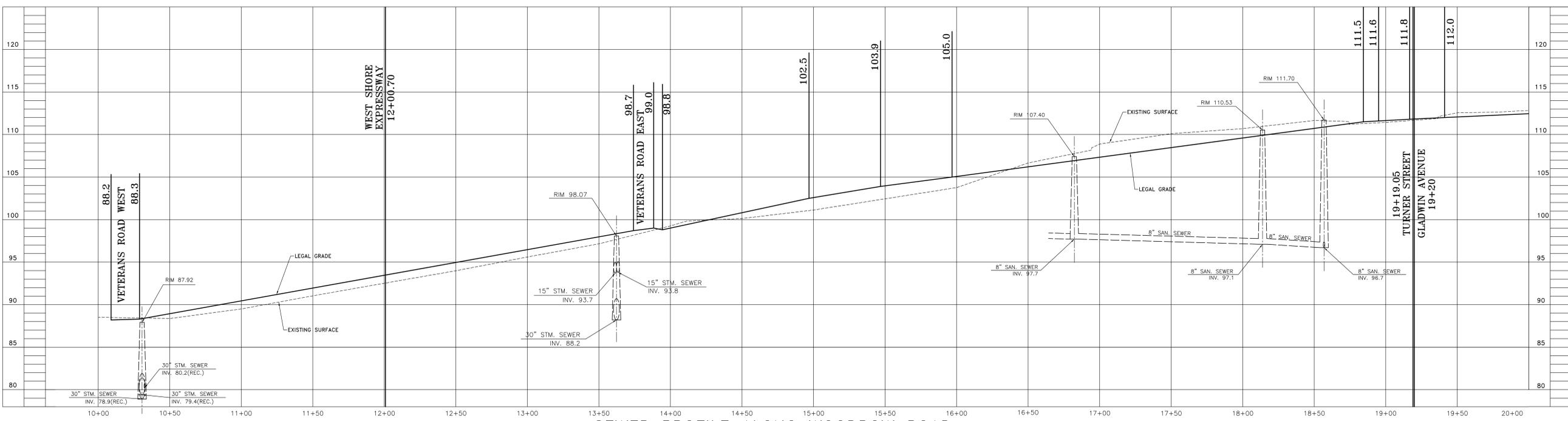
CLEAN BASE PLAN
 SCALE AS SHOWN
 S.N.W./E.C.R.
 DRAWN BY
 G13207
 CADD FILE

WOODROW ROAD CONNECTION AT VETERANS ROAD EAST
 FROM STA. 10+00 TO STA. 20+00
 BOROUGH OF STATEN ISLAND
 CAPITAL PROJECT NO. HWR00510
 SHEET 8 OF 14

NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				



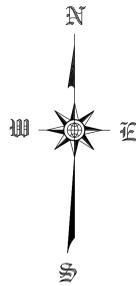
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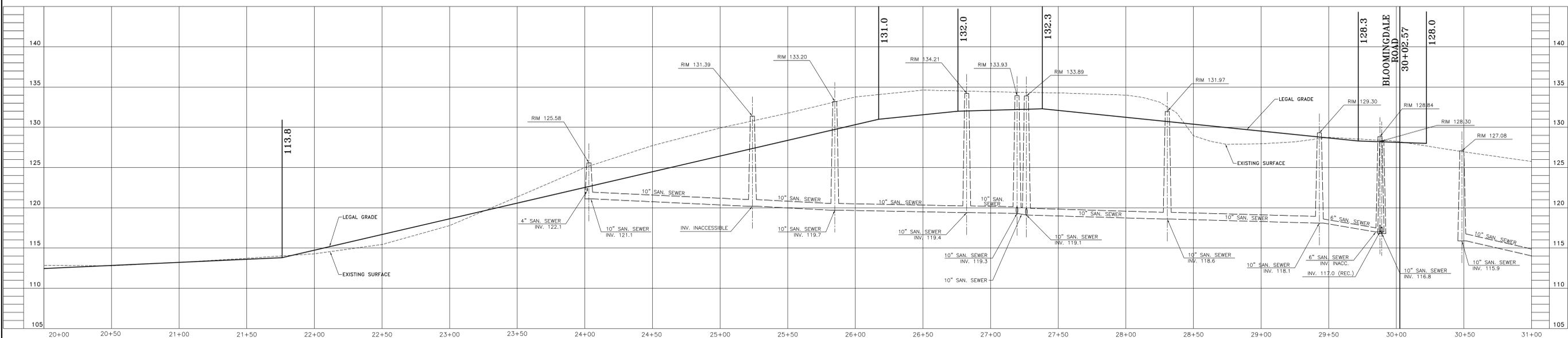
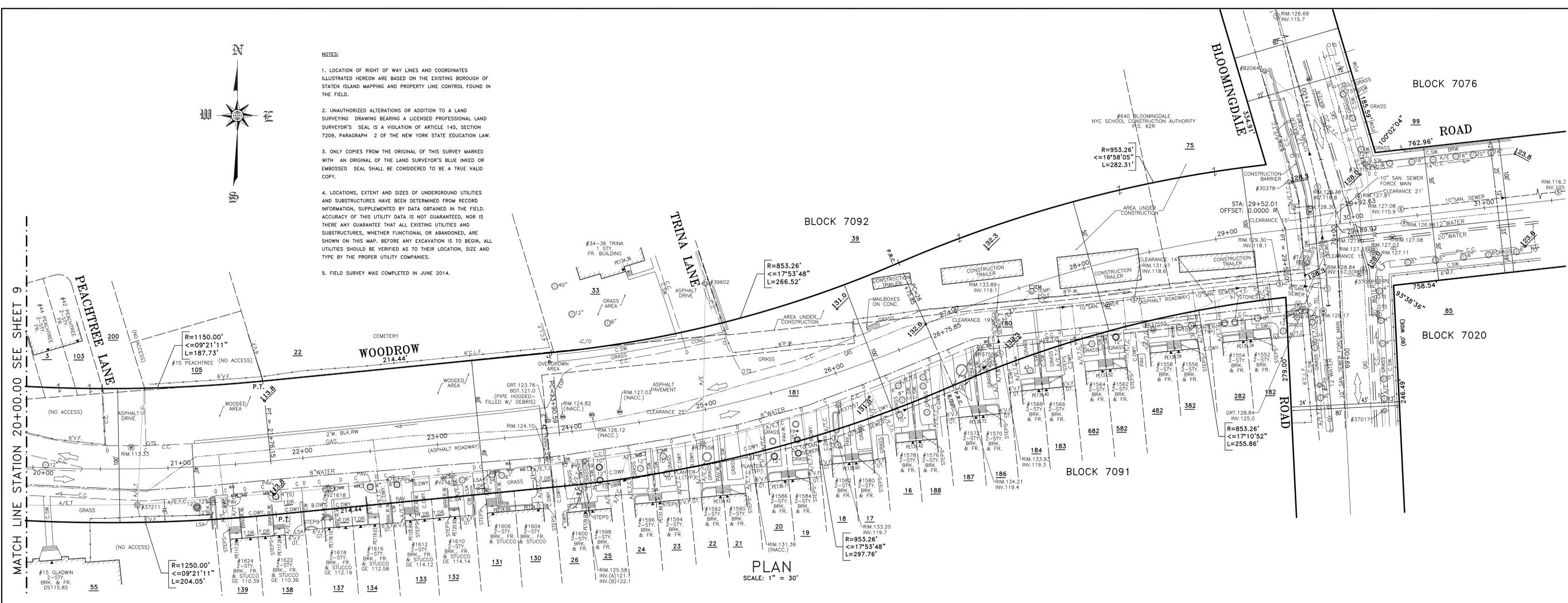
SEWER PROFILE ALONG WOODROW ROAD
SCALE: VERT: 1" = 5'
HORIZ: 1" = 30'

