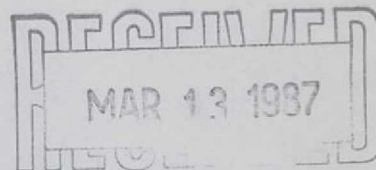


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ARCHAEOLOGICAL SENSITIVITY EVALUATION
OF THE PROPOSED HYLAN BOULEVARD
SHOPPING CENTER PARCEL, STATEN ISLAND, N.Y.

86-235R

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We would like to express our appreciation to Mr. Albert Anderson for his openness and assistance in helping synthesize the location and results of past investigations in the area.

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ARCHAEOLOGICAL SENSITIVITY EVALUATION OF THE
HYLAN BOULEVARD SHOPPING CENTER PROJECT

I. Abstract

The following Archaeological Sensitivity Study documents and evaluates the potential prehistoric and historic subsurface sensitivity of the proposed Hylan Boulevard Shopping Center Project Site. (Figure 12) The project area derives its archaeological sensitivity from the confirmed presence of previously documented archaeological sites within a radius of 500-1,000 feet to the north and south of the intersection of Page Avenue and Hylan Boulevard which defines two sides of the project parcel. (Figure 2) The potential sensitivity was further highlighted by the past discovery in the area of a child and dog burial in association with prehistoric refuse pits and hearths. Although it has been confirmed that these finds were recorded at least 50-100' north of the project parcel, their proximity suggests that comparable remains may exist within the project parcel itself. In addition, the recovery of a single prehistoric grooved axe which has been confirmed as having been found within the project parcel itself close to the intersection of Hylan Boulevard and Page Avenue,

suggests that additional materials may also survive within it, as well.

Based on this evaluation, it appears that the archaeological sensitivity of this parcel, is restricted to the prehistoric period. While these late 19th - early 20th century structures once existed within the project zone, they appear to have been demolished as part of bulldozer clearing operations within the last three decades. Because of their relatively late date of construction and contemporary condition, no archaeological investigation relative to their potential sensitivity is herein recommended. Furthermore, while this survey documents the recovery of 18th century material between several thousand feet to the northwest of the parcel, neither documentary, cartographic or archaeological evidence suggest that any comparable early historic remains exist within the project parcel itself. As detailed below, this study recommends a limited subsurface testing program to establish the presence or absence of prehistoric archaeological remains as a basis for agency review of the archaeological sensitivity of this property. So as to expedite the review process, a separate site testing proposal is being submitted concurrent with the sensitivity evaluation.

II. Introduction

This report is limited in scope to a documentary and cartographic as well as a superficial visual survey of the project parcel. No subsurface tests were conducted as part of this study. The data for this report was based on a comprehensive review of archival, cartographic, primary and secondary source documentary material, photo collections as well as interviews with avocational archaeologist, Albert J. Anderson who had worked in the vicinity of the project area. The following institutions also provided key sources of information: Staten Island Archives, Richmond County Court House, County Clerk's Office, Topographic Bureau, Borough Hall, S.I., The Staten Island Advance. In addition to these standard archival sources, this survey integrated the results of previous environmental impact studies in the area (Pickman, 1978; Grossman, 1985). Finally, the detailed study of historic maps through time provided key insights into changing land use patterns in the area.

III. The Project Site & Setting

Located near the southern shore of Staten Island, the project area is approximately 1/3 mile from Raritan Bay at an elevation of between 38'-40' above sea

level and is situated in the village of Tottenville. (Figure 1) The site itself, known as Block 7755, is bounded on the south by Hylan Boulevard, on the west by Page Avenue, by the unpaved paper streets Camden Avenue on the north, and Eugene Street on the east. The total area of the project parcel consists of 82,456 square feet. Of this, 14,500 square feet or 17%, would be taken up by the proposed two-story building. The other 67,956 square feet will be "open space", i.e., parking lots and landscaped areas (Figure 20) (Salvadeo 1985). As noted below, in the description of the visit to the site, major areas of this parcel have been previously impacted by fire, house demolition activities and by the previous excavation of an incomplete building foundation trench which was relocated as part of this survey.

The overall topography and setting of the immediate project parcel consists of relatively low flat ground bounded by a higher ridge to the north which slopes down from an elevation of 50' above sea level at its crest. The parcels' low elevation at the 38' contour constitutes a relatively flat damp area within this complex of ridges. These ridges drop down to the south within 1,000-1,500' of the shore, and join a relatively flat sloping coastal zone with an elevation range of between 5-20' within 700' of the Raritan Bay. Thus the project parcel and the known sites in the immediate area of Page Avenue

and Hylan Boulevard are located on a series of ridges which overlook, and are adjacent to, the southern coastal plain of Staten Island. The density of prehistoric sites in the southwestern shore area of Staten Island to a large degree, reflected the abundance of shellfish and other marine resources in the nutrient rich tidal waters of the Raritan Bay and the Arthur Kill. (Figure 15)

Both air photos and historic maps of this southern shoreline show nearby areas of standing water and wetness in the vicinity. (Plate 1) An 1896 map (Figure 9), showed the presence of what was referred to as "Decker's swamp" in this lower shoreline area immediately southwest of Page Avenue. To the east of the project parcel, the terrain drops sharply from 40' down to 30' in elevation, creating several low spots with standing water. Other patches of standing water are visible on the air photos of the area but it is not clear if these represent former streams which may have been truncated by past road construction or, instead, areas of trapped water formed by surface runoff. (Plates 1 & 2) Based on the indications above, it appears possible the Pre-contact inhabitants may have had access to water without traveling great distances at least for part of the year.

As discussed below, and as observed during the field

visit, both the upland ridge to the north and the higher elevations to the south of the project parcel, are covered by stands of 10-20 year old Oak and Sassafras trees. All areas are densely blanketed by a thick growth of vines and cat briar. Although a detailed plant community survey of the immediate area was not conducted during the surface reconnaissance, it was noted that the relatively low flat terrain of the parcel was distinguished from the higher sandy ridges immediately to the north by the presence of moss and lichen in damp areas within the project boundary.

IV. Known Prehistoric Sites Along the Southwest Shore of Staten Island

So as to place the project area in its proper prehistoric setting, we have selected an arbitrary study radius of 1-1/2 miles so as to delimit the study area. This prehistoric zone located both adjacent to rich coastal fishing areas, shell beds and routes of migratory birds, and because of its proximity to both Manhattan Island and New Jersey, represents a key transportation route between these areas in both the late prehistoric and historic periods. (Bolton, 1922, Jacobson, 1980:69)

The southwestern shore of Staten Island has been

noted for at least 100 years as a region of relatively dense and early prehistoric occupations. As early as 1909, Alanson Skinner noted the presence of shell middens in the Prince's Bay area. He later wrote, "beginning at Rossville and running along the shore at Tottenville are a series of interesting camp or village sites and shell heaps." (Skinner 1912:90).

Although it is clear that many potentially significant prehistoric site locations have been destroyed by the elements or recent real estate and industrial development, and that many of these have never been scientifically described or documented in detail, at least four confirmed prehistoric sites have been identified in published accounts and located within a 1-1/2 mile radius of the immediate project area. In addition to these nearby sites, there are four additional prehistoric sites in the immediate vicinity of the project parcel. These immediately adjacent sites will be discussed in detail below and are referred to in this report as the Page Avenue Complex.

Taken together, it is clear that this southern shore of Staten Island contained numerous manifestations of human occupation dating back to at least the early Archaic Period (5,000-6,000 years B.C.) and extending upwards in time to the period of European contact in the 17th century. The following summary will briefly

describe the nature and location of previously identified sites within this 1-1/2 mile radius of the project area.

A prehistoric site known, alternatively, as "Sharrott Avenue", "Prince's Bay" or "Wolfe's Pond" was located at the end of Sharrott Avenue along the southern shore of Staten Island at Prince's Bay (approximately 1.1 miles southeast of the project area). The site was recorded as part of the Metropolitan site Survey by Dr. Bert Salwen. Salwen noted that a group of artifacts in the collections of the Museum of The American Indian may have derived from this site. These artifacts included a knife, projectile points, a decorated object made of steatite and stone flakes. (Salwen, 1967) This site is not to be confused with another with a similar name excavated by Cotz, Lenik and Githens several miles to the north in 1983. (Cotz, Lenik & Githens, 1985)

Approximately .5 miles southeast of the project impact area, a second site known as the Red Bank site was identified on a knoll on the property of the Mount Loretto Girl's Home. (Skinner 1909) Although Skinner noted the concentration of archaeological materials on his map, there is no discussion of the site or its contents within his text. His location map places the site at approximately 20' above sea level between Jack's or Butler's Creek and the Raritan Bay, about 500' east of the point where the creek formerly entered the bay.

Also within half a mile of the project area, avocational archaeologist, Joseph Bodnar and others, reported the presence of a third site, described as a shell heap or midden in the Richmond Valley section of Staten Island. (Anderson, 1961) The brief site description notes that artifacts found included decorated prehistoric postsherds, Woodland Period triangular projectile points and several awls. In their multi-volume history of Staten Island, Leng & Davis noted that an Indian path in Richmond Valley "went past the one time Indian camping place at the spring..." (Leng & Davis, 1930:726). Because of the vagueness of these descriptions, the two site areas can not be positively linked, but it is clear this this area contained one or more Native American sites.

Finally, in addition to these brief and often limited references to sites in the general vicinity, the project parcel is also located within 1-1/3 miles of what has been described as the largest prehistoric occupation sites and cemeteries in the Metropolitan area. (Jacobson, 1980) Known variously as Burial Ridge or the Ward's Point Site Complex, this extensive area of archaeological deposits has been the focus of investigations by a number of professionals and others, beginning in 1858. In 1980, Jacobson published a detailed synthesis of past work and documented the

temporal range and cultural affiliations of materials recovered from the site. Earlier, Bolton had characterized the area as being particularly well-suited to prehistoric occupations due to the dense oyster beds and fish populations within the tidal waters of the Arthur Kill and Raritan Bay. Not only was this a primary source for the Pre-Contact populations but also for 18th and 19th century settlers, as well. (Bolton, 1922:195) The various investigators within this locality indicated that this area has been utilized by prehistoric inhabitants over a 6-8,000 year timespan, from the Archaic to the Late Woodland periods. (Jacobson, 1980)

Although many of the earlier excavations were never reported in detail, or, at all, Jacobson's summary of past work, as well as his own excavations, documented the recovery of over 850 projectile points, more than 600 other stone tools, over 1,000 prehistoric pottery sherds, the presence of at least 45 pits, and no less than 100 Native American graves from this site alone.

Thus, although the level of documentation of past archaeological activities in the vicinity of the project area varies considerably in detail and quality of coverage, this evidence, nonetheless, demonstrates that the area within 1-1/2 miles of the impact zone is one of demonstrable archaeological sensitivity

V. The Page Avenue Complex of Sites

Overview

As part of the complex of sites discussed above, the immediate vicinity of the project parcel has also been well documented as an area of dense and significant prehistoric occupation, with sites to the northeast, northwest, and south of the Hylan Boulevard - Page Avenue intersection. These localities were described by Albert Anderson as "a series of sites scattered throughout the Woodlands." (Anderson 1965:1) For purposes of clarity, the various sites and their contents are here described as being either east or west of Page Avenue or north or south of Hylan Boulevard.

Although this area has been repeatedly documented as one of archaeological sensitivity, the quality of this documentation is highly variable. Site locations are sometimes ambiguous, artifact assemblage discussions often sketchy, and in some instances, the same site has been repeatedly referred to by different names. In none of these cases has either the site boundaries or extent been defined with controlled testing. In other instances, the archaeological documentation is limited to a single site survey form on file at the Staten Island Archives. In attempting to clarify the ambiguity over the various site designations and locations used by

different authors, we have compiled all available site location data into a single scaled map for reference purposes. (Fig.2)

Following Skinner's (1909; 1912) early turn of the century references to the density of sites along the shoreline, the next account which specifically locates prehistoric site areas in the immediate vicinity, was 50 years later by Albert Anderson (1962). An avocational archaeologist and resident of Staten Island, he has been involved with a variety of archaeological activity in the immediate project area and has played a key role in helping to locate previously reported sites. In his 1962 brief account, he initially mentioned the presence of a site which he designated Page Avenue Site No. 1. This site was described as located to the northwest of the Page Avenue - Hylan Boulevard intersection, and yielded both prehistoric and historic artifacts. (Anderson, 1962) (See Figure 12) Subsequently, Anderson (1965) published a reference to a second but related site area which he called Page Avenue Site No. 2, to the northeast of the Hylan Boulevard - Page Avenue intersection, directly opposite or east across Page Avenue from the Page Avenue No. 1 site. (Fig.) Although Anderson (1966) later published an account showing the approximate location of his Page Avenue excavations, (Figure 16), none of these reports contains a descriptive or graphic definition of

the extent or boundaries of either of these sites. As illustrated in Figure 16, the sites are shown as two parallel rectangles on either side of Page Avenue, indicating the general area of his excavations but not their overall extent. A third rectangle illustrated the approximate location of a child and dog burial close to the northeast corner of Hylan Boulevard and Page Avenue. Based on the map information alone, which was not drawn to scale, the precise location of the burial and associated features remained ill-defined until the present study.

Partially referring to the same localities, sometime after 1967, Lorraine Williams, currently curator of ethnology and archaeology at the New Jersey State Museum, filed a site survey form with the Staten Island Archives which showed an extensive area of prehistoric site sensitivity in the northeast sector of the Page Avenue-Hylan Boulevard intersection which she referred to collectively as Page Avenue Sites 1 and 2 (Fig.19) This rough site sketch was drawn to include the project parcel. However, Williams' designation was inconsistent with Anderson's descriptions of Sites 1 and 2. His report showed these sites on both sides of Page Avenue, while Williams' referred only to the east side of the road.

The area immediately to the south of Hylan Boulevard

has also been documented as being archaeologically sensitive. In 1966, avocational archaeologist E. Kaesar filed a site survey form with the Staten Island Archives which recorded the presence of two oval prehistoric site locations, to the south of Hylan Boulevard on either side of Page Avenue (Figure 18). These two site locations have been given different site names by various investigators. Kaesar referred to both sites collectively as Tottenville Site No. 4. Later, Anderson (pers. comm. 1987), distinguished between these two locations, referring to the west side as the Hollowell site, named after Don Hollowell who conducted a variety of surveys and testing programs under the auspices of the SIIAS. For the purposes of this report this distinction will be followed. (See Figure 12)

These localities were also the focus of a recent sensitivity evaluation for another project by the Principal Investigator for another project (Grossman, 1985). As part of this 1985 study, it became evident that the eastern sector of Kaesar's Tottenville Site No. 4 correlated with a ridge of high ground above the 42' contour line which was subsequently destroyed when this quadrant of the intersection was graded flat to accommodate a new baseball field and gas station. However, at that time, a walkover survey of the prehistoric zone (Grossman, 1985) indicated that not only

was the "Hollowell" section of the site west of Page Avenue largely intact, but that it also extended further to the west and south than Kaesar's 1966 survey indicated. (See Figure 12) Because of their proximity to the project area, each of these four sites will be individually discussed below.

Page Avenue Site No. 1

Page Avenue Site No.1, northwest of the Hylan - Page Avenue intersection, was investigated by Joseph Bodnar and his sons, and William Guether and Ralph Hall and was first reported by Anderson in 1962. Although no detailed site report was published, Anderson noted the recovery of a "3/4 grooved axe, 71 projectile points, quantities of pottery and several scrapers." (Anderson, 1962:93) (Figure 12). Subsequently, Anderson published additional information on the site (1965). Although this 1965 report referred to it only as the "Page Avenue Site," recent conversations with Anderson, clarified that this general reference was only meant to pertain to Page Avenue Site No. 1. In this more recent description, Anderson reported the recovery of artifacts which he suggested were similar to those from the Middle Woodland component at the Abbott Farm site near Trenton, N.J. (See Cross, 1956, Vol. II) The artifacts included an incised atlatl weight, a "two-holed gorget," two incised

decorated pendants, "large blades", a 3/4 grooved axe, "prehistoric potsherds,", a "peaked" vessel and a groundstone mortar. The latter "was recovered at 22 inches," the lowest depth recorded. (Anderson, 1965:63) Additional finds included two pestles, a "sinew stone", a shaft smoother, a graver, drills, approximately 135 projectile points (including one identified as an Orient Fishtail point), knives and a scraper. He lists and illustrates pottery that he identifies as modified-Vinette, cord-marked, net-impressed, Abbott dentate and Abbott zoned. He characterized the site as "pure" and as a "good example of one phase of the Middle Woodland Era." (Anderson, 1965:62) However, the initial identification of Vinette I type pottery suggest that the site may be even earlier and contain elements dating to the Early Woodland Period as well. In addition, one of the vessels Anderson illustrates in Plate IV of his 1965 article, appears to be from the Late Woodland Period.

Historic artifacts were also documented at Page Avenue Site No. 1. In his brief 1962 report, Anderson notes that Guether recovered "a cannon ball, two George II coins (c. 1700), one Spanish silver 'real'...and fragments of colonial dishware" from the humus level. (Anderson, 1962:93) In a recent interview with Anderson, he pointed out that most, if not all, of the area where Guether recovered the historic material had been

destroyed by the construction of a modern housing development.

Tottenville Site No. 4

South of Hylan Boulevard, work by local archaeologists has also documented the recovery of a wide range of prehistoric artifacts, suggesting a long time period of occupation and the presence of buried surfaces on one or both sides of Page Avenue. (Kaesar, 1966; Ritchie and Funk, 1971) Although probably artificially divided by modern Page Avenue, the area to the east is herein referred to as Tottenville Site No. 4, and that to the west as the Hollowell Site.

At Tottenville Site No. 4, Kaesar (1966) described the results of "several small excavations and small scattered test pits." (Kaesar, 1966:1) In addition to general occupation debris indicated by shell, bone and fire-cracked rock, Kaesar listed the recovery of the base of a side-notched projectile point which had been reworked into a drill, a hammerstone, chert flakes, burned clam and oyster shells, and fragments of deliberately fractured deer bone. (ibid) The fact that these materials did indeed come from the east side of Page Avenue is documented by a small arrow on the map in Kaesar's 1966 report. (Kaesar, 1966:2) (See Figure 18)

The Hollowell Site

On the opposite or western side of Page Avenue, is the Hollowell site, which was the focus of a report by Ritchie and Funk (1971). Excavations in 1968 by Hollowell, Anderson and others have documented the recovery of vertically stratified deposits and deeply buried layers at least 5' below the present surface. These deposits have been described by Ritchie and Funk as containing what may be some of the earliest projectile point types stratigraphically recorded in the Northeast. These point types include Eva-type, Kanahwa, Lecroy, Susquehanna Broad and unidentified bifurcates, which, based on dated finds from other sites, indicate that the Hollowell site contained Early and Late Archaic Period components. In a visit to Mr. Anderson's home in January, 1987, he permitted us to photograph these specimens. In addition to these identifiable early projectile points, several later types including Late Woodland Levanna points, were also in evidence (Plates 10 and 11).