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	GREGORY S. GALLAS NEW YORK PROFESSIONAL LAND SURVEYOR #50124			



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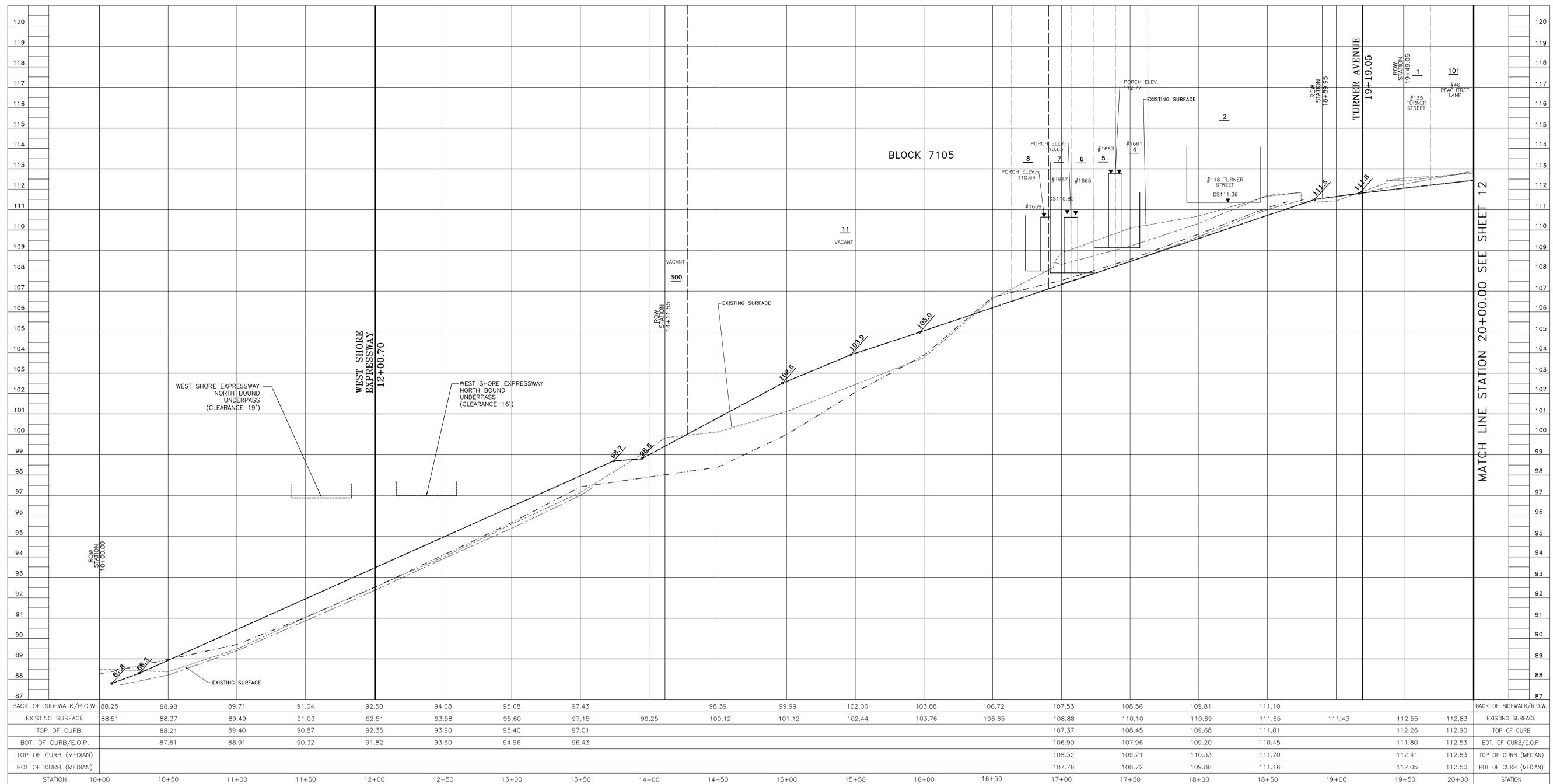
SURVEY PREPARED BY:
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 NORTH BRUNSWICK, NJ 08902
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 www.gallasurvey.com
 LICENSED LAND SURVEYOR

FINAL DESIGN PREPARED BY:
 NAME OF CONSULTANT _____
 SIGNATURE OF PRINCIPAL _____
 DATE _____

CITY OF NEW YORK
 DEPARTMENT OF DESIGN + CONSTRUCTION
 DIVISION OF INFRASTRUCTURE
 BUREAU OF DESIGN

UTILITY PLAN
 SCALE AS SHOWN
 S.N.W./E.C.R.
 DRAWN BY _____
 G13207
 CADD FILE

NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
WOODROW ROAD CONNECTION AT VETERANS ROAD EAST FROM STA. 10+00 TO STA. 20+00 BOROUGH OF STATEN ISLAND				
CAPITAL PROJECT NO. HWRO0510				10/14
SHEET 10 OF 14				14



HIGHWAY PROFILE ALONG NORTH SIDE OF WOODROW ROAD

SCALE: VERT: 1" = 2'
HORIZ: 1" = 30'

- LEGEND**
- EXISTING BACK OF SIDEWALK (OR ROW)
 - EXISTING TOP OF CURB
 - EXISTING SURFACE / SURVEY BASELINE
 - EXISTING TOP OF CURB (MEDIAN)
 - EXISTING LEGAL GRADE LINE
 - LOT LINE

- NOTES:**
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GALLAS SURVEYING GROUP
 SURVEY PREPARED BY:
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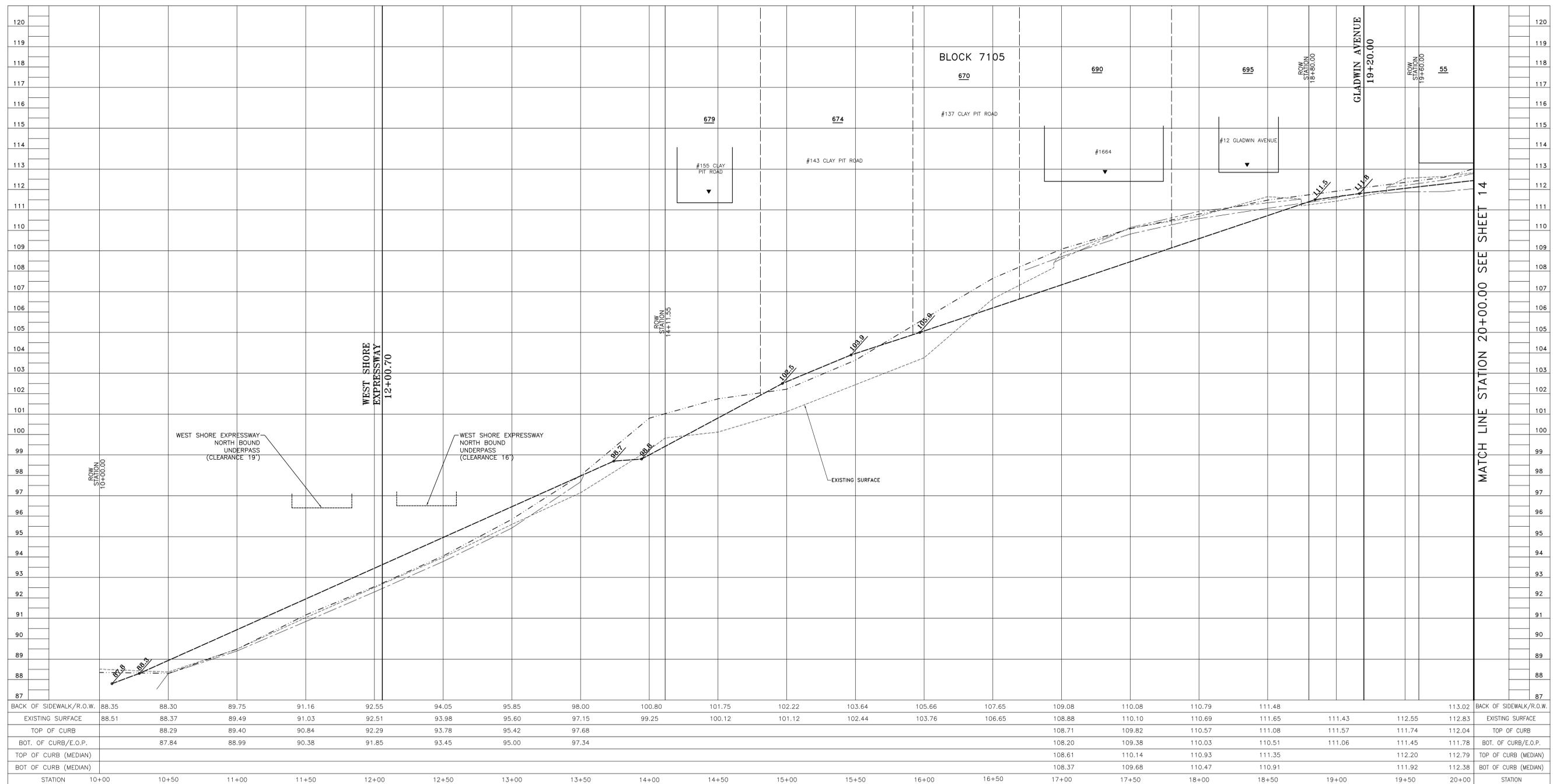
GREGORY S. GALLAS
 NEW YORK PROFESSIONAL LAND SURVEYOR #50124

CITY OF NEW YORK
 DEPARTMENT OF DESIGN + CONSTRUCTION
 DIVISION OF INFRASTRUCTURE
 BUREAU OF DESIGN

HIGHWAY PROFILE
(NORTH OF WOODROW ROAD)
 STA 10+00 TO STA 20+00
 SCALE AS SHOWN

S.N.W./E.C.R.
 DRAWN BY _____
 G13207
 CADD FILE _____

NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
WOODROW ROAD CONNECTION AT VETERANS ROAD EAST				
FROM STA. 10+00 TO STA. 20+00				
BOROUGH OF STATEN ISLAND				
CAPITAL PROJECT NO. HWR00510				SHEET 11 OF 14



HIGHWAY PROFILE ALONG SOUTH SIDE OF WOODROW ROAD

- LEGEND**
- EXISTING BACK OF SIDEWALK (OR ROW)
 - EXISTING TOP OF CURB
 - EXISTING SURFACE / SURVEY BASELINE
 - EXISTING TOP OF CURB (MEDIAN)
 - EXISTING LEGAL GRADE LINE
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 - FIELD SURVEY WAS COMPLETED IN JUNE 2014.