The artifacts from the Hollowell site were evaluated by New York State archaeologist William Ritchie and senior scientist Robert Funk, of the New York State Museum and Science Service. In describing the site and

its contents, Ritchie and Funk (1971) described six discrete deposits or strata. Although based on secondary accounts, Ritchie and Funk's description constitutes the only published record of these buried archaeological deposits in the immediate project area. Given the relevance of these data to the nearby project parcel and to the recommendations of the present report, this stratigraphic description warrants quotation:

"Hollowell has described the stratigraphy as follows, in personal communications to the writers 1) an overburden of modern landfill, 0-33 inches thick, composed of sand and gravel containing bits of iron and crockery of around 1860, plus a little Indian pottery derived from the underlying late prehistoric occupation; 2) a dark brown humic layer, averaging 6 inches in depth, yielding Late Woodland artifacts (Levanna points (Ritchie 1961:31-32), incised, collared pottery, a drill and pipestem); 3) a yellowish sandy loam, 10 to 13 inches thick, which produced scattered fire-shattered rock, flint and argillite chips, and a few artifacts - Vinette 1 sherds (Ritchie and MacNeish, 1949:10) in the upper levels and narrow stemmed points and a Vosburg-type point near the base of the stratum (Ritchie, 1961:55); 4) a light brown mottled sand, averaging 18 inches thick, in which the oldest artifacts were found; 5) a sterile gray sand zone, about 10-20 inches deep; and 6) the basal boulder clay hardpan." (Ritchie & Funk, 1971:47)

In addition to more recent materials near the surface, Ritchie and Funk described the recovery of 24 projectile points from the buried "Stratum or Zone IV" (up to 5' below modern grade) and noted that most consisted of diagnostic bifurcated points indicative of the Early Archaic Period and one example of a distinctive early Eva-type point (Plate 11). Other tools associated

with this complex included end scrapers, biface and ovate knives, a drill, large numbers of oval-shaped siltstone and sandstone choppers, bifacially chipped celts with ground bits, pebble hammerstones, an adze and abrading stones (Ritchie and Funk, 1971:47). They also noted the presence of worked flaked tools which showed technical characteristics similar to some Paleo-Indian scrapers (ibid). Ritchie and Funk date this deposit to 5,000-6,000 B.C. based on the artifacts. For a discussion of their dating, see Ritchie and Funk (1971:47).

This area was recently visited in 1985 as part of an earlier Environmental Impact Study (Grossman, 1985) unrelated to the present project. This surface survey established the clear survival of prehistoric remains at the Hollowell site. A limited surface collection produced a hammerstone, jasper, quartzite and chert debitage, prehistoric pottery and a prehistoric mortar. In addition, historic artifacts were also found. These included sherds of whiteware, stoneware and yellowware, a clay pipestem, coal and charcoal. The presence of large quantities of modern glass fragments and many bottles was also noted. (Grossman, 1985)

During the most recent site survey for the Hylan Boulevard Shopping Center project, Anderson pinpointed the location of Hollowell's 1968 test excavations which had been the subject of Ritchie and Funk's report (1971).

These test unit locations are still apparent as a series of backdirt piles and depressions. It is noteworthy that while Kaesar's boundary definitions and the 1985 surface collection focused on the crest of the ridge, Hollowell's deeply buried Early Archaic horizon which yielded the Eva-type point and other buried artifacts (Plate 11), located not on the crest itself, but instead, was on its lower slopes to the southwest below the 22' contour line (Figure 12). This evidence, in addition to data recovered from Page Avenue Site No. 2 to the northeast of the intersection (see below), demonstrates the presence of deeply stratified materials in the area. Furthermore, it is also clear that areas of key archaeological sensitivity are not limited to areas of high ground alone.

The Page Avenue Site No. 2

Closer to the project site, on the northeast side of the Hylan - Page intersection, is the fourth discrete archaeological site area containing prehistoric remains and which has been designated as Page Avenue Site No. 2. (Figure 12) As is the case with the other site discussed above, its extent and boundaries remain ill-defined.

Anderson's 1965 map (Figure 16) shows a rectangle, which he pointed out in his recent conversations (1987),

was intended to indicate only the immediate area of his early investigations. The excavations were limited to the crest of the ridge no less than six hundred feet to the north of the project parcel. The southern extent of Page Avenue Site No. 2 relative to the project area remains to be defined. As mentioned above, the site form filed by Williams (post-1967) (See Figure 19), shows the prehistoric zone of the Page Avenue Site No. 2 extending as far south as Hylan Boulevard. However, it is not clear whether this representation was specific in intent based on concrete data such as subsurface tests, or instead, on only verbal accounts with Anderson and others familiar with the project area.

Although no profiles or plans were published in 1967, Anderson reported the presence of two vertically stratified occupation zones. (Anderson, 1967) Anderson noted the recovery of Cody Knives or transverse blades associated with what he defines as an Early Woodland and Period near-surface deposit. Below this occupation, he described the recovery of seven earlier Archaic Period Vosburg-points, separated by a 13" thick sterile sand layer from the upper component. The precise location of this stratigraphic sequence within Page Avenue Site No. 2 was not documented in the report other than having been found on the crest above the 50' contour. (Anderson, 1967).

Missing
OK

Although not specifically defined as having come from the Page Avenue Site No. 2, Anderson's 1965 article noted the recovery of a groundstone grooved axe northeast of the intersection of Hylan Boulevard and Page Avenue. No explicit provenience or locational maps accompanied the article. In our recent interview with Anderson (1987), he pointed out that the axe was recovered as a surface find during bulldozer clearing activity within 20' of the Hylan Boulevard - Page Avenue intersection. This is the only artifact which has been concretely identified as having come from within the boundaries of the proposed project.

The Child and Dog Burial

In addition to his other Page Avenue report, Anderson also published an account of the excavation of a child and dog burial and other finds (1965). Based on his unscaled map, (Figures 16 and 17), the burial and related features appeared to have been located in or near the project parcel. The child and dog burial was found by Don Hollowell during the course of an excavation of a number of pits and hearths which were exposed in a 50' X 50' area in the southern edge of Page Avenue Site No. 2. Hollowell asked Anderson to assist in the exposure and

documentation of the burial and Anderson published the results in 1966. Although this find was described and illustrated with photographs, the precise location of this excavation area remained ill-defined. From the scale and layout of the site sketch in his publication (See Figure 17), it appeared possible that the burial excavations occurred within the boundaries of the current project parcel.

The location of this child and dog burial is significant not only because of the recovery of the human remains but also because of the density, integrity and good preservation of the buried archaeological features recovered in association with the burial. After exposing a 50' X 50' open area, and removing 12-13 inches of overburden, Anderson recorded the presence of six discrete pits containing shell and other food remains, two hearths and a concentration of artifacts in addition to the child and dog burial. Associated with the burial were fabric-impressed ceramic sherds, a quartz projectile point and a "pebble celt." Anderson also noted a large concentration of points, scrapers and a grooved axe within 23' of the burial (Anderson, 1967). (Plate 9)

Anderson described the burial as "an oval shaped pit measuring about 3' in any given direction and no more than 2' in depth" below the original surface, which, in turn, was covered by 12" of recent humus and slopewash

(Plate 8). (Anderson, 1966:87) Anderson suggested a date range of between 700-905 A.D. for the child burial.

where are the bodies?

The location, distance and environmental setting of this series of finds relative to the project parcel could not be established based on available documentary sources without and until the site visit, together with Mr. Anderson as part of the study. As described in the site reconnaissance section below, Anderson's ability to relocate the area of these earlier excavations, established concretely that the child burial and related features did, in fact, come from outside of the project parcel.

History of Land Holdings in the Project Area

The primary goal of this historic survey is to provide a basis for addressing the presence or absence of potentially sensitive historic remains within the immediate project parcel. As a preface, it is pertinent to point out that in addition to the larger regional events which affected the European settlement of Staten Island, the history of the immediate project area, to a large extent, reflects the growth and development of transportation routes which provided access to the inland

areas of southwestern Staten Island.

As is discussed below, in addition to deeds and other primary sources, the diachronic study of the growth and distribution of early roadways as shown by historic maps, often provides a basis for projecting the potential for finding early historic remains within a study area. For this section of Staten Island, the earliest evidence for a road in the vicinity of the project parcel comes from 18th century Revolutionary War maps. At that time the main highway crossing Staten Island was Amboy Road which bisected Staten Island east and west (Fig. 4) The 18th century settlements both bordered this main road and offshoots from it. One of these north-south sideroads led to the south shore in the vicinity of the project area, and was associated with three structures along its route. The more extensive modern network of adjacent north/south roads did not appear until after the first quarter of the 19th century. Page, originally known as Beach Avenue, was not constructed until 1823, but, based on earlier maps appears to have been preceded by an earlier roadway as far back in time as the American Revolution. (Liber K p. 188) (McMillen 1946) Hylan Boulevard itself was not constructed until sometime between 1853 and 1874. (Figs. 6 & 7), and was not made into a major thoroughfare until 1927. (Jacobs, 1979)

This general pattern of the growth of transportation

networks helps to explain the fact that the vicinity of the project parcel contained a relatively low density of historic residences and structures until the advent of new roads which opened up the interior in the first half of the 19th century.

Early History: The 17th Century

Although there is documentary and cartographic evidence for early colonial settlements in other areas of Staten Island, the surviving maps and records tell little of 17th century activities, if any, in the immediate vicinity of the project area. Despite the limited availability of 17th century map and documentary coverage for this area of Staten Island, two points are worthy of mention:

1) no primary documents have been encountered which indicate the presence of any 17th century European occupations within the immediate vicinity of Hylan Boulevard and Page Avenue; and

2) the ability to tie down the presence of documented 17th and 18th century occupations in Staten Island is complicated by the fact that unlike the Borough of Manhattan where deeds are indexed by blocks in addition to lots which can be directly traced through time, Staten Island deeds were unindexed by either lot or block until

the late 20th century. Thus, primary deed research for the relatively large 17th and 18th century parcels require that the researcher evaluate each deed listed under the persons name in a general grantor or grantee book. Property transactions are listed chronologically rather than alphabetically. It is not clear from these indices, which deed refers to which parcel of land. Thus, without specific references to a specific settlers' name, it is difficult to identify the history of land tenure, or the identity, of 17th and early 18th century residents from deeds alone.

The 17th century settlement history of Staten Island was influenced by the shift in control from Dutch to British hegemony and by a continued pattern of conflict and confrontation between the earliest European settlers and the original Native American inhabitants. Staten Island was the scene of bloody confrontations between the Indians and the Dutch in the 1640's and 1650's. Following these confrontations, it was not until 1670, when the Indians signed an agreement with the British to finally relinquish title to all lands that European colonization really began in earnest on Staten Island (Stokes, 1916).

The earliest surviving map, the Manatus Map, is a 1670 copy of an earlier Dutch map drawn in 1639 for the Dutch West India Company by Andries Hudde, the first

surveyor general of the province. (Figure 2). It records the "bouweries" or farms of New Amsterdam and its adjacent land. Only a single farm or bouwerie is shown on Staten Island at this time and it belonged to David Pieterz de Vries. However, this early settlement was located to the east of the project area being considered.

In February 1640, DeVries leased his house and plantation to Thomas Smyth for a term of six years, complaining that he had not been sent "any people from Holland" as was agreed upon in the contract entered into with Frederick de Vries, Director of the West India Company, who was David DeVries' partner in this endeavor. (De Vries 1841,:262.)

A second early settlement was established by the Dutch merchant and patroon, Cornelis Melyn, who also arrived in 1641 aboard the ship "Den Eyckenboon" with his servants, wife, children, and forty one settlers but its precise location is unknown. They immediately began to erect houses and plough the land (Stokes 1916). The settlement was short lived (DeVries, 1841:264) because of conflicts with the Native American inhabitants of the Island. To a large degree, these conflicts helped maintain a relatively low density of European occupation on Staten Island until the last quarter of the 17th century.

The first documented evidence for land grants pertaining to the proposed project area begins with a British grant to Christopher Billop in 1676. This grant came about within a context of a conflict between areas now designated New York and New Jersey over the control of Staten Island.

Subsequent to the English takeover of New Amsterdam in 1664, there was some dispute as to whether Staten Island belonged to New York or New Jersey. James, Duke of York, decreed that all islands lying in the river or harbour which could be circumnavigated in 24 hours would automatically belong to New York. Christopher Billop, commander and owner of the ship "Bentley", sailed around Staten Island in 24 hours, thereby securing it for the Duke of York, who, in gratitude, gave Billop 1,163 acres in the southern part of Staten Island in 1676.

Billop called his grant of land "The Manor of Bentley." The project impact area is part of those lands awarded to Christopher Billop by the Duke of York on March 25, 1676 and May 6, 1687 (Skene 1907) (Leng and Davis 1930) (Figure 3). (See below for a discussion of the Conference or Billop House in the context of other survey sites within 1-1/2 miles of the project area.)

18th Century Evidence

As detailed above, during the 17th and 18th centuries the immediate project area fell within the boundaries of a large land holding belonging to the Billop family. During the 18th century the large original Billop land grant followed the general pattern of smaller deeded subdivisions and land sales. After the American Revolution, these sales provided a basis for identifying specific owners with specific parcels. However, given problems of scale, it is impossible to precisely correlate these parcels with modern maps or topography.

In 1724, the grandson of Captain Christopher Billop, (Thomas Farmer), was bequethed 1,078 acres of the original 1,600 acre Billop grant. By 1780 or 1781, his great grandson, (also named Christopher Billop), a well-known British sympathizer, had sold the portion of his estate which includes the project area to the following individuals: (Davis, 1926)

Samuel Wood (Ward)	373	acres
Albert Rickman	207	"
Benjamin Drake	60	"
Edmund Wood	50	"
John Mance (Manee)	50	"
Joseph & Jasper Totten	35	"

Jasper Churchwood	25	"
Charles Storee	50	"

(Davis, 1926:166)

By comparing McMillen's 1933 composite Revolutionary War era map of Staten Island between 1775-1783, (compiled from three primary cartographic documents: the Taylor and Skinner 1781 map, the Hessian Map, ca. 1777, the "French" Map ca. 1783 and other sources), with the above list of names, it is possible to project who owned the impact area during the Revolutionary War. Four of the individuals on the above list are noted on McMillen's map in the vicinity of the project area, three of which were some distance from the project parcel. Mr. Rickman or "Ryckman" was located west of the impact area. A Mr. "Story" or "Storee" is shown near Amboy Road, to the northeast. An "A. Manee" ("Mance") is located to the east, at the edge of Prince's Bay at Menee's (sic) point. (Figure 4)

The names on the McMillen map closest to the project impact area were "Totten", (which is on the above list) and Prall, which is not. It is possible that Totten owned the property in question, but only because the Tottens are on record for having owned a portion of the project parcel in the 19th century. Some 18th century historic finds have been reported in the archaeological literature in this vicinity, but no concrete linkages

with known early settlers can be projected based on the available data. Anderson (1962) reported the presence of 18th century artifacts from the Page Avenue Site No. 1, west of Page Avenue and northwest of the project parcel. These artifacts included a cannonball, two George II coins dating between 1727-1760, colonial pottery and a Spanish "real."

The 19th Century Evidence

The earliest available 19th century map which includes the project area, the U.S. Coastal Survey, dates to 1836, and shows a structure next to the project parcel but not directly within its boundaries. (Fig. 5)

Detailed historic maps in the form of atlas sheets were not published for Staten Island until the mid-19th century. The earliest 19th century map showing names associated with structure locations, was Dripps' 1850 map, but its level of definition was limited compared to subsequent area maps.

Butler's 1853 Atlas clearly indicated the presence of Beach or Page Avenue. (Figure 6) There were no structures on the project parcel at this time. However, the property may have been owned by J. Cole. An 1868 deed from John Cole to Amanda Tufts exists (L. 74,1) and Beer's 1874 Atlas of Staten Island corroborates that the

project area was, indeed, within Mrs. Tufts property holdings. (Figure 7) In 1874, the land surrounding the project parcel was bounded on the east by the properties of Anthony Butler, on the north by J. Totten and J. Storer, on the west by J. Totten as well as by Beach Avenue (Page Avenue) and on the south by Butler Avenue (Hylan Boulevard). Although no structures were in evidence within the project area during this time period, the 19th century maps of the vicinity showed a landscape dotted with farms and homes or estates by the last quarter of the 19th century. By the end of the Civil War, Staten Island had become a summer resort and many hotels and recreational facilities were established at that time, both in Tottenville and along other shore front properties. (Jacobs, 1979).

Beers 1887 Atlas indicated that Mrs. Tufts still owned the property including the project impact area, and that it was devoid of structures as of this date. B. Butler owned the land to the north, having purchased it from J. Storer. N.L. Butler owned the land to the east, it having been transferred or bequeathed to him by A. Butler. Page Avenue on the west was still known as Beach Avenue and the small portion of land to the west, and, intruding on Tufts' land, was still in the hands of J. Totten in 1887. (Fig. 8)

Amanda Tufts died by 1894 (L. 236 p. 569),

Robinson's 1898 Atlas indicated that the property continued in the family and belonged to Mrs. William Wood, Amanda's daughter (Figure 10). This atlas also showed that a house had been constructed near the southwest corner of the project parcel. Another structure was located just outside of the project area to the southeast and a third was shown northwest. Both deeds and atlas sheets document that these structures were built between 1887 and 1898. N.L. Butler owned the lands to the north and west. He also owned the sprawling Anchorage Estate, with its racetrack, to the southeast, which seems to have also been erected between 1887 and 1898, since it was not on the 1887 map but is illustrated in the 1898 atlas. (Figs. 8 & 10)

20th Century Indications

Robinson's 1907 Atlas of the Borough of Richmond, revealed that the property was owned by William Wood, possibly the son of the "Mrs. Wood" of the 1898 atlas. (Fig. 11) B. Butler's property to the north, was now owned by Eugene Bernheimer and the western side of Wood's property was bordered by land owned by N.L. Butler (B. Butler in 1887). Butler Avenue, (later Hylan Boulevard), still surrounded the lands on the south and Beach Avenue, (later Page Avenue), on the west.