SCALE: VERT: 1" = 2'
HORIZ: 1" = 30'

NOTE: ALL ELEVATIONS REFER TO THE BOROUGH OF STATEN ISLAND HIGHWAY & SEWER DATUM, WHICH IS 3.192 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

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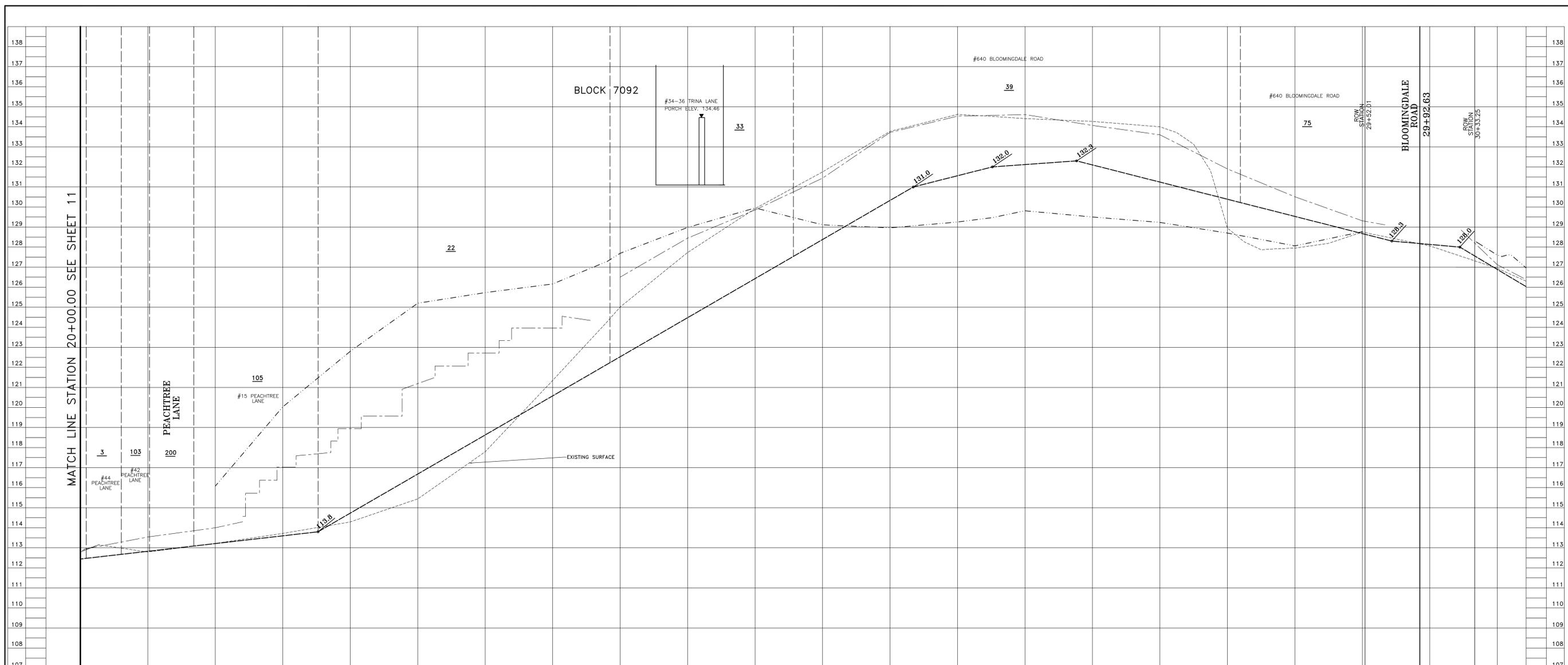
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HIGHWAY PROFILE
(SOUTH OF WOODROW ROAD)
 STA 10+00 TO STA 20+00
 SCALE AS SHOWN

S.N.W./E.C.R.
 DRAWN BY _____
 G13207
 CADD FILE _____

NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
WOODROW ROAD CONNECTION AT VETERANS ROAD EAST				
FROM STA. 10+00 TO STA. 20+00				
BOROUGH OF STATEN ISLAND				
CAPITAL PROJECT NO. HWR00510				12/14
SHEET 12 OF 14				



BACK OF SIDEWALK/R.O.W.	116.08	120.03	122.80	125.20	125.73	126.16	127.69	128.98	129.95	129.11	128.96	129.25	129.81	129.50	129.23	128.70	128.06	128.77	127.60	BACK OF SIDEWALK/R.O.W.			
EXISTING SURFACE	112.83	112.79	113.22	113.72	114.29	115.44	117.79	121.35	125.01	127.73	129.92	131.75	133.77	134.62	134.41	134.27	134.00	128.95	127.95	128.75	126.77	EXISTING SURFACE	
TOP OF CURB	112.90	113.54	114.00	117.03	118.94	121.19	122.72	123.96	126.50	128.56	129.85	131.44	133.72	134.53	134.61	134.07	133.60	131.90	130.51	129.31	127.12	TOP OF CURB	
BOT. OF CURB/E.O.P.	112.53	113.16	113.65	113.87	114.34	115.40	117.68	121.25	126.28	128.05	129.85	131.06	133.20	134.09	134.08	133.82	132.92	131.39	129.99	129.02	126.60	BOT. OF CURB/E.O.P.	
TOP OF CURB (MEDIAN)	112.83																					TOP OF CURB (MEDIAN)	
BOT OF CURB (MEDIAN)	112.50																					BOT OF CURB (MEDIAN)	
STATION	20+00	20+50	21+00	21+50	22+00	22+50	23+00	23+50	24+00	24+50	25+00	25+50	26+00	26+50	27+00	27+50	28+00	28+50	29+00	29+50	30+00	30+50	STATION

LEGEND
 - - - - - EXISTING BACK OF SIDEWALK (OR ROW)
 - - - - - EXISTING TOP OF CURB
 - - - - - EXISTING SURFACE / ROADWAY CENTERLINE
 - - - - - EXISTING TOP OF CURB (MEDIAN)
 - - - - - EXISTING LEGAL GRADE LINE
 - - - - - LOT LINE

HIGHWAY PROFILE ALONG NORTH SIDE OF WOODROW ROAD

SCALE: VERT: 1" = 2'
 HORIZ: 1" = 30'

- NOTES:**
1. LOCATION OF RIGHT OF WAY LINES AND COORDINATES ILLUSTRATED HEREON ARE BASED ON THE EXISTING BOROUGH OF STATEN ISLAND MAPPING AND PROPERTY LINE CONTROL FOUND IN THE FIELD.
 2. UNAUTHORIZED ALTERATIONS OR ADDITION TO A LAND SURVEYING DRAWING BEARING A LICENSED PROFESSIONAL LAND SURVEYOR'S SEAL IS A VIOLATION OF ARTICLE 145, SECTION 7209, PARAGRAPH 2 OF THE NEW YORK STATE EDUCATION LAW.
 3. ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S BLUE INKED OR EMBOSSED SEAL SHALL BE CONSIDERED TO BE A TRUE VALID COPY.
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 5. FIELD SURVEY WAS COMPLETED IN JUNE 2014.

NOTE: ALL ELEVATIONS REFER TO THE BOROUGH OF STATEN ISLAND HIGHWAY & SEWER DATUM, WHICH IS 3.192 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY AS ESTABLISHED BY THE U.S. COAST AND GEODETIC SURVEY.

NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
WOODROW ROAD CONNECTION AT VETERANS ROAD EAST				
FROM STA. 10+00 TO STA. 20+00				
BOROUGH OF STATEN ISLAND				
CAPITAL PROJECT NO. HWR00510				13
SHEET 13 OF 14				14

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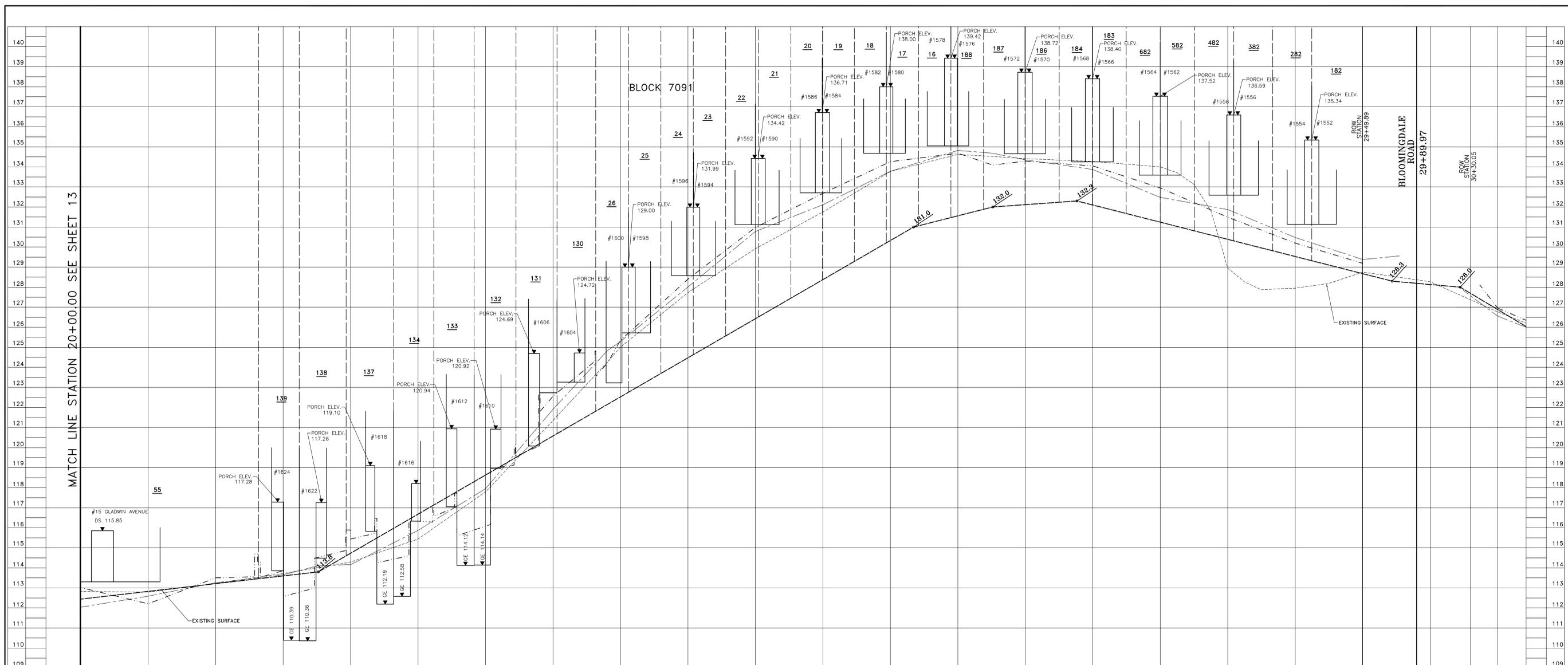
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 BUREAU OF DESIGN