By the first decade of the 20th century, early maps indicate that new houses and outbuildings had been erected on many of the adjoining properties. The 1907 atlas clearly showed the 1/2 mile race track at "The Anchorage", as well as the "Raritan Bay Hotel" to the south, along the beach. At this time, individual parcels of land had been assigned lot or block numbers and the Project Area was part of Lot or Block 100 in 1907.

The 1911 topographic map of the Borough of Richmond documents the presence of a single related group of three structures on the project parcel close to Page Avenue (Fig. 12) The structure located within the project area and along Page Avenue appeared to be a 1-1/2 story residential wooden frame residence and was probably owned by William Wood at this time. A wooden frame barn was erected between 1907 and 1911 directly southeast of this residence within the project impact area, and was shown surrounded by "open fields". A 2-1/2 story frame structure outside of the project impact area and located closer to, what eventually became, Eugene Street had been erected on Wood's tract of land. (Figure 12)

The 1917 Bromley Atlas shows that the property had passed to Harriet A. Wood, wife of William Wood who initially owned the property as of 1907. (Figure 13) A smaller house or outbuilding had been constructed behind the large house within the project area. The structure

located on the Wood property north of and outside of the project impact area was a frame barn with a smaller frame structure immediately to the south. Elmer T. Butler, one of the many members of the Butler family in the area, owned the estate to the east of the project area until at least 1940 (McMillen 1940).

Hylan Boulevard was first designated as Butler Avenue but later called Drumgoole Boulevard after the founder of the Mission of the Immaculate Virgin, Rev. John Drumgoole. By 1917, Beach Avenue officially became Page Avenue at this time (Figure 13).

Harriet A. Wood sold her property sometime after 1917. A subsequent 1925 map filed by North, Allison and Ettinger, civil engineers and city surveyors, for the Tottenville Manor Development Company, showed that the project area and its vicinity had been divided into blocks and lots, for the purposes of development. (Figure 14) No existing structures were illustrated on this map, however, it was this 1925 map which first showed the project block in its present form and dimensions with the exception that the block was formerly 10' longer along Page Avenue than it is today. The block was shown as partially bounded by two unpaved "paper streets" named Camden and Eugene, as well as by Page Avenue and Hylan Boulevard to the west and south. Known as Block 2 within the development complex, it was divided

into 63 separate lots, 42 of these lots were within the project parcel. (For a complete listing of property transactions with old and new lot numbers, see Appendix I, below.)

A tax map attributed to having been produced in the 1950's showed that the 1925 lot numbers had changed completely within the previous 25 years. The lots were both entirely renumbered and enlarged, with one new lot absorbing two, three or even five smaller lots. Instead of 63, there were now 23 lots, of which 14 were within the project parcel.

There was also an important shift in land designation procedures at this time. Although the land block number system had been in effect since 1923, all deeds between 1929 and 1955 pertaining to the Hylan Boulevard Shopping Center site block, were defined by the August, 1925 map of Tottenville Manor. Therefore, instead of the more recent lot numbers, the deeds consistently utilized those lot numbers from the Tottenville Manor filed Map, making it necessary to first convert the Tottenville Map lot numbers into the present day land lot numbers in order to correctly identify the true locus of each lot.

In 1981, the County Clerk's office discontinued the use of the Land Block and lot numbers and began using City Tax Block and lot numbers. Therefore, the project

parcel, once part of Block 7742 became block 7755 in the new deeds. By 1982, all property within the project impact area was owned by Mr. Max Kadin. (See Appendix I) It was subsequently purchased by representatives of the Block 7755 Richmond Corporation, current developer of the Hylan Boulevard Shopping Center site.

VII. Historic Sites Within 1-1/2 Miles of the Project Area

A number of known historic site localities are present near the project area. The village of Tottenville was part of the original Manor of Bentley which was founded by Captain Christopher Billop in 1675. Located approximately 1-1/2 miles to the east of the project area, Billop's home, erected sometime prior to 1688 and known today as the Billop or Conference House, still stands in Conference House Park, Tottenville. This structure is best known as the meeting place of Benjamin Franklin, John Adams, Edward Rutledge, Admiral Lord Richard Howe and his secretary, Henry Strachey and for their unsuccessful attempt to negotiate a settlement for an end to the Revolutionary War. The house was given to the City of New York in 1926 by W. Burke Harmon, president of the National Real Estate Corporation under the express condition that it be used "for park, recreational or museum purposes." (Davis, 1936:6) This

important early historic resource has recently been investigated archaeologically by Sherene Baugher, Archaeologist with the New York City Landmark Preservation Commission (Baugher & Venables, 1985).

Near the Conference House, at the foot of Amboy Road, Billop's Ferry provided transport between Perth Amboy, N.J. and Staten Island during the 17th and 18th centuries (and was maintained by the Billop family for four generations). Although not confirmed, at least one source has suggested that this ferry route corresponds with the original 17th century crossing point used by the Raritan Indians as late as 1650. (Pickman, 1978)

During the Revolutionary War, two companies of Hessian soldiers were stationed at Billop's Ferry and the Billop House. Christopher Billop, a British sympathizer, put in a claim to the British government after the war, for damages caused by Hessians billeted there.

Also in the area during the early 19th century the Greek revival style Tidewater Tavern was erected at the foot of Bentley Street ca. 1830, 1-1/2 miles west of the project area. It is currently being considered for designation as a New York City Landmark. (Pickman, 1978)

To the east of the impact area, one of the earliest structures on Staten Island, the Purdy Hotel, was

constructed around 1690, approximately 1-1/2 miles to the southeast of Page Avenue and Hylan Boulevard, near Seguine's Point and Prince's Bay. This area derived much of its economic vitality from the oyster beds along the shore. By ca. 1800 intensive harvesting and pollution had depleted the natural oyster beds in the Raritan Bay and local oystermen attempted to revitalize the industry by importing and reseeding them in this shore area. (Powell, 1976). Approximately one mile east of the project area is the Mission of the Immaculate Virgin, or Mt. Loretto, a home originally established ca. 1885 by the Rev. John C. Drumgoole for blind, homeless and destitute children. Hylan Boulevard, along the southern boundary of the project block.

The Red Bank Light standing on the bluff at the end of Cunningham Road on the Mt. Loretto property is situated on the site of many earlier lookouts, as well as a blockhouse, which were part of a group of fortifications and redoubts erected during both the Revolutionary War and the War of 1812. The most recent blockhouse, was destroyed in 1828 when the lighthouse was constructed. A religious statue presently stands on the foundation of the lighthouse.

19th Century Industries

Both the atlases and published accounts showed that

the closest 19th century commercial enterprise was located approximately 2200' southeast of the proposed impact area. This factory, established in 1860 by James Pike Gage, and referred to as a "Sand Paper Manufactory" utilized quartz pebbles from the beach and horsedrawn millstones to crush them. (Beers, 1874; Jacobs, 1979) (Figure 7)

Although not directly related, Amanda Tufts, owner of the project area from ca. 1874 to at least 1887, had a neighbor to the east, (Anthony Butler), who married Gage's daughter, Adrianna. Anthony Butler also leased the farm and beach fronting Raritan Bay where Gage gathered the quartz necessary for his sand paper production. According to an article by McMillen (1940), the factory may have been constructed by "Reuben Daggett and Israel Butler, prominent south shore carpenters and builders, during the 1860's." (McMillen, 1940:10)

Gage died in 1868 and the sand paper factory closed in 1874. Gage's home leased by his father-in-law, Anthony Butler, was constructed ca. 1800, as shown on the 1907 atlas. (Figure 11) It was still standing in 1940, as was the sand paper factory. The factory was subsequently moved from its original site and renovated into a barn and stable which stood next to the residence on the estate of Elmer T. Butler.

A second and related mid-19th century factory

existed to the northeast of the project area. Israel Butler had a box factory ca. 1850 which was located "on the south side of Amboy Road, midway between Page Avenue and Richmond Valley Road." (McMillen, 1940:11) Butler produced boxes for the shipment of Gage's sand paper produced nearby.

Israel Butler also built another Staten Island landmark, the famous Octagon House on Page Avenue, owned and occupied by William Page, the well known portrait painter, and close friend of Matthew Brady, the photographer. Page Avenue was named for this painter who lived in the uniquely shaped house west of Page Avenue and south of Hylan Boulevard from 1860 until his death in 1885. The octagon shape of the house was clearly indicated on Beer's 1887 atlas (Figure 8). This structure no longer stands. However, a 1985 pedestrian survey, led by Principal Investigator, Joel W. Grossman, then Chief Archaeologist for Greenhouse Consultants, Inc., located the depression of the building foundation, along the western side of Page Avenue, south of Hylan Boulevard and immediately east of the area Kaesar recorded in 1966 as being an area of dense prehistoric occupation.

VIII. Site Reconnaissance and Recent Impact Evaluation

Subsequent to reviewing available documentary sources relevant to the history and prehistory of the project area, a field investigation consisting of a surface survey of the project parcel was conducted on January 15, 1987 under the coordination of Joel W. Grossman, Ph.D., Principal Investigator, together with three members of the Grossman & Associates staff and with Mr. Albert Anderson, a recognized expert on the archaeology of Staten Island. Mr. Anderson was involved with previous excavation work in the Page Avenue area and was responsible for a series of important discoveries in the vicinity of the project parcel.

Although the documentary investigation had indicated that no early historic 17th or 18th century remains were likely to be found on the site itself, the synthesis of published materials pertaining to the prehistory of the area, clearly indicated that the project parcel was situated in the immediate vicinity of several previously identified prehistoric site localities. Thus, the purpose of the surface reconnaissance and on-site visit with Mr. Anderson was threefold:

- 1) to visually inspect the project parcel for surviving surface indications of prehistoric remains;

- 2) to document and evaluate the present condition of the location of any recent impacts to the parcel which may have affected the survivability of any archaeological

remains; and

3) to pinpoint the location relative to the prehistoric pits, hearths, features and a child and dog burial which had been excavated by Mr. Anderson and others in this locality in 1967.

From the published site location map in Anderson's article (1966), it initially appeared that the proposed project area map may have overlapped with the location of these excavated features and burials. (Figure 16) The evaluation of the relative sensitivity of this proposed project depended to a large extent on establishing the relationship of the project parcel to the location of these previous excavations as well as to the environmental context in which they were found.

After a preliminary review of field records and earlier excavation results at Mr. Anderson's home, he accompanied us to the project site with the explicit purpose of defining the precise location and relative elevation of the child burial excavation area (Plate 12). This visit established conclusively that the excavations were situated outside of the proposed project parcel, to the northwest, between 50-100' north of the project parcel's most northerly boundary of Camden Avenue. (470' east of Page Avenue and 40-90' north of Camden Avenue.) Its location also corresponds with the shifting topography of the area (Figure 12).

In addition to being located outside the project parcel, it was also found to have come from a zone of differing elevation and ground cover conditions. Anderson's earlier work on the child burial excavation was located on the southern slope of a wide ridge which drops in elevation from 52' down to 42' along the edge of Camden Avenue. The burial and features were recovered between the 44 and 48 foot contour line as defined on the 1911 topographic map of the area, an elevation zone consistently 2-4' higher than the lower and damper project parcel (Plate 6).

In contrast, the project parcel itself ranges in elevation between 38 and 40 feet and consists of a relatively flat terrain characterized by areas of wetter soil, surface moss and other plant cover adapted to damp conditions.

Thus, it appears from this reconnaissance survey, that the burial and features excavated by Anderson came from the areas of high, dryer ground above the 42' contour on the northern side of Hylan Boulevard.

Past Impacts

The second goal of evaluating recent impacts focused on the identification of areas of surface disturbance within the parcel general, and on the relocation and mapping of the rectangular foundation trench which was

cut sometime in the 1960's by the previous owner. It was not clear whether this foundation trench included the completion of footings or slab construction when cut. As requested by the New York City Landmark Preservation Commission staff, no subsurface tests were made prior to review of this initial sensitivity study. The foundation trench was easily relocated as a wide triangular lineal depression measuring between 42"-36" in width and 22" deep (Plates 2 and 4). It was cut with its sides parallel to both Page Avenue and Hylan Boulevard with overall dimensions of 52'X167', some 63' in from Page Avenue and 52' in from Hylan Boulevard. (Figure 15) Thus, in addition to fixing its precise location and dimensions, the surface reconnaissance established that this previous trenching activity was limited to lineal impacts following the proposed building outline but did not involve extensive surface removal within the interior of the structure outline.

The site reconnaissance also showed the presence of extensive surface disturbance and back dirt piles along the northwest and northern boundaries of the project site adjacent to Page and Camden Avenues on the north (Plate 3). The regularity and the presence of backdirt piles in a nearly parallel band near Camden Avenue suggest machine clearing. The presence of small trees throughout this disturbed area indicated these clearing operations had

taken place within the last 20 years.

Several local informants, as well as the present owner, suggested that this clearing activity was part of the cleanup from one or more fires which resulted in the destruction of a number of homes in the Tottenville area in the 1960's. A front page article in the Staten Island Advance (April 21, 1963) told of a series of three extensive brush fires which struck Staten Island on April 20, 1963. The fire first started in Rossville and spread throughout Annadale, Huguenot and Charleston. The second fire began on the beach in Tottenville, spread towards Mount Loretto, crossing Hylan Boulevard near Page Avenue and continued burning toward the S.I.R.T. This second fire also burned over the project parcel.

No evidence has been found to document when and how the late 19th century structures indicated on the 1911 topographic maps were demolished. If they indeed existed until the 1963 fire, then the bulldozer activity may have been associated with demolition of fire related debris. A third fire blazed in the north at Mariner's Harbor. The initial reconnaissance survey suggested that much, if not most, of the northern and western sides of the project parcel had been bulldozed to within 6 inches to one foot below modern grade with both vertical and horizontal disturbance within this zone.

A study of early maps and atlases had shown that no

historic buildings or structures appear to have been located within the project area until sometime between 1887 and 1898, when a house was erected at the corner of Hylan Boulevard and Page Avenue. Although possibly demolished prior to 1925, segments of cement slabs of undetermined function could be seen protruding from the disturbed soil, approximately 25 feet to the east of Page Avenue and approximately 75 feet north of Hylan Boulevard (Plate 5). No historic foundations or basement depressions were identifiable during the surface survey.

Finally, the surface survey showed, on the upper slope to the north of the project area, the presence of recent potholes and backdirt piles with surface scatters of fire-cracked rock, flakes, and at least one utilized grinding stone or "mano", indicating recent amateur digging in areas of previously confirmed archaeological deposits (Plate 3). No comparable potholes or remains were found in the lower elevations of the project site itself. Fragments of clam and oyster shell were in evidence but no fire-cracked rock or lithic debitage was observed during this surface survey of the project block.

IX. Summary of Results and Recommendations

As detailed in this Sensitivity Study for the Hylan

Boulevard Shopping Center Project, the proposed parcel is located in the immediate vicinity and adjacent to four confirmed prehistoric site zones to the north, south, and west. The potential sensitivity of the parcel further derives from the fact that earlier excavations immediately to the north by Albert Anderson and Don Hollowell, recovered six shell pits, two hearths, a dense concentration of artifacts, as well as a child and dog burial between 50 and 100 feet north of the project area. Although it was initially thought that this complex of pits and burials may have been within the project parcel itself, a field visit with one of the original investigators, Mr. Anderson, confirmed the fact that these finds, in fact, occurred north and outside of the project parcel. They were also located in a higher, drier elevation zone than the topography of the project area.

At the same time, however, this field visit confirmed the recovery of a groundstone axe within the actual project parcel near the intersection of Hylan Boulevard and Page Avenue. Nevertheless, these indicators of potential project sensitivity are balanced by the fact that this particular parcel is situated in areas of lower and damper soils than are the confirmed archaeological sites to the north and south. The field visit also indicated that between 40-50% of the project

parcel had been disturbed to an as yet undetermined depth by bulldozer and clearing activity within the last 24 years. In summary, while the project parcel is clearly located adjacent to areas of known sensitivity, it is not clear to what degree archaeological remains may be present within it, or may have survived these recent impacts.

Anderson made specific mention of the fact that a number of pits had been excavated within the project parcel by avocational archaeologists. Since these pits showed limited or negative results, he expressed the opinion that the parcel was of relatively low archaeological potential compared to the areas of high ground immediately to the north (Anderson, 1987: pers. comm).

Several possibilities relating to the archaeological potential of this parcel may exist:

- 1) given the relative dampness and low elevation of the parcel, it may indeed be an area devoid of archaeological remains despite the proximity of confirmed sites.

- 2) that despite the contemporary characteristics of relative lowness and dampness, these may reflect only recent conditions caused by alteration of traditional drainage patterns prior to the construction of Page

Avenue and Hylan Boulevard, and

3) although it may have been less intensively utilized or occupied relative to the upper ridges, it may contain cultural material of a different character or function than that encountered in other zones of documented archaeological sensitivity.

Given the proximity of known resources to the project parcel, the depth of documented finds within them, and the apparent superficial nature of the past disturbance to the project area, the possibility exists that preserved archaeological remains may survive within the project block. Although available indicators suggest that this possibility is relatively low, a concrete determination concerning its archaeological potential cannot be made based on the existing levels of information. Therefore, it is recommended that a limited and carefully designed testing program be undertaken to establish the presence or absence of archaeological remains. Accordingly, a separate recommendation for a limited testing program has been prepared for submission as an adjunct to this report.