HIGHWAY PROFILE
 (NORTH OF WOODROW ROAD)
 STA 20+00 TO STA 30+50
 SCALE AS SHOWN

S.N.W./E.C.R.
 DRAWN BY _____
 G13207
 CADD FILE _____



MATCH LINE STATION 20+00.00 SEE SHEET 13

BACK OF SIDEWALK/R.O.W.	113.02	112.21	113.50	113.86	115.44	116.30	116.95	122.56	125.35	128.40	130.98	132.68	134.26	134.68	134.29	134.05	132.95	131.49	130.20	129.19	126.96	BACK OF SIDEWALK/R.O.W.	
EXISTING SURFACE	112.83	112.79	113.22	113.72	114.29	115.44	117.79	121.35	125.01	127.73	129.92	131.75	133.77	134.62	134.41	134.27	134.00	128.95	127.95	128.75	128.06	126.77	EXISTING SURFACE
TOP OF CURB	112.04	112.59	113.26	113.65	114.16	115.87	117.95	121.91	125.29	128.01	130.78	132.11	133.78	134.82	134.35	133.87	132.99	131.87	130.48	129.38	126.56	TOP OF CURB	
BOT. OF CURB/E.O.P.	111.78	112.24	112.85	113.29	114.03	115.29	117.53	121.41	124.88	127.56	130.24	131.64	133.34	134.35	133.97	133.57	132.48	131.41	130.08	129.02	126.19	BOT. OF CURB/E.O.P.	
TOP OF CURB (MEDIAN)	112.79																					TOP OF CURB (MEDIAN)	
BOT OF CURB (MEDIAN)	112.38																					BOT OF CURB (MEDIAN)	
STATION	20+00	20+50	21+00	21+50	22+00	22+50	23+00	23+50	24+00	24+50	25+00	25+50	26+00	26+50	27+00	27+50	28+00	28+50	29+00	29+50	30+00	30+50	STATION

- LEGEND**
- EXISTING BACK OF SIDEWALK (OR ROW)
 - EXISTING TOP OF CURB
 - EXISTING SURFACE / ROADWAY CENTERLINE
 - EXISTING TOP OF CURB (MEDIAN)
 - EXISTING LEGAL GRADE LINE
 - LOT LINE

HIGHWAY PROFILE ALONG SOUTH SIDE OF WOODROW ROAD

SCALE: VERT: 1" = 2'
HORIZ: 1" = 30'

- NOTES:**
- LOCATION OF RIGHT OF WAY LINES AND COORDINATES ILLUSTRATED HEREON ARE BASED ON THE EXISTING BOROUGH OF STATEN ISLAND MAPPING AND PROPERTY LINE CONTROL FOUND IN THE FIELD.
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NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
WOODROW ROAD CONNECTION AT VETERANS ROAD EAST				
FROM STA. 10+00 TO STA. 20+00				
BOROUGH OF STATEN ISLAND				
CAPITAL PROJECT NO. HWR00510			SHEET 14 OF 14	14

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 BUREAU OF DESIGN

HIGHWAY PROFILE
 (SOUTH OF WOODROW ROAD)
 STA 20+00 TO STA 30+50
 SCALE AS SHOWN
 S.N.W./E.C.R.
 DRAWN BY _____
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APPENDIX B: DESIGNATION REPORT, ROSSVILLE A.M.E. ZION CHURCH CEMETERY

ROSSVILLE A.M.E. ZION CHURCH CEMETERY, Crabtree Avenue, Staten Island.
Established 1852.

Landmark Site: Borough of Staten Island Tax Map Block 7092, Lot 22.

On October 12, 1982, the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of the Rossville A.M.E. Zion Church Cemetery and the proposed designation of the related Landmark Site (Item No. 6). The hearing had been duly advertised in accordance with the provisions of law. Seven witnesses spoke in favor of designation. There were no speakers in opposition to designation.

DESCRIPTION AND ANALYSIS

The Rossville A.M.E. Church Cemetery located near the western tip of Staten Island commemorates the history of Sandy Ground, a community engendered by a planned mid-19th century migration northward of free black oystermen and their families. The migration was predominated by families from Snow Hill, Maryland, one of a number of Delmarva Peninsula settlements populated by blacks who had prospered in this industry. Maryland's large free black population -- more than 15,000 by 1830 -- challenged the rationale promulgated by slave-holding states that servitude and black economic survival were inextricably bound.¹ For this reason repressive legislative measures were directed toward free blacks; a law forbidding gun ownership, for example deprived them of an important means of food acquisition. And because successful black oystermen in particular offered not only an ideological but economic threat as well to their white counterparts, legislation controlling competition was enacted; a statute of 1835, for instance, required that all vessels operating in Maryland waters have on board as chief navigator a white person above the age of eighteen.

The mid-century relocation to Staten Island which included members of the Henman, Bishop, Purnell, Landin, Robbins and Stevens families is linked to the history of the island's oyster industry. From the 18th century on, abundant yields from extensive oyster beds located in waters off the lower end of Staten Island -- Prince's Bay and Raritan Bay -- constituted a major sector of the island's economy. By the early 19th century the natural beds had been depleted and the practice of reseeding them with immature oysters brought in from other locations had been instituted. Regional sources such as Long Island Sound originally sufficed, but Staten Island's major oyster planters soon ventured further afield. During the 1820s and 1830s Staten Island vessels began to roam the waters of the Chesapeake and Chincoteague Bays acquiring large cargoes of seed oysters from local gatherers. These were carried to Staten Island and replanted on the old oyster beds of Prince's Bay where optimal growing conditions speeded maturation and enhanced the flavor. Not only were contacts between Staten Island growers and free black oystermen of Chesapeake Bay area established as a result of this commerce, but some of the black oystermen are also said to have sojourned near Prince's Bay during the planting seasons.