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BLOCK # 7755 (7742)

GRANTOR	GRANTEE	DATE	LIBER	PAGE	OLD LOT #	NEW LOT #
Bergen Assoc. Inc.	Emanuel Christensen	6/20/32	736	516	8,9	57
Bergen Assoc. Inc.	Gertrude D.H. Perlman H. Henry Simon	8/10/32	738	491	57,58	7
Bergen Assoc. Inc.	Samuel Poll Israel Grablowsky	8/10/32	739	421	7	59
Mary Burton	Morris Marlow	8/18/32	740	289	5,6	60
Bergen Assoc. Inc.	Sarah Newman, Harry A. Newman, Phillip Newman	5/9/33	748	559	40,41,42	23
Bergen Assoc. Inc.	Abraham Rose	4/11/34	757	594	61,62,63	2
Bergen Assoc. Inc.	Bergen Home Sites Corp.	11/26/34	766	233	1-4, 47-50	1,62,19,9
Bergen Home Sites Corp.	White-Tremont Realty Corp.	12/28/36	790	29	1-4, 47-50	1,62,19,9
White-Tremont Realty Corp.	Bergen Assoc. Inc.	1/21/38	799	576	1-4, 47-50	1,62,19,9
Bergen Assoc. Inc.	Tottenville Manor Homes, Inc.	2/8/38	801	116	1-8,40,44-46	1,62,60,59,57,23,19
Bergen Assoc. Inc.	Louella Berger	5/6/38	804	334	43-49	19
Bergen Assoc. Inc.	Samuel Goldfarb	5/6/38	804	332	50-56	9
Abraham Rose, Executrix of deceased	Lydia Kerchenblatt	2/2/42	845	188	61,62,63	2
Lydia Kirsch (formerly Kirchenblatt)	Wilmer T. Butler	8/1/53	1248	499	61,62,63	2
Annie Linnick	Wilmer T. Butler	8/11/53	1249	364	16,17,18	43
Treasurer of the City of New York	City of N.Y. (foreclosure tax liens)	7/8/54	1283	290	40,44,46	23,19
Thomas R. Sullivan (referree) (transfer of tax liens \$50/lot)	Wilmer T. Butler	5/2/55	1310	373	1-13,40-60	1,5,7,9,19,23, 53,55,57,59,60,62
Samuel Poll (1/2 share)	Wilmer T. Butler	5/5/55	1311	66	7	59
Wilmer T. Butler	Wilmer T. Butler Elizabeth S. Butler	6/20/55	1316	112	1-13,40-60	1,5,7,9,19,23,53,55, 57,59,60,62
Morris Proner	Leo Kaplan	2/5/64	1636	138	14,15	51
Wilmer T. Butler	Max Kadin	3/10/64	1639	407	1-13,16-18, 40-63	1,2,5,7,62,60,59,57, 55,9,53,48,19,23,62
Leo Kaplan	Max Kadin	9/14/82	7	8315	14,15	51

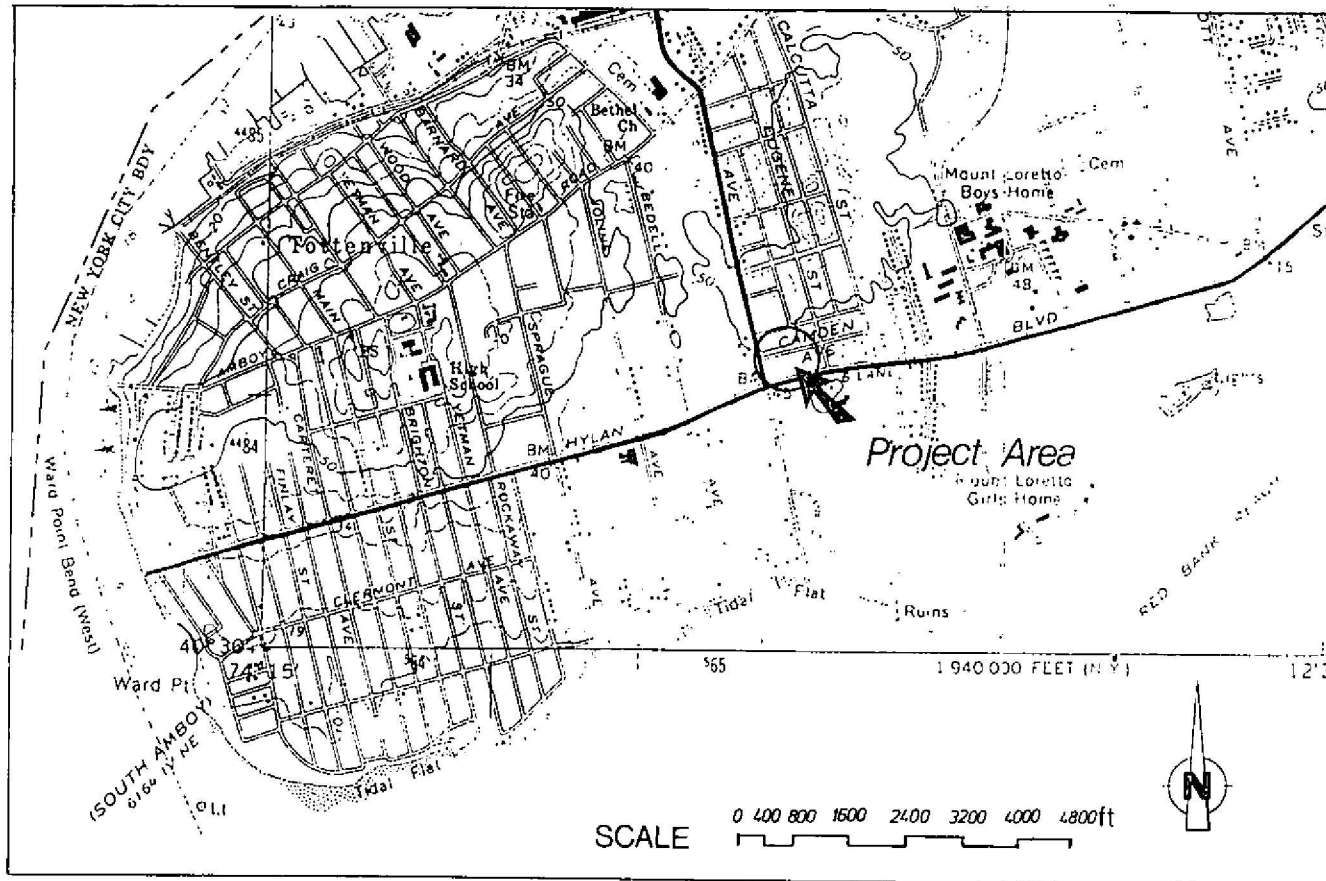


Figure 1: U.S.G.S. 7.5 Minute Series Map, Arthur Kill, N.J. - N.Y. Quadrangle, showing proposed Hylan Boulevard Shopping Center Project Site.



Figure 2: Manatus Map 1639-1670 showing DeVries early 17th century "bouwerie" on southeastern side of Staten Island.

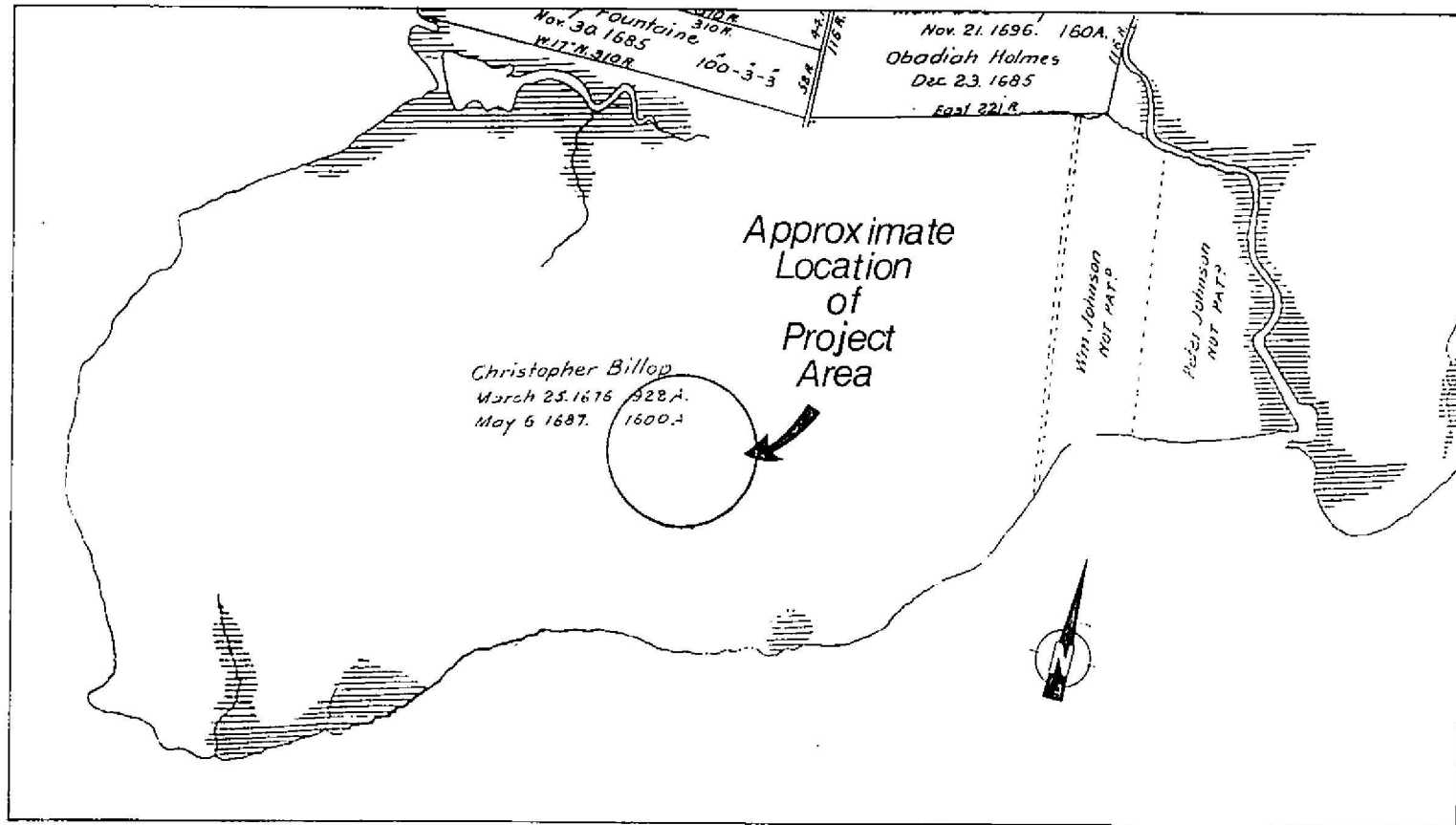


Figure 3: Skene's (1907) Map of Colonial Land Patents 1668-1712. Project area is within the Billop Land Grant, the original patent for this area of Staten Island.

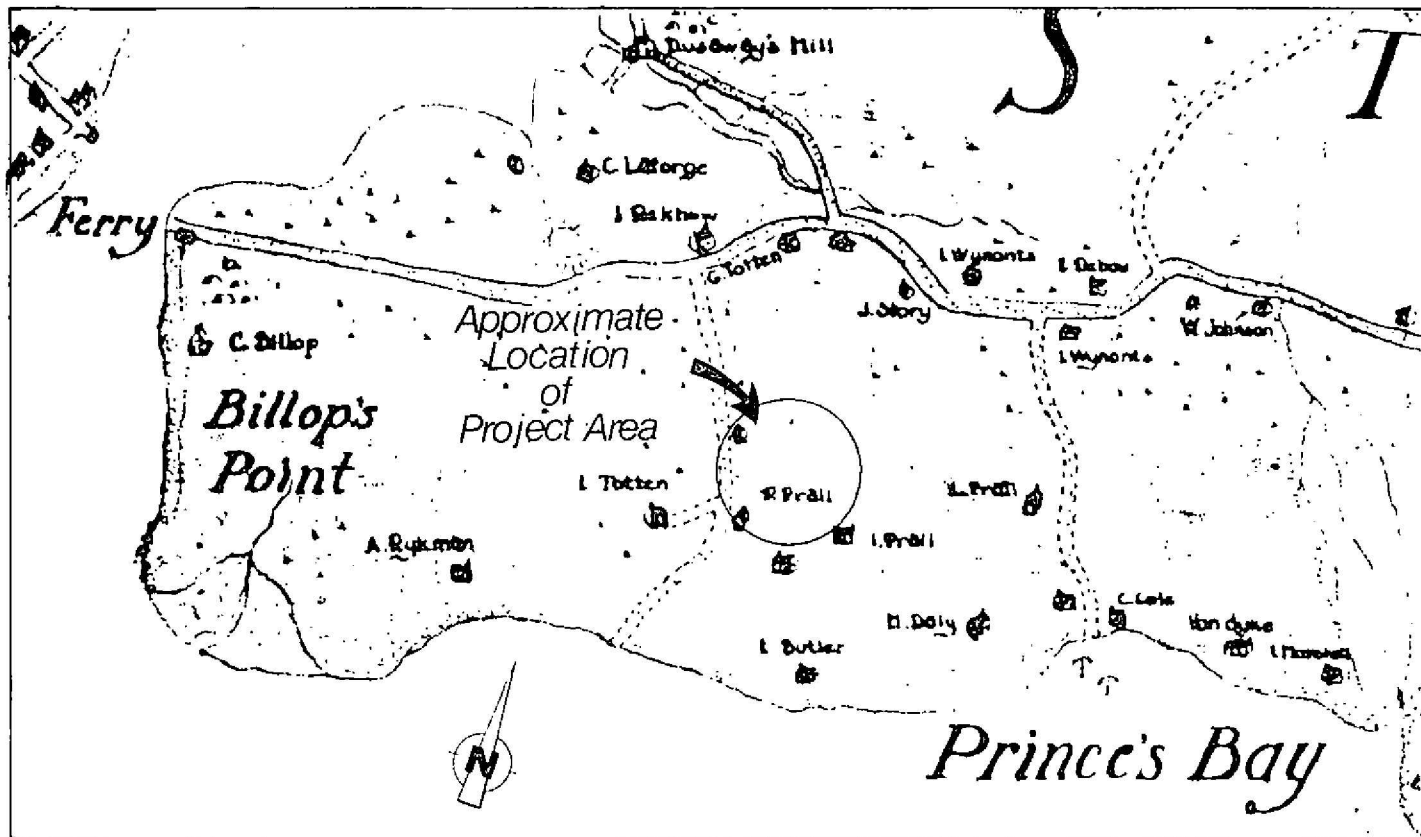


Figure 4: McMillen's (1933) composite Revolutionary War Map, 1775-1783, showing project area within lands owned by Totten or Prall. Note Amboy Road to the north.

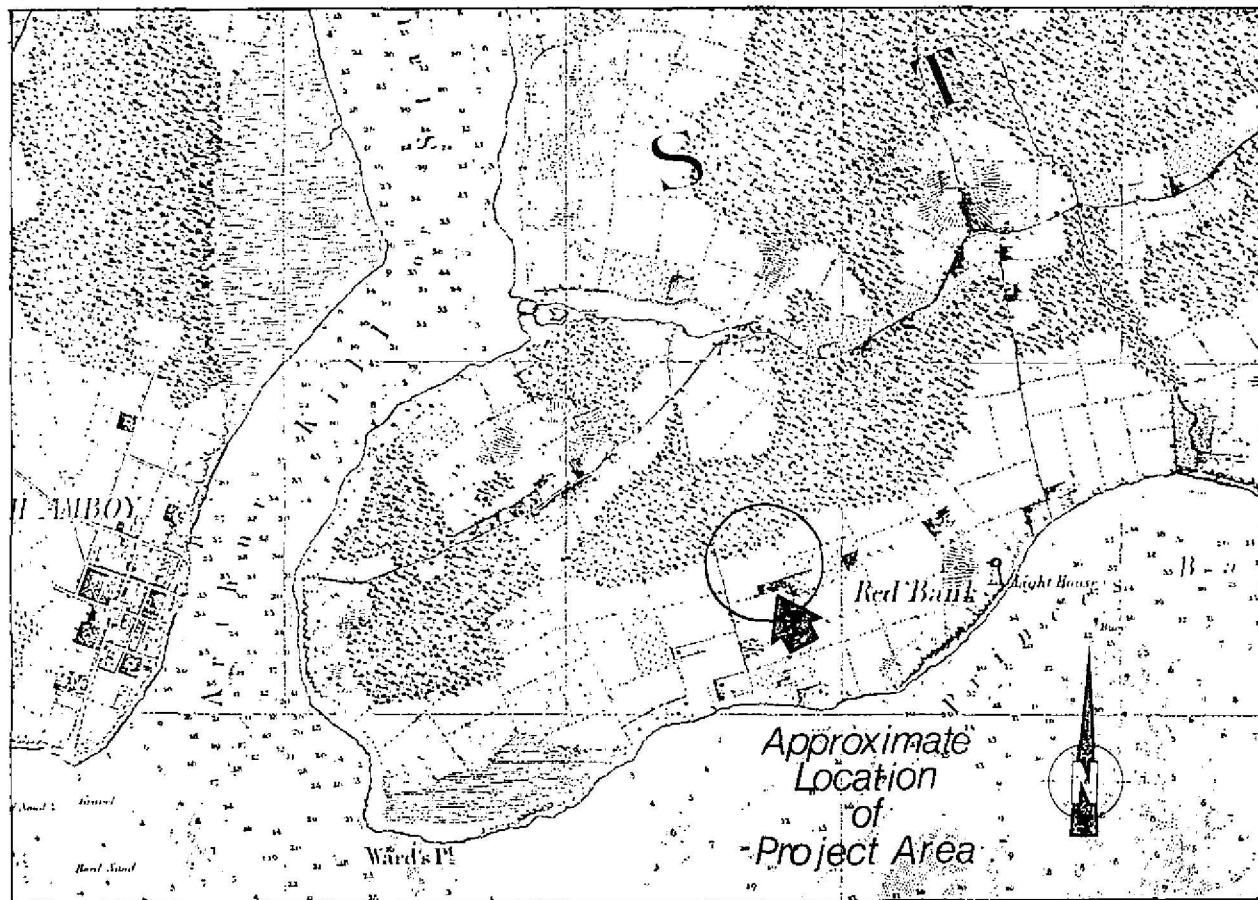


Figure 5: 1836-39 U.S. Coast Survey Charter of New York Harbor showing the relative density of land development and occupation in the early 19th century.

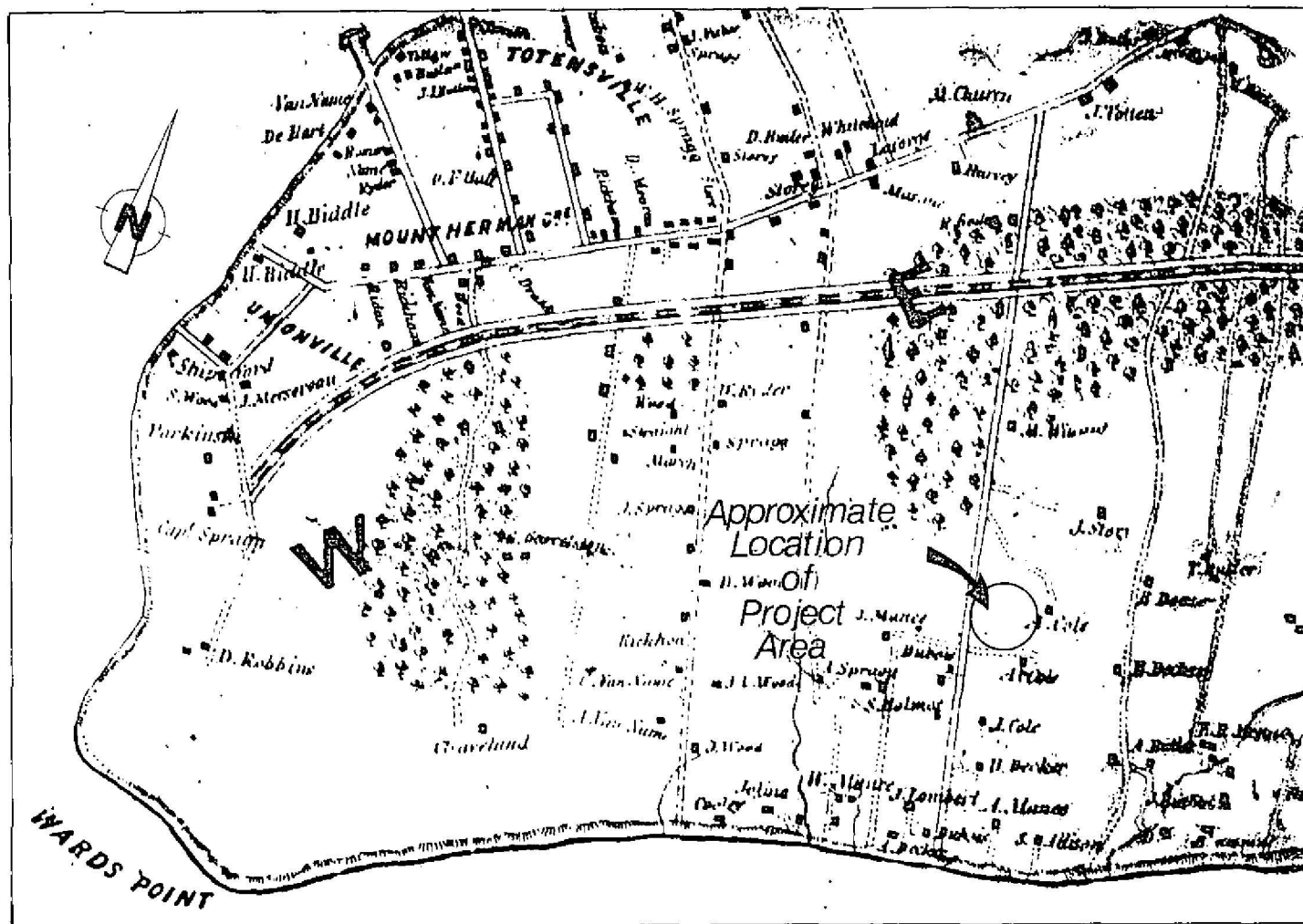
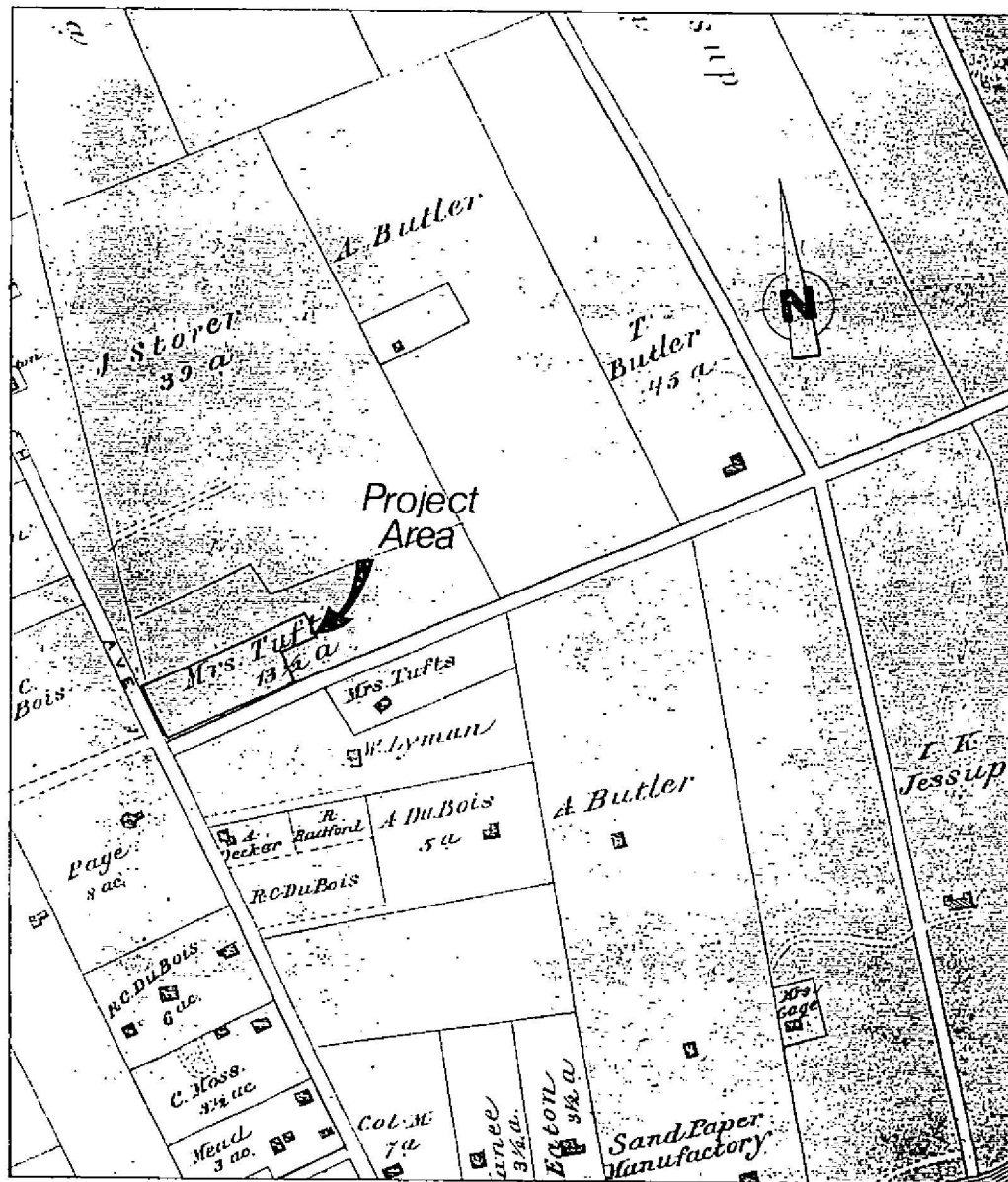


Figure 6: Butler's 1853 Atlas of Staten Island showing project area as part of Cole's property. No structures are indicated for immediate project area. Note road to the Raritan beach from Amboy Road.



SCALE 50 0 100 200 300 400 500 1000 1500ft

Figure 7: Beer's 1874 Atlas illustrating Mrs. Tufts' property on either side of Hylan Boulevard. Note the "Sand Paper Manufactory" to the southeast and early version of Hylan Boulevard south of the project parcel.

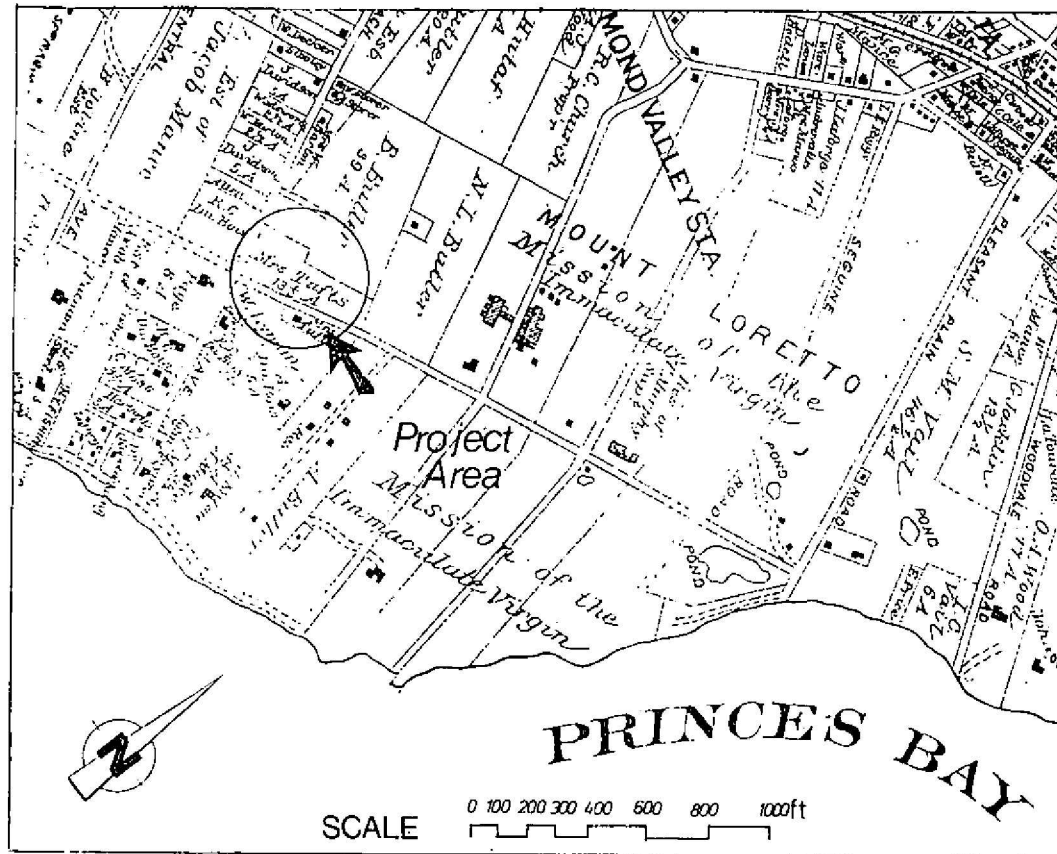


Figure 8: Beer's 1887 Atlas showing project parcel owned by Mrs. Tufts. Note the Mission of the Immaculate Virgin or Mt. Loretto to the east of the project area.

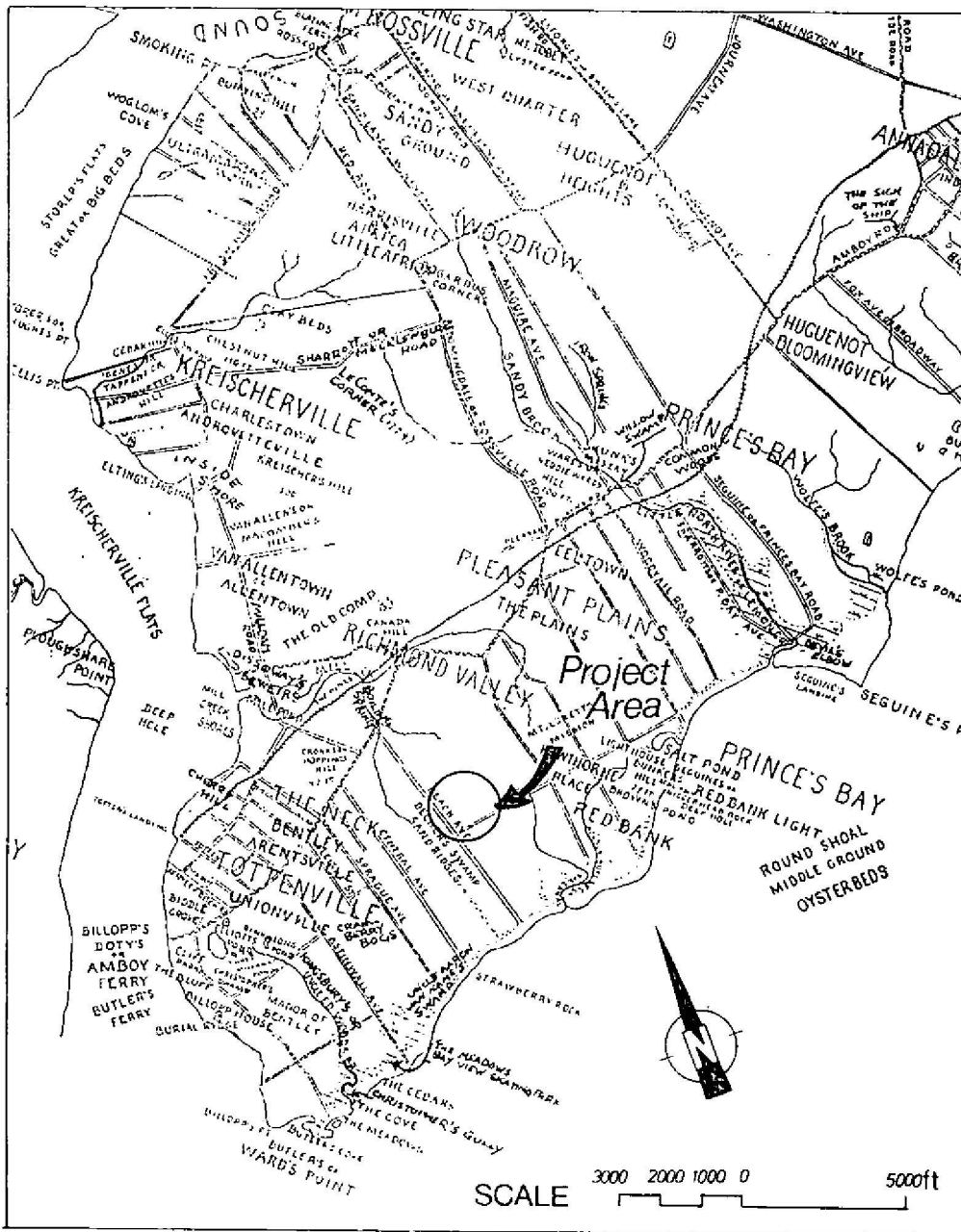


Figure 9: Leng & Davis' 1896 Map of Staten Island showing "Decker's Swamp" along western side of Beach or Page Avenue.

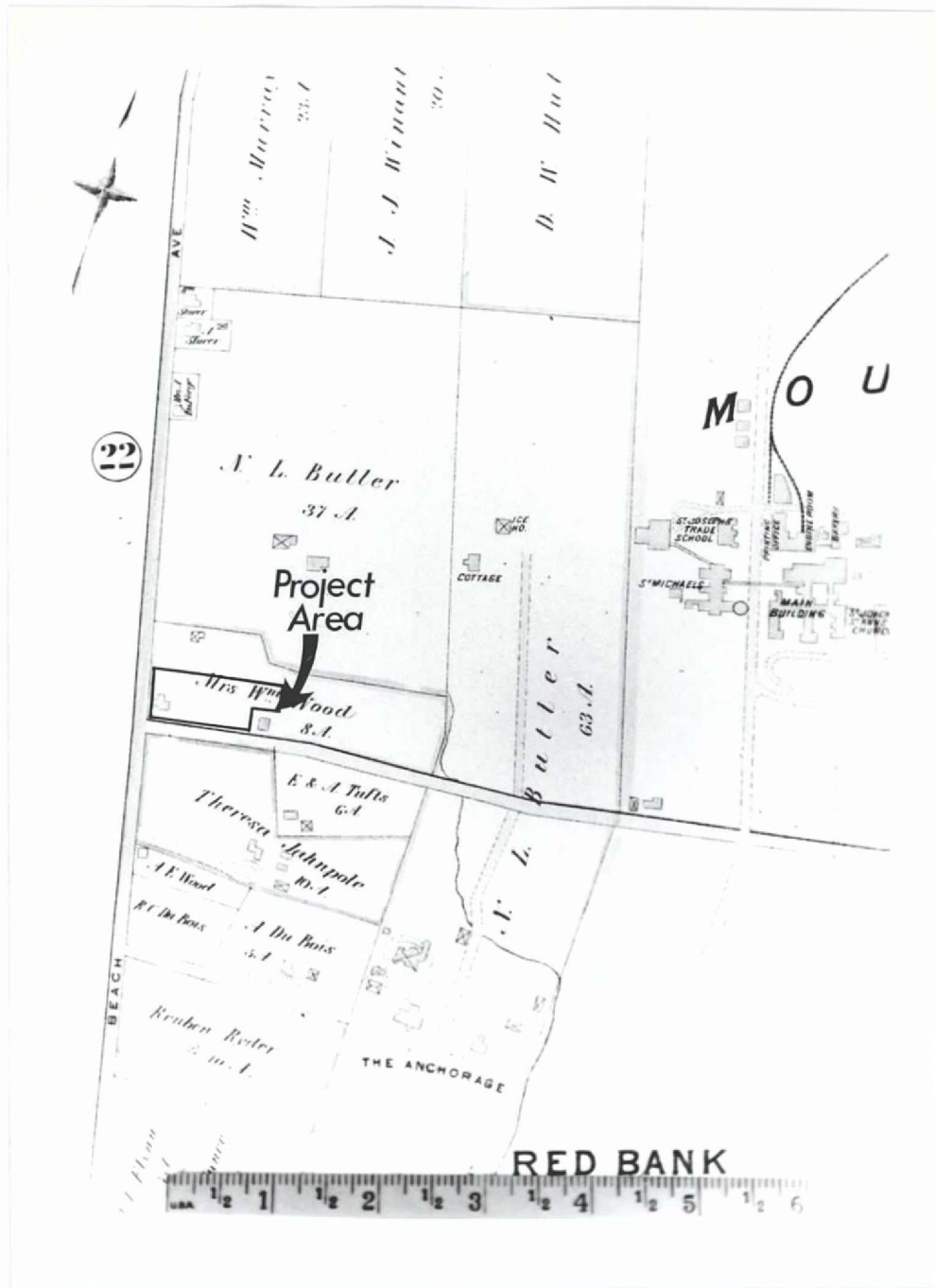


Figure 10: Robinson & Pidgeon 1898 Atlas showing project parcel owned by William Wood. Note new frame house constructed between 1887 and 1898 near Page Avenue within project parcel. Two additional structures lying east and north outside of the impact zone. Also note "The Anchorage Complex" located to the southeast and Mt. Loretto to the east of project area.