Staten Island emerged as a logical and probably already familiar destination as the migration from Maryland was being planned around the middle of the century. The place to which the free black oystermen and their families came was a sandy plateau located on the outskirts of Woodrow, a small farming community gathered around the Woodrow Methodist Church which had been established in 1787. The western edge of Woodrow -- the area near the intersection of Woodrow and Bloomingdale Roads -- was then but sparsely settled. There were, however, at least two black families, the Jacksons and the Williams, and possibly a third, the Holmes, living in the vicinity. To this place there also came black families from New Jersey and New York, the Harrises and the Henrys. These families, together with Henmens, Bishops, Purnells, Landins, Robbinses and Stevenses came together to form the community known later as Sandy Ground.²

An early investigator of Sandy Ground's history concluded its first inhabitants brought with them the considerable assets they had gained in the Chesapeake Bay oystering industry.³ On the other hand, a subsequent oral history has indicated that Sandy Ground was originally populated by insubstantial dwellings and the lives of its inhabitants were characterized by unremitting labor.⁴ A more recent study has posed the possibility that any pre-migration assets of the early settlers were not transferrable and therefore a life of non-consumption was deliberately chosen by the original Sandy Grounders as a means of accumulating the capital required for the realization of future expectations.⁵

Such a life did not preclude addressing an immediate need for a spiritual center which would identify and solidify Sandy Ground as a community. The A.M.E. Zion Church -- at first people meeting in each other's homes -- was formally incorporated in 1850. Land -- three-quarters of an acre -- on Crabtree Avenue was purchased in 1852, and in 1854 what was later described as a "plain wooden structure" with a capacity of some 150 persons was dedicated.⁶ It was located toward the eastern side of the property; the land to its west was reserved for a cemetery. Although the community was small -- the original congregation was comprised of fourteen families -- the optimistic expectations expressed by the construction and size of the church were justified. Sandy Ground was to grow and prosper over the course of the 19th and early 20th centuries.

The late 19th-century appetite for oysters appears to have been almost insatiable. Among the barges purveying oysters from wharves at the foot of West 10th Street in the 1880s there were more than a dozen owned by Staten Island planters alone. Prince's Bay acquired several hotels and inns which offered oyster consumption as a major activity. Advertisements of the day noted that their carriages were available at the Prince's Bay train station to transport visitors from New York City to the shorefront for that purpose. It was this industry which engaged the greater preponderance of Sandy Ground's residents.

Many were employed by the major planters located at Prince's Bay; their tasks included seeding the beds, gathering the mature oysters with long-handled rakes, shucking and packing them for distribution. Other Sandy Grounders, among

them Dawson Landin, Robert Landin and Francis Henry, acquired their own sloops. Their entrepreneurial pursuits included supplying planters with seed oysters taken from the Arthur Kill and Kill Van Kull. Still others were engaged in occupations ancilliary to the industry. Several Sandy Ground forges produced the rakes and other hardware required by the trade. That founded by William Bishop was operated until very recently by his son Joseph. Hundreds of bushel baskets were woven by Sandy Ground craftsmen using the white-oak saplings found in the nearby woods. Farming and market-gardening were taken up by some families. Strawberries, which thrived in the sandy soil, became a specialty and were shipped from the Rossville dock to the produce markets near Barclay Street. And some, principally the Harrises, worked for wealthy white families in New York City. An oral history obtained from Isaac Harris records his employment by the eminent American architect Stanford White.⁷ According to this history, White had architects from his office design the Harris house, still standing at 444 Bloomingdale Road.

The Harris residence was one of many substantial new homes constructed in Sandy Ground beginning in the 1880s. The community's growth and prosperity is also suggested by the fact that it was able to support two churches. A split in the A.M.E. Zion Church had occurred in 1875 when its pastor, Rev. Gilford Landin, was adjudged by the A.M.E. bishop to have exceeded his authority in a matter involving installation of clergy at another church. Members of the congregation who supported him withdrew to form a new congregation allied with the Newark M.E. Conference. A new building, the Mt. Zion M.E. Church, was constructed on Bloomingdale Road a short distance north of Crabtree Avenue. The split in the church appears not to have divided the community however; members from a single family could be found in both churches. Church membership lists compiled in 1898 suggest the size of the Sandy Ground community at the end of the century; together the churches served 99 adults and approximately 150 children. Prosperity was mirrored too by the construction of a new, more imposing, A.M.E. Zion Church on Bloomingdale Road in 1897. The Crabtree Avenue building remained in use for social events, festivals and lectures.

Sandy Ground's history was dramatically altered by the price of progress -- water pollution. Although the oyster beds off Staten Island were not officially closed down by the New York City Department of Health until 1916, the visibly dirtier Raritan Bay and reports of typhoid fever associated with eating Prince's Bay oysters had sent the industry into decline by 1910. Although Bishop's Forge could more readily adapt to altered circumstances -- decorative metalwork, for example, because one of its specialites -- the skills and assets which had sustained the Sandy Ground community for more than half a century were rendered useless. Some families or their children departed. Of those who stayed, some found work locally -- a number of Sandy Ground women were employed by Seaview Hospital -- while others travelled to construction and factory jobs in New Jersey. For Sandy Ground a depression had preceded the Depression, but it did not vanish. Nor was it eradicated, despite the loss of many homes, by the great South Shore fire of 1963 which destroyed more than a hundred structures in the area and many acres of woodland. Although threatened today by encroaching tract-housing, Sandy Ground survives. The Rossville A.M.E. Zion Church is sustained by an active congregation, its open-air barbecues which once drew hundreds have been successfully revived, decendants of original Sandy Grounders still live in the vicinity, and the A.M.E. Zion Church Cemetery remains in use.

Located 450 feet west of Bloomingdale Road, the cemetery occupies a rise of land on the south side of Crabtree Avenue. It is entered on the eastern side by a fairly wide asphalted roadway which extends toward the rear property line.⁸ From the cemetery there is to be gained a panoramic view toward the northwest; on the horizon lie the Watchung Mountains of New Jersey. Although there are a few grave sites on the east side of the entrance road, the main portion of the cemetery lies to its west and extends from Crabtree Avenue to the southern boundary of the property. The western edge of the cemetery is delineated by a chain-link fence. Comprised of family plots, the cemetery is criss-crossed by narrow asphalted paths. Some plots are defined by low posts and pipe-railings; others are not. All plots and the individual stones within them face eastward. Some of the plots are maintained, but others need tending. Tall grasses abound, obscuring many of the gravestones from view. Death dates recorded on the stones begin in the 1860s and continue to the present.⁹ The stones are simple and of modest dimensions; none overwhelm the others.