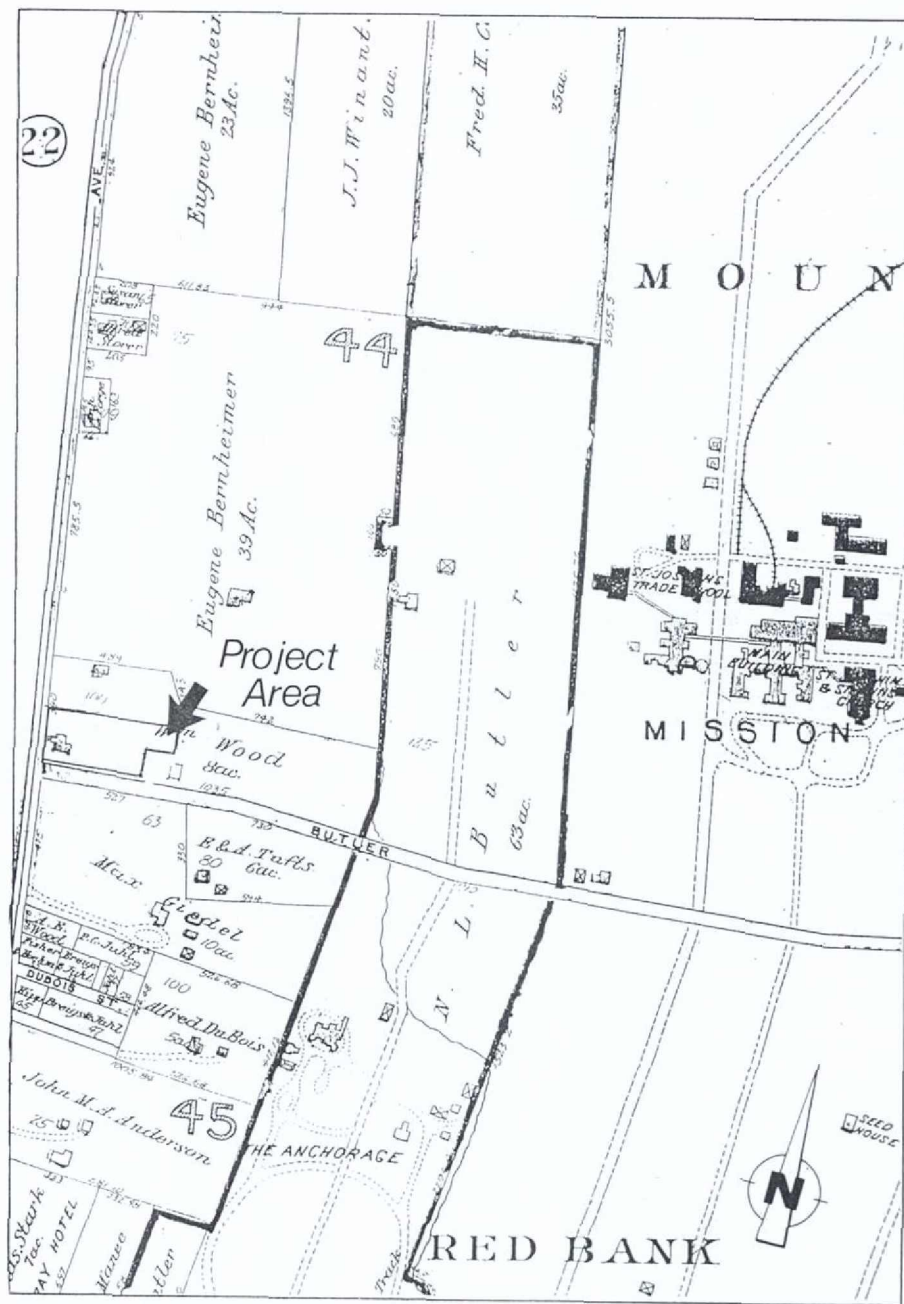


Figure 11: Robinson's 1907 Atlas showing impact area property owned by William Wood. Note The Anchorage "1/2 mile track" illustrated to the southeast of the project impact area.

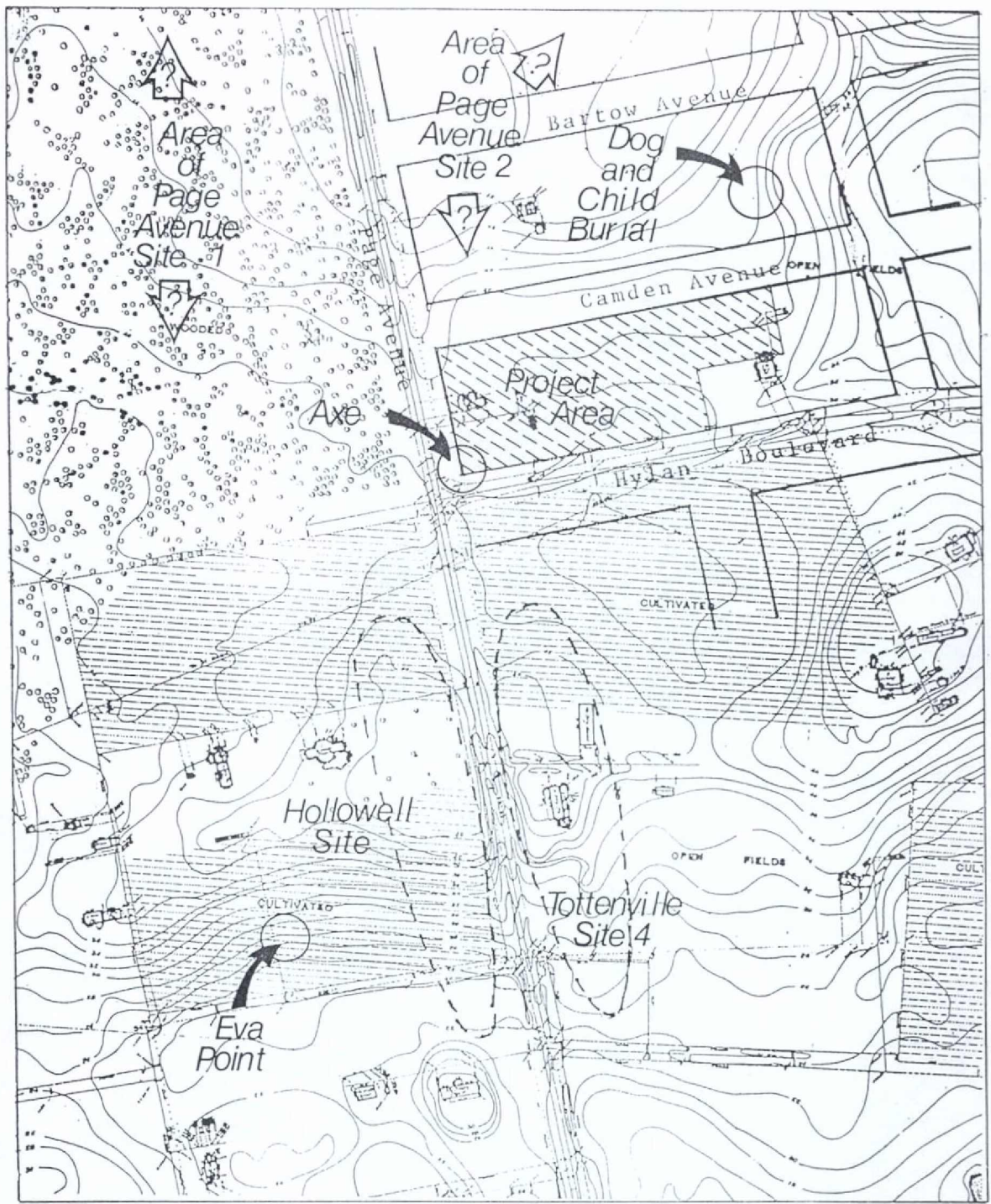


Figure 12: Composite map derived from 1911 topographic map showing the relationship of the project area to previously reported archaeological site localities and excavation areas in the immediate vicinity of the project parcel.

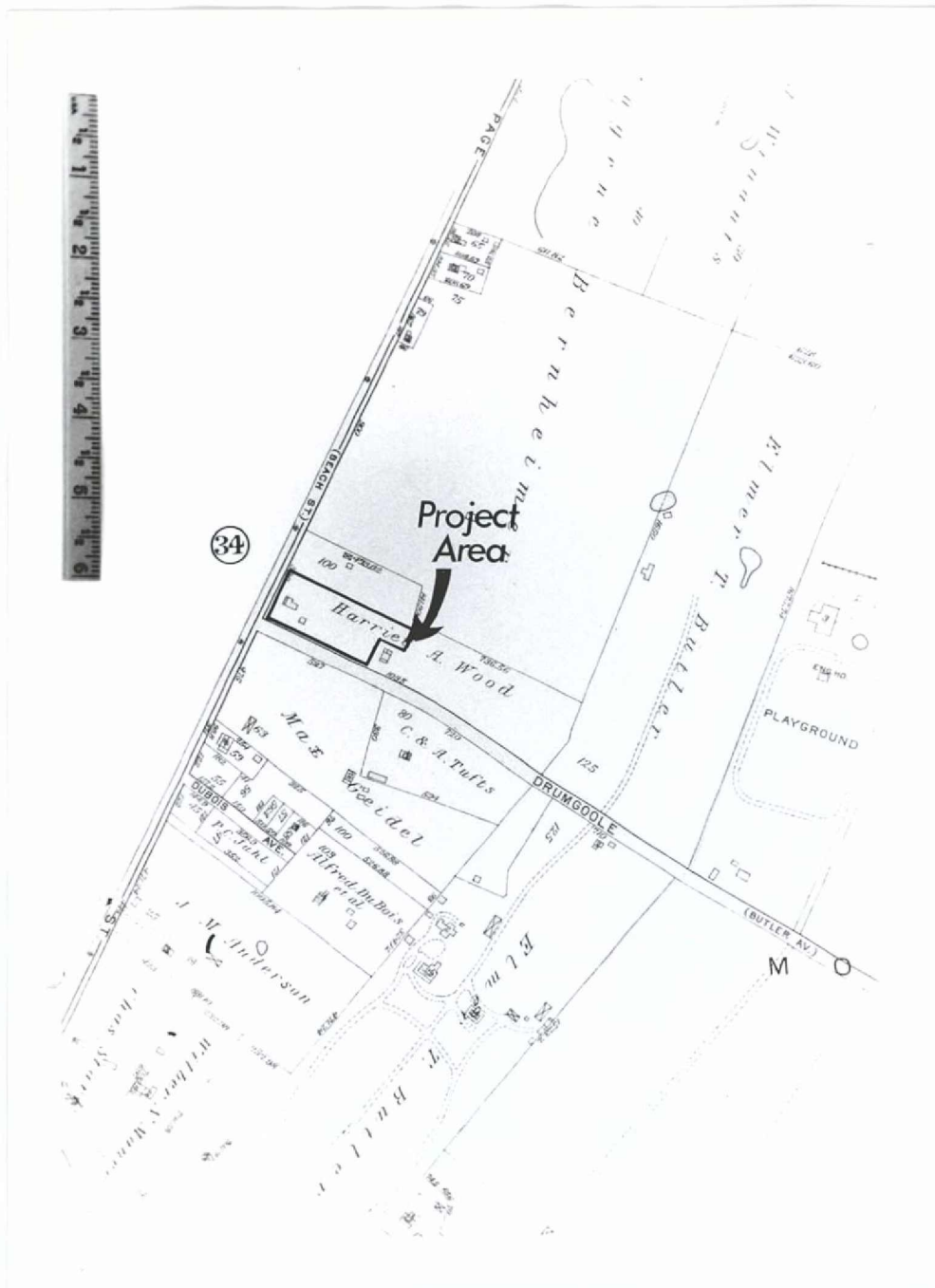
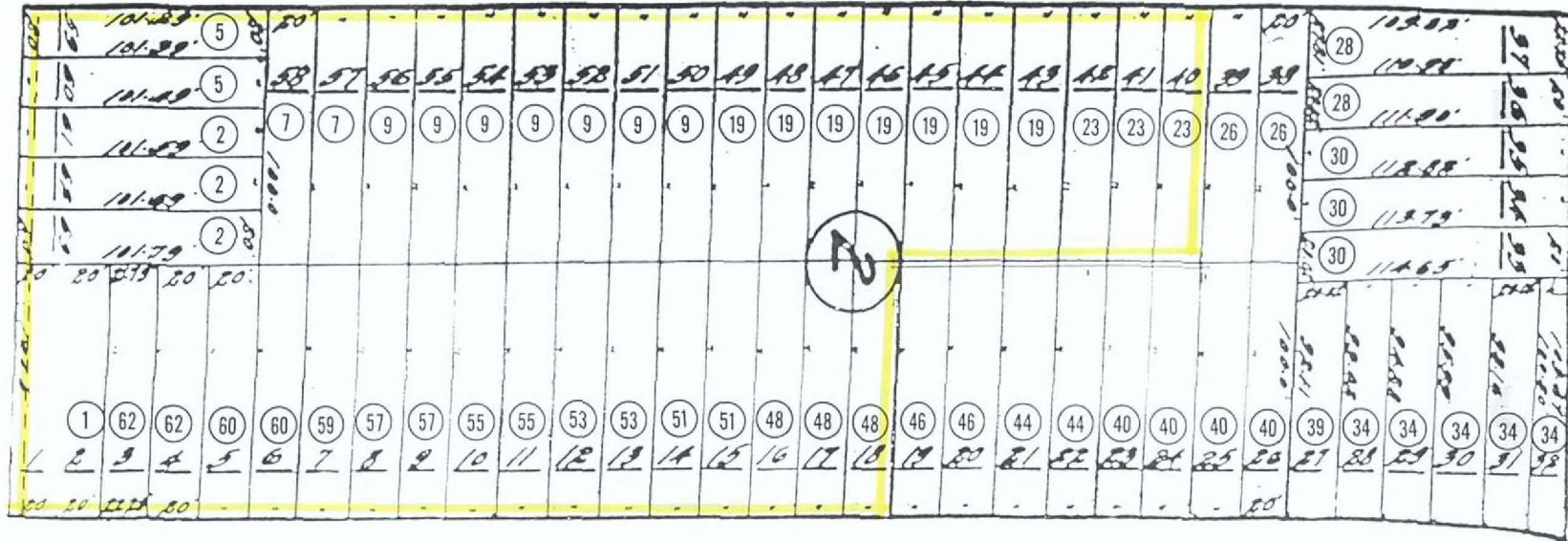


Figure 13: A photo detail of the 1917 Bromley Atlas showing the project area as part of Harriet A. Woods' landholdings. No additional structures have been erected either within or immediately adjacent to the project zone.

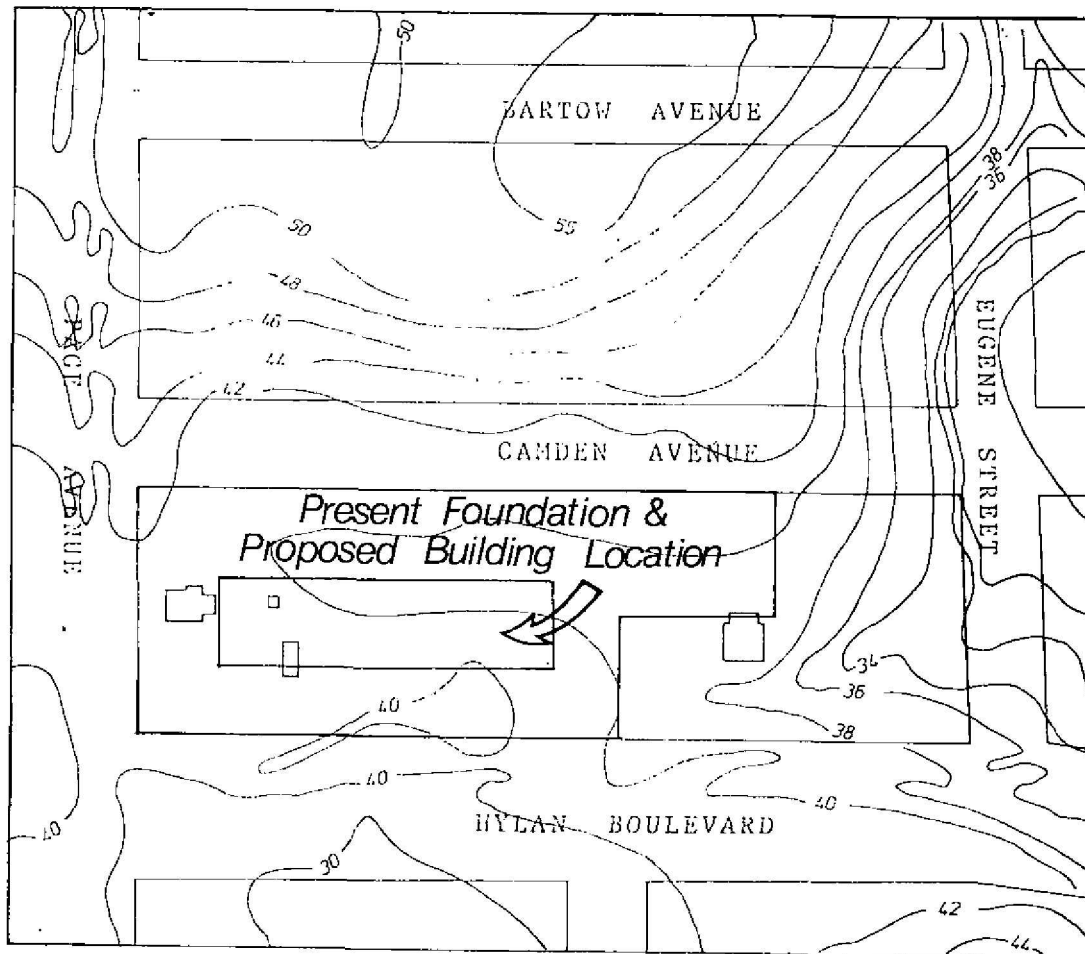
CAMDEN



HYLAN

N 75° 04' 33" E.

Figure 14: Tottenville Manor Development Map, 1925, which first shows project block in its modern form. Block is divided into 63 lots. These 1925 lot numbers are underlined, modern lot numbers are circled and the project area is defined in yellow.



0 50 100 200 300ft
 SCALE

Figure 15: Rendition of 1911 topographic map showing project boundary relative to streets and landforms and illustrating the location of previously excavated foundation trench and proposed building site.

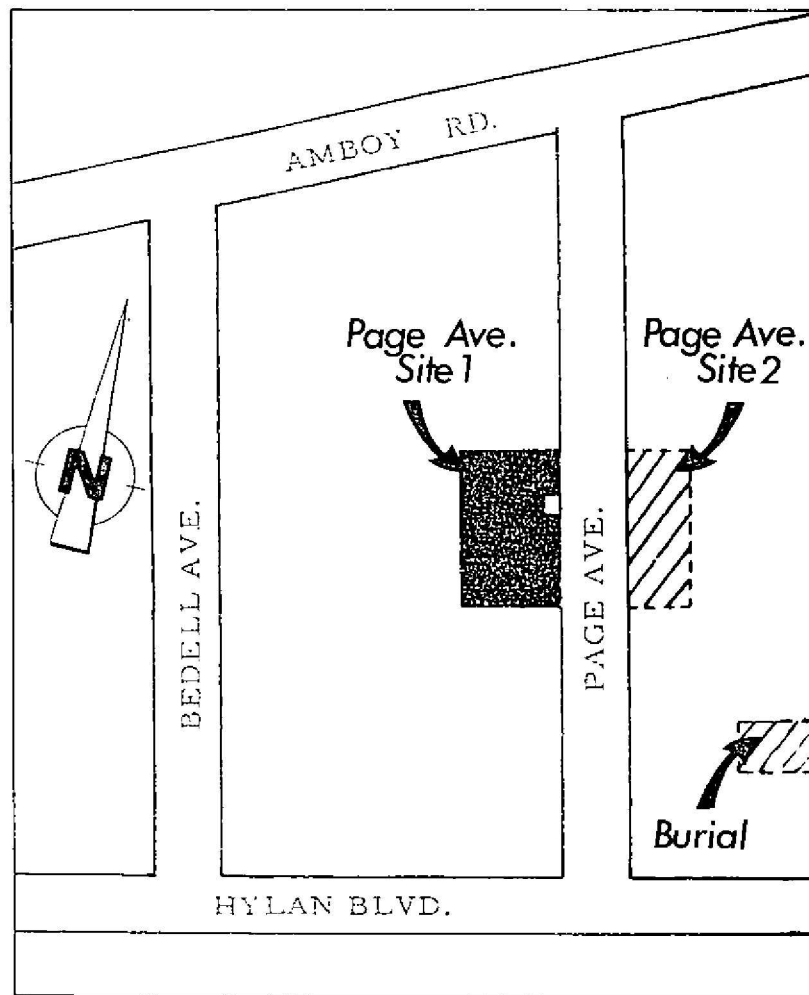


Figure 16: Reproduction of Anderson's 1965 Map indicating the areas of his excavations. Note the proximity of his indicated burial area relative to the unscaled corner of Page Avenue and Hylan Boulevard. A field visit established that the project parcel itself is, in fact, located to the southeast of Anderson's excavation area.

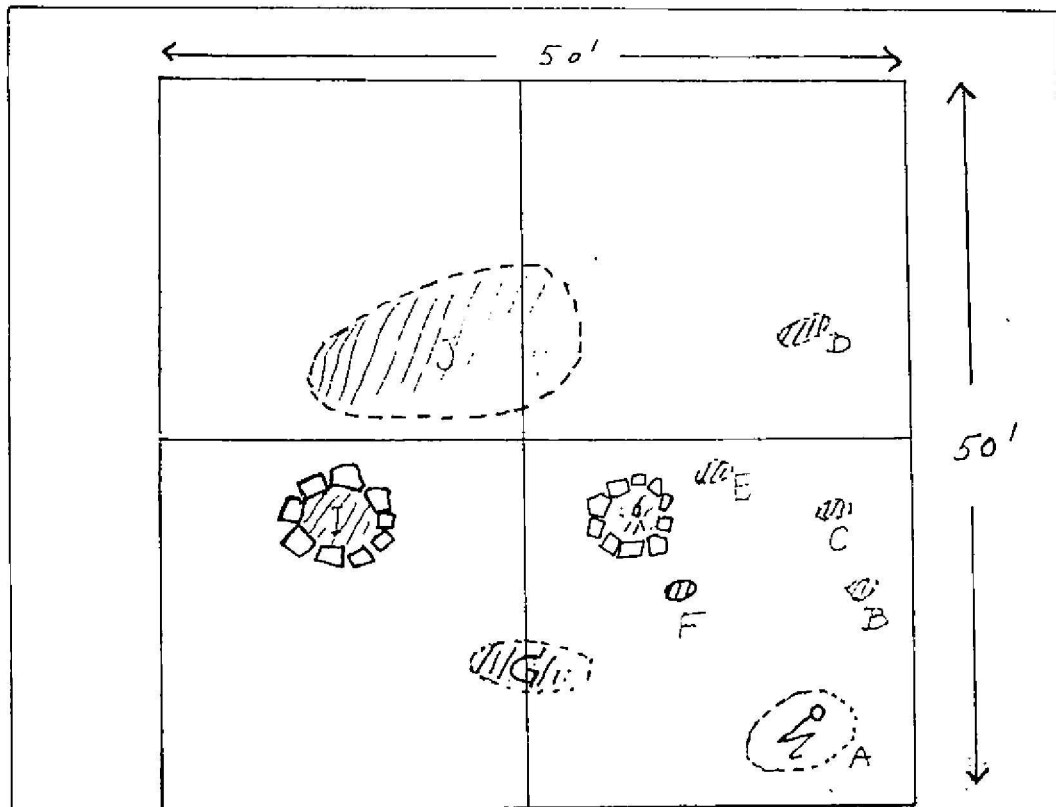


Figure 1. Plan and profile of Pit 4, FEA 8.

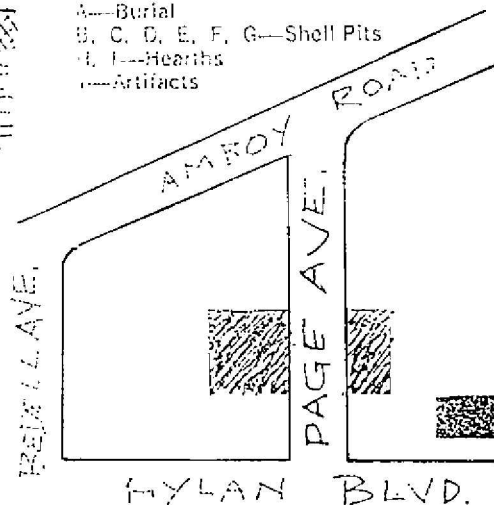
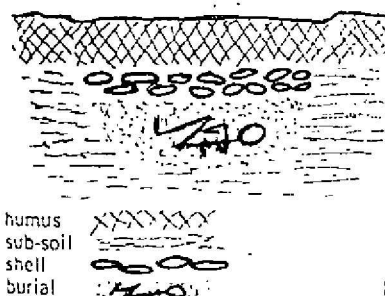


Figure 2. Page Avenue Site. Shaded area shows site proper while small dark area is the approximate area of the burial. (Not drawn to scale)

Figure 17: Reproduction of Anderson's 1966 original site plan showing the child and dog burial excavation zone, the relative vertical stratigraphic relationships of the burial to the modern ground surface and the approximate location of these investigations to modern streets.

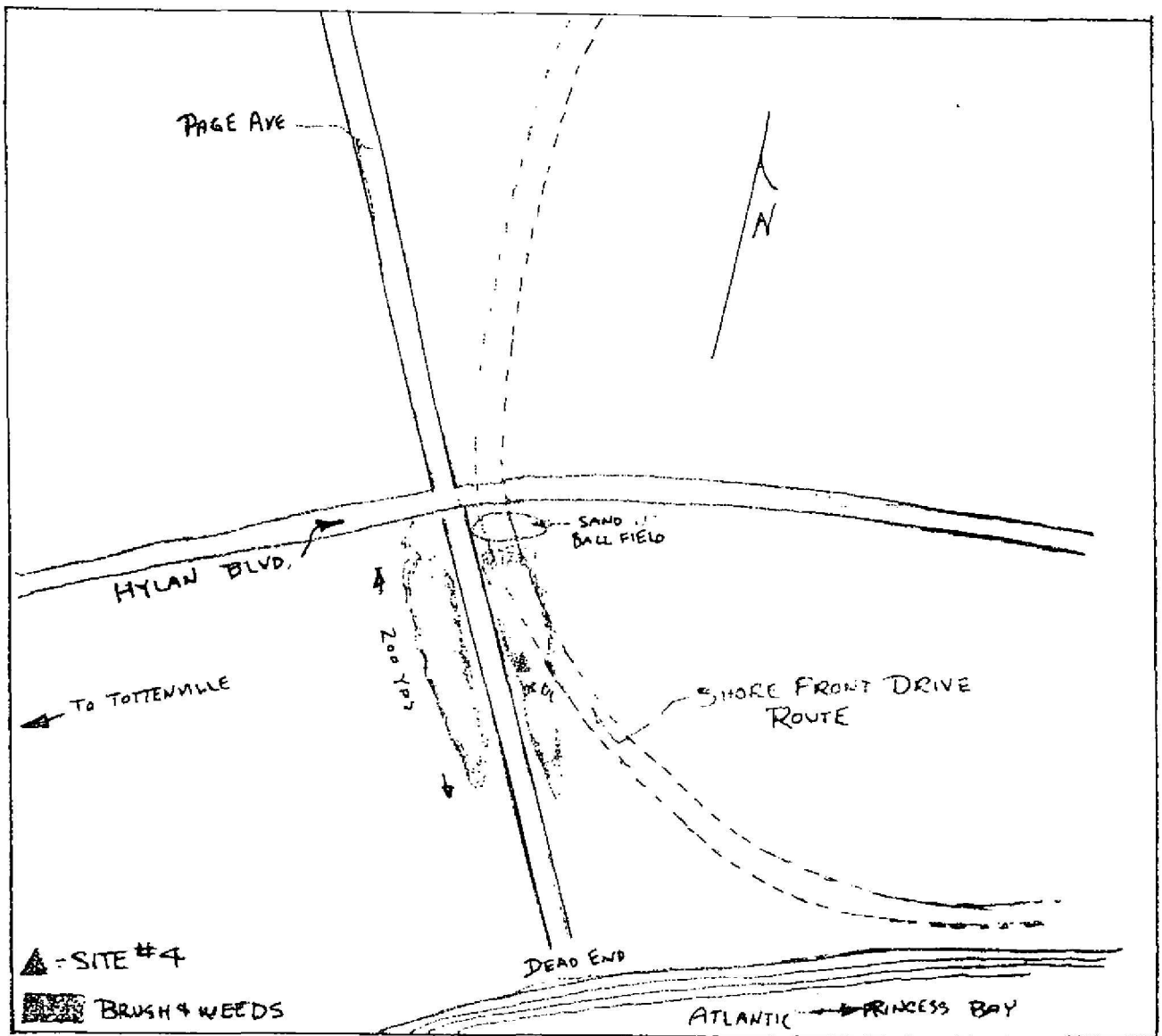


Figure 18: Reproduction of Kaesar's 1966 original sketch plan and his identification of Totteville Site No. 4 southeast of the Hylan/Page intersection. Note the presence of two oval prehistoric sensitivity zones on either side of Page Avenue. More recent site surface surveys by the Principal Investigator and others suggest that the western sensitivity zone, in fact, extended further to the west than Kaesar indicates. Although not published, the site map was found on file at the Staten Island Archives.

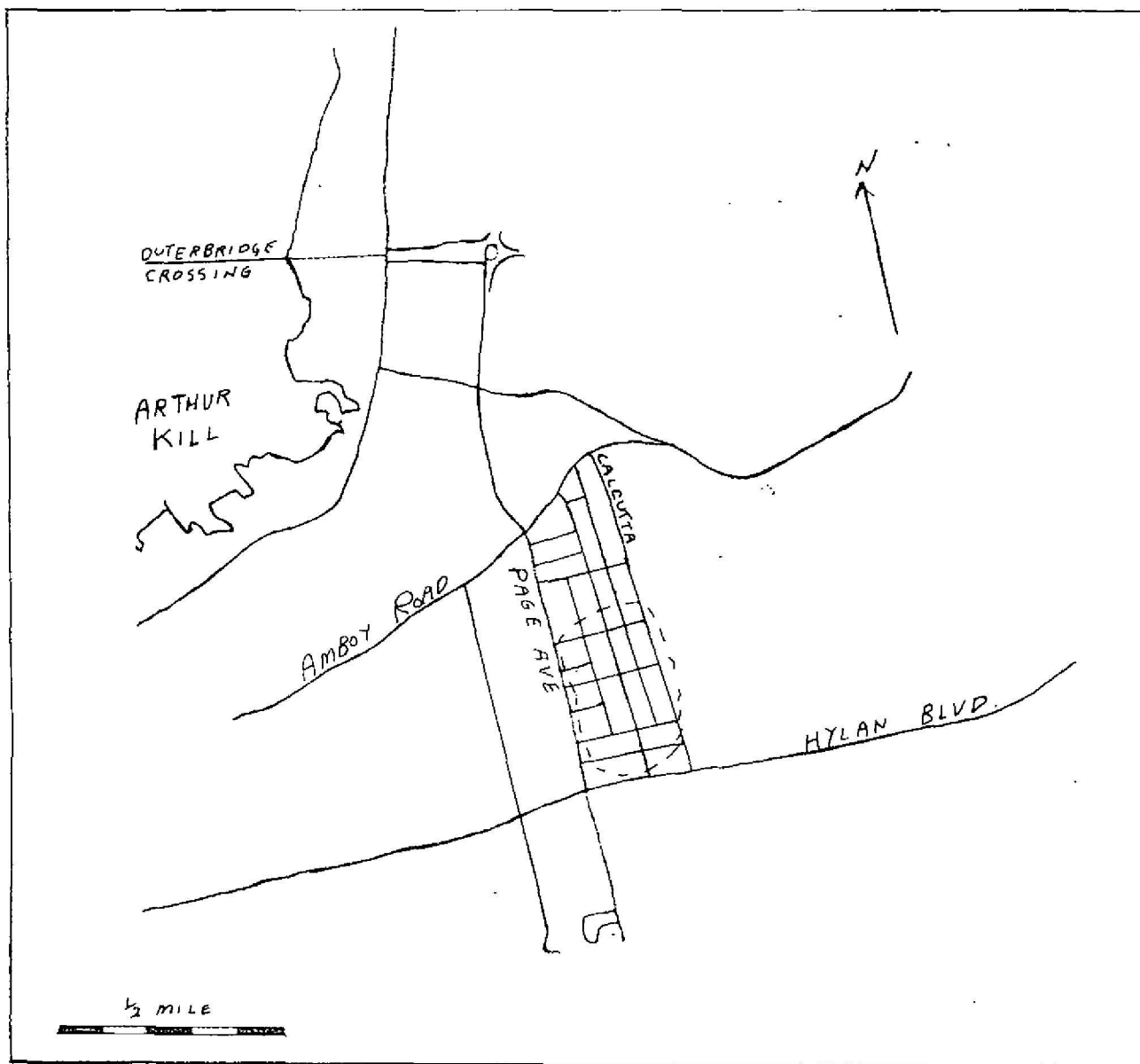


Figure 19: Reproduction of Lorraine Williams' original, post-1967, site sketch map suggesting that the zone of archaeological sensitivity extended south and west to the edges of Hylan Boulevard and Page Avenue. No data exists to verify the level of subsurface field tests which provided the basis for defining the extent of the indicated zone of prehistoric sensitivity. On file at Staten Island Archives.

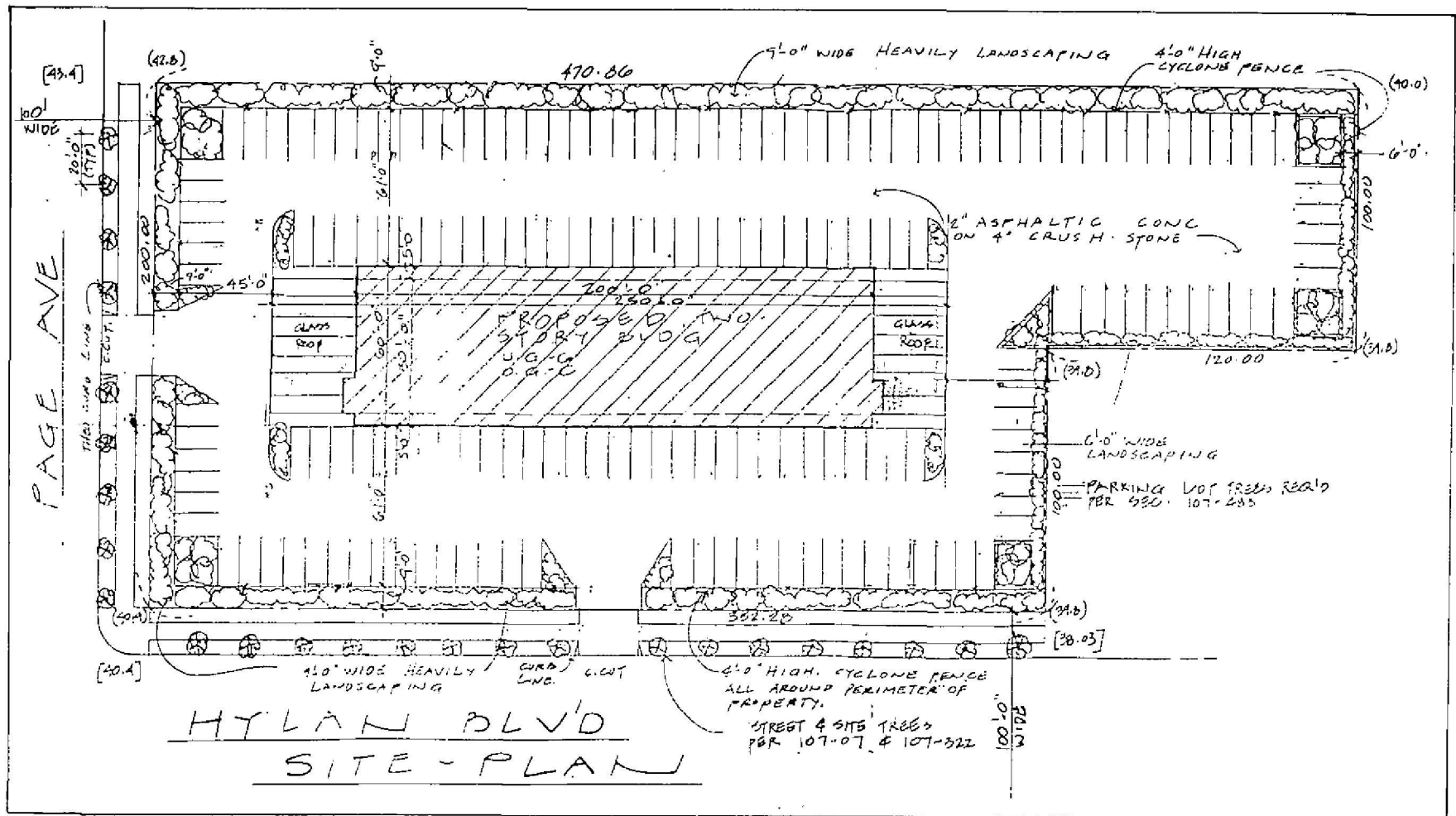


Figure 20: Proposed building plan for the Hylan Boulevard Shopping Center project. Nicholas J. Salvadeo, architect, 1985.