There are those who lie here without benefit of stone or marker; the lives recorded by markers comprise some 34 families. Of those families associated with Sandy Ground's beginnings we find these names: Bishop, Harris, Henry, Landin, Purnell and Stevens.¹⁰ Those names are joined by these: Bagwell, Benedict, Brown, Coleman, Cooley, Cooper, Decker, Gibbs, Glenn, Green, Hammon, Hines, Hunter, Jones, Junior, Mangin, McCoy, Mitchell, Pennyfeather, Roach, Robinson, Schnidt, Selby, Walker, Wallen, Watts, and Whallen.

One who now lies here, Mr. George H. Hunter, once said this of the A.M.E. Zion Church Cemetery: "Most of the people lying in here were related to each other, some by blood, some by marriage, some close, some distant. If you started in at the gate and ran an imaginary line all the way through, showing who was related to who, the line would zigzag all over the cemetery."¹¹ Mr. Hunter's "imaginary line" illuminates the essence of Sandy Ground's history.

The name Sandy Ground does not appear on maps contemporary with the period of its growth and prosperity. Physically Sandy Ground was part of the larger and racially integrated village of Woodrow. The Woodrow neighborhood in which it was concentrated was known and indicated on maps as Bogardus Corners, the name the intersection of Woodrow and Bloomingdale Roads received after 1860 when the Bogardus family established a grocery business there. The community of Sandy Ground did not coincide with a precisely bounded geographical location. It was a community defined by the network of relationships between people, bonds which were reinforced by Sandy Ground's spiritual centers. Today the community of Sandy Ground located by geography is small. The community joined by an "imaginary line," however, is large and is being strengthened as Sandy Ground descendents and their friends reaffirm their roots. For this community the Rossville A.M.E. Zion Church Cemetery is a tangible and visible link to its history, one now approaching its 150th year.

Report prepared by
Shirley Zavin
Research Department

Report typed by
Barbara Sklar

FOOTNOTES

1. The background history which precedes the migration from Maryland to Staten Island is summarized by Minna C. Wilkins in "Sandy Ground: A Tiny Racial Island - Part I," Staten Island Historian, 6 (January-March 1943), 1-3, 7.
2. The date when this community was first identified as Sandy Ground has not been determined.
3. Wilkins, 7.
4. Joseph Mitchell, "Mr. Hunter's Grave," New Yorker, September 22, 1956, p.59.
5. William Askins, The Sandy Ground Survey Project: Archaeological and Historical Research in Support of a National Register Nomination, New York: The City College, City University of New York, 1980) f.n. 2, 1-15 -- 1-16.
6. A.Y. Hubbell, History of Methodism and the Methodist Churches of Staten Island. (New York: Richmond Publishing Company, 1898), p.149.
7. Askins, pp.1-5.
8. The entry roadway may cover the site of the 1854 church. An 1898 map indicates it was located toward the eastern side of the property about midway between Crabtree Avenue and the rear property line. The 1906 topographical map of Richmond County shows a small structure at this location; this may or may not be the church. The date the original church was demolished has not been ascertained.
9. Clara Cooley's date of death, June 17, 1837, is the earliest recorded by surviving markers. Interment here prior to the purchase of the property by the A.M.E. Zion Church in 1852 seems unlikely however.
10. An inventory of grave markers and inscriptions is included in Robert L. Schuyler, "Sandy Ground: Archaeological Sampling in a Black Community in Metropolitan New York," The Conference on Historic Site Archaeology Papers, (Columbia, S.C.: University of South Carolina, 1972), vol. 7, pp.13-52.
11. Mitchell, p.92.

FINDINGS AND DESIGNATIONS

On the basis of a careful consideration of the history and other features of this cemetery, the Landmarks Preservation Commission finds that the Rossville A.M.E. Zion Church Cemetery has special character, special historical and aesthetic interest and value as part of the development, heritage and cultural characteristics of New York City.

The Commission further finds that, among its important qualities, the Rossville A.M.E. Zion Church Cemetery commemorates the history of Sandy Ground, a Staten Island community engendered by a mid-19th-century migration of free black oystermen and their families from the Chesapeake Bay area; that the community grew and prospered, as did the oyster industry, through the early 20th century; that Sandy Ground has survived despite such major disasters as the condemnation of Staten Island's oyster beds in 1916 and the destructive fire of 1963; that the family plots and markers of the cemetery provide a visible record of the network of relationships which constituted the community of Sandy Ground; and that the cemetery provides the Sandy Ground community with a tangible and visible link to a history which is now approaching its 150th year.

Accordingly, pursuant to the provisions of Chapter 21 (formerly Chapter 63) of the Charter of the City of New York and Chapter 8-A of the Administrative Code of the City of New York, the Landmarks Preservation Commission designates as a Landmark Rossville A.M.E. Zion Church Cemetery, Crabtree Avenue, Borough of Staten Island and designates Tax Map Block 7092, Lot 22, Borough of Staten Island, as its Landmark Site.

BIBLIOGRAPHY

- Askins, William. The Sandy Ground Survey Project: Archaeological and Historical Research in Support of a National Register Nomination. New York: The City College, City University of New York, 1980.
- Hubbell, A.Y. History of Methodism and the Methodist Churches of Staten Island. New York: Richmond Publishing Company, 1898.
- Mitchell, Joseph. "Mr. Hunter's Grave," New Yorker, September 22, 1956, pp.50-95.
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- Staten Island Institute of Arts and Sciences. Black Man on Staten Island Collection.
- Wilkins, Minna C. "Sandy Ground: A Tiny Racial Island," Staten Island Historian, 6 (January - March 1943) 1-3, 7; (October - December 1943), 25-26, 31-32.



Photo Credit: Carl Forster
Landmarks Preservation Commission

Rossville A.M.E. Zion Church
Cemetery
Crabtree Avenue

Established: 1852