Plate 1: Air photo of the south shore of Staten Island along Raritan Bay showing the project area in relation to the shore, Hylan Boulevard and Page Avenue. Note the presence of standing water to the east of the project parcel and its relatively undisturbed nature compared to the extensive clearing evident to the south of Hylan Boulevard.

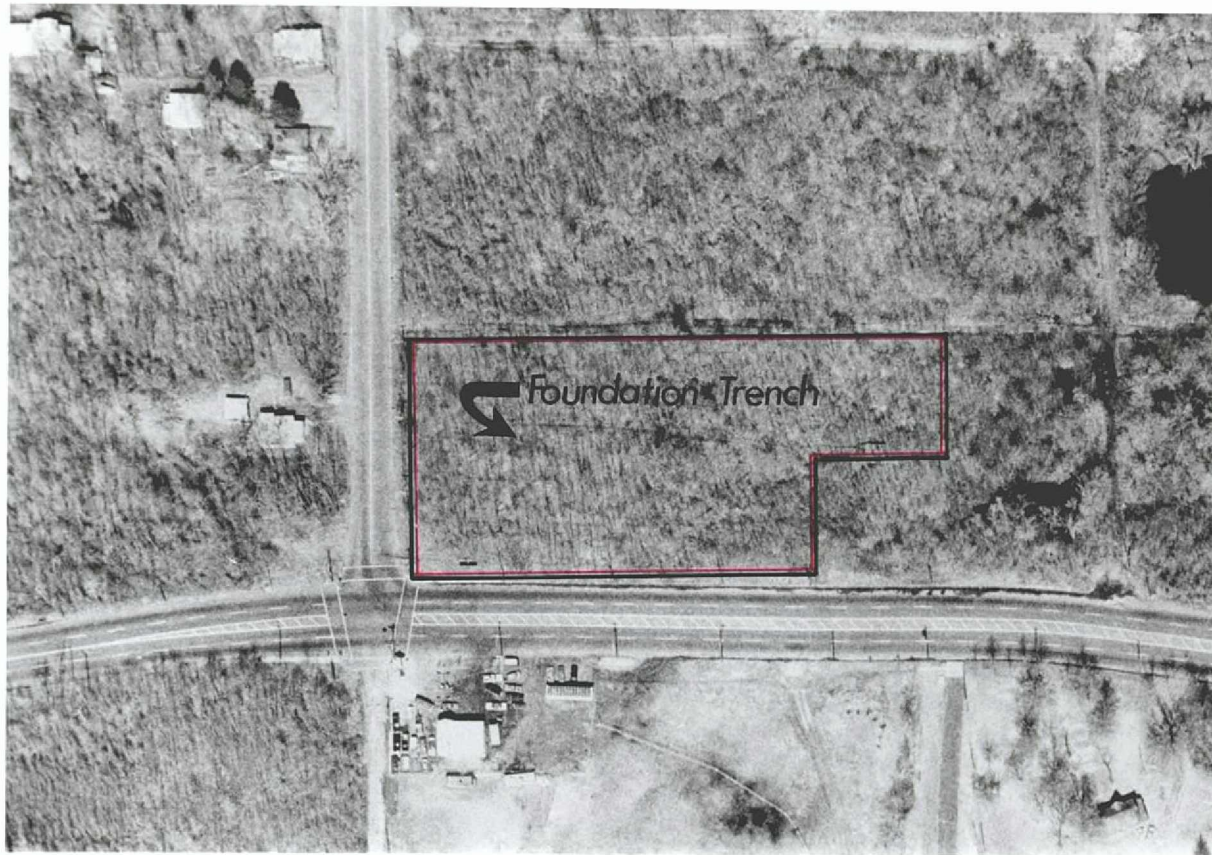


Plate 2: Air photo detail of project parcel which clearly indicates the rectilinear 1960's foundation trench, approximately 52' x 167' in size, which roughly corresponds with the proposed new building location.



Plate 3: View of project impact area looking south towards Hylan Boulevard at 3' mounds of disturbed overburden from previous surface clearing and/or foundation trench activity.



Plate 4: View looking southeast at corner of Page Avenue and Hylan Boulevard showing depth and outline of previously excavated foundation trench within the project parcel.



Plate 5: Close-up view of foundation trench showing exposed cement slab near location of late 19th century residence at the western Page Avenue end of the project parcel.



Plate 6: View looking northwest from edge of Camden Avenue from northern edge of project parcel showing area of Anderson's 50 X 50 foot exposure within which the child burial and prehistoric features were encountered. Note the drop in elevation to the right or east towards the relatively lower project parcel.



Plate 7: View looking north - west showing recent backdirt from amateur archaeological activities on high ground north of the proposed impact area.

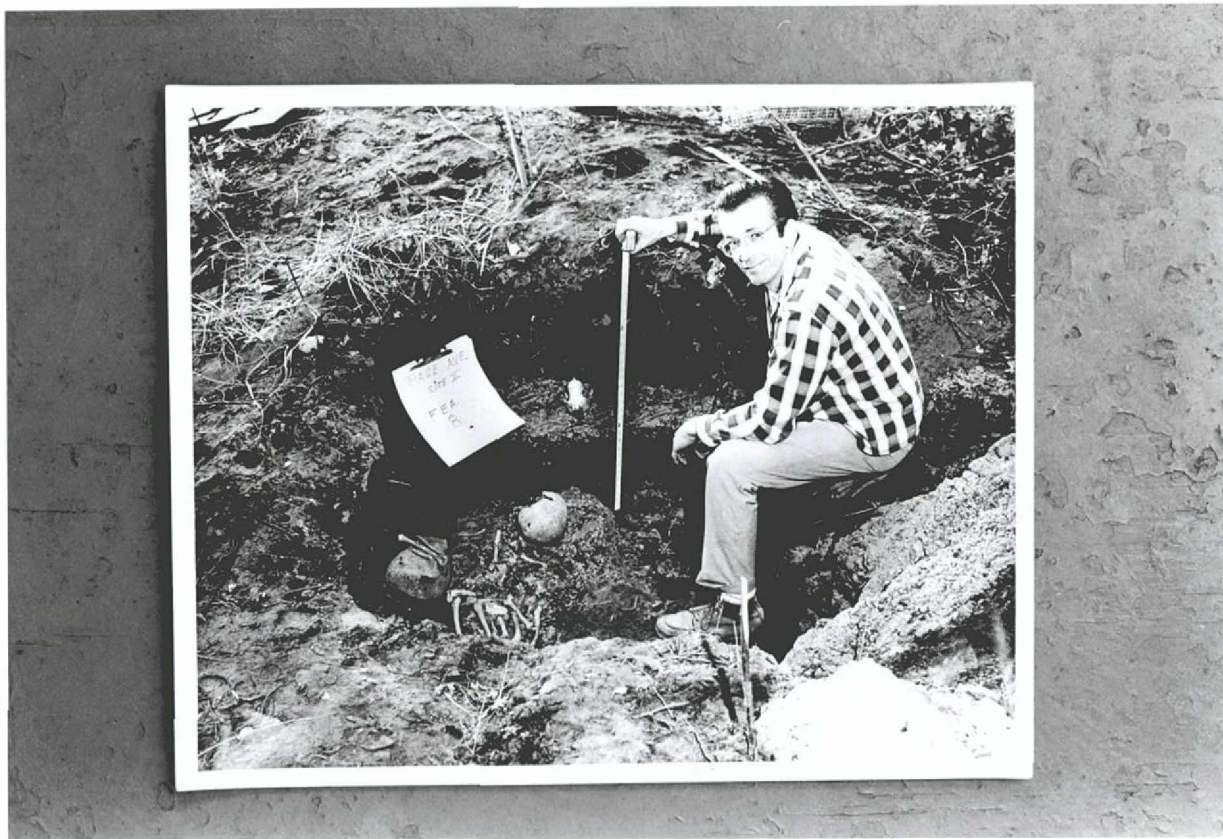


Plate 8: Copy of unpublished field photograph from collection of Albert Anderson showing the child and dog burial in relation to the modern ground surface, 50-100' north of Camden Avenue and the project parcel. This photo clearly shows the presence of about 1' of overburden over the depths of the excavated remains.

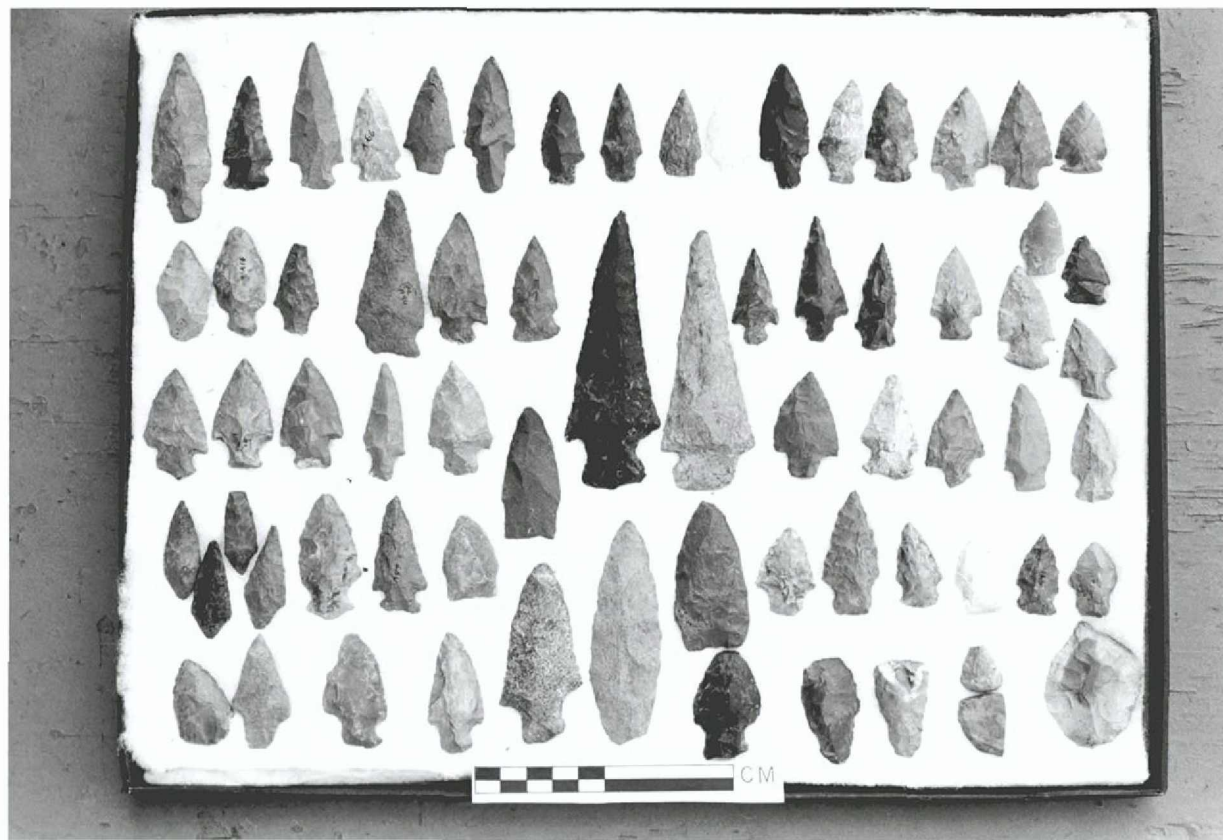


Plate 9: Photograph of projectile points in private collection of Albert Anderson which he described as having been recovered from Page Avenue Site No. 2, within 500-1,000 feet due north of the project parcel.

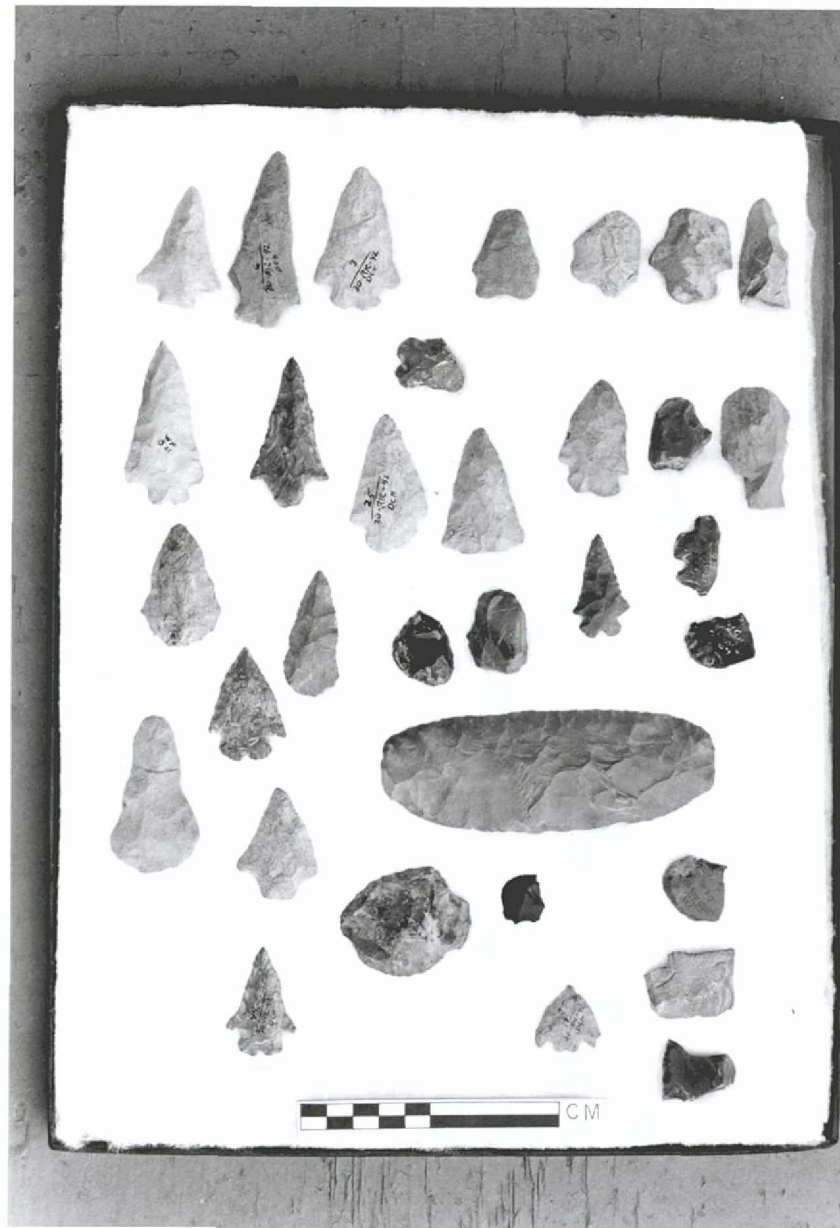


Plate 10: Photograph of projectile points in private collection of Albert Anderson which he identified as having been recovered from the Hollowell Site, immediately to the southwest and diagonal to the Hylan Boulevard - Page Avenue intersection. Note the presence of several Early Archaic bifurcated points which have been dated elsewhere to at least 5,000 B.C.



Plate 11: Detail of Eva-type point recovered from the Hollowell Site to the southwest of the project parcel which documented the presence of buried cultural materials no less than 5 feet below modern grade at the 20-22 foot contour elevation.

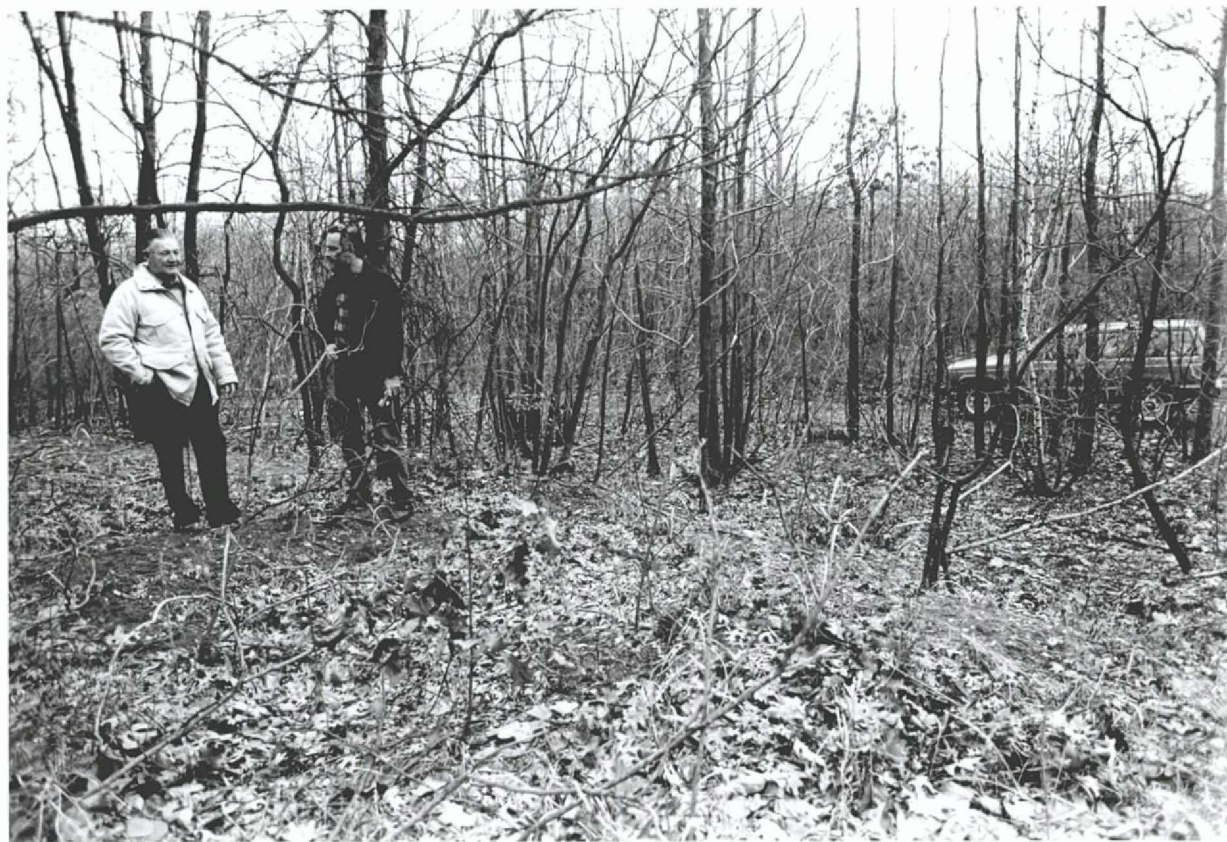


Plate 12: View looking south from north of project parcel showing Principal Investigator and Albert Anderson on site of child and dog burial excavations to the north of Camden Avenue. Note drop in elevation at and to the south of Camden Avenue relative to the former excavation area.