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THE NEW YORK CITY
LONG RANGE SLUDGE MANAGEMENT PLAN

GENERIC
ENVIRONMENTAL IMPACT STATEMENT III

MASPETH, QUEENS

STAGE 1A ARCHAEOLOGICAL ASSESSMENT

584

HISTORICAL
PERSPECTIVES INC.



P.O. Box 331 Riverside, Connecticut 06878

NEW YORK CITY

LONG RANGE SLUDGE MANAGEMENT PLAN

GENERIC

ENVIRONMENTAL IMPACT STATEMENT III

Maspeth, Queens

Stage 1A Archaeological Assessment

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I. INTRODUCTION

A. Project Description

New York City has entered into a Consent Decree and Enforcement Agreement with the U.S. Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (DEC) to end ocean disposal of its sewage sludge. A Long Range Sludge Management Plan is being developed by the City as part of the agreement. The Plan calls for the development of multiple City sites where dewatered sludge can be processed into sludge product with beneficial reuse technologies.

The proposed generic building design is anticipated to have spread-footing foundations to a depth of 5-6 feet below grade (D. Lang of Allee King Rosen & Fleming, Inc., personal communication 5/22/91). There is also a possibility of pilings along the perimeter of the generic building design going down to bedrock. Vehicular access on this site is planned to be from 48th Street approximately 200 feet from where it joins Maspeth Avenue.

This report presents the results of a Phase 1A cultural resource survey of the proposed construction site conducted by HISTORICAL PERSPECTIVES, INC. of Riverside, Connecticut. It is a completely updated version, both in terms of the site condition and the latest archaeological research, of a report on the same property which was submitted August 21, 1986 to Parsons, Brinckerhoff, Quade and Douglas Inc. of One Penn Plaza, New York. At that time, the parcel was under consideration for a New York City Department of Sanitation resource recovery facility.

The purpose of this survey was to evaluate the archaeological potential of the project area; that is, to locate or determine the possible existence of prehistoric or historic sites and cultural remains within the study area that might be affected by the proposed construction of the sludge management facility, and to recommend appropriate measures with respect to such sites if they exist.

Archaeological remains are vital and irreplaceable resources for future research and for an objective approach to cultural interpretation of any community or region. Historical or prehistoric sites represent the tangible remains of past ways of life, the study of which can provide us with a better understanding of human culture in this area of Queens. This cultural resource survey is a contribution to such better understanding in its attempt to locate, record, and preserve the vestiges of our past.

B. Study Area

The proposed sludge management facility is located at the confluence of Newtown Creek and Maspeth Creek in the Borough of Queens, New York. The site can be located on the Brooklyn Quadrangle, United States Geological Survey Map, 7.5 series. (See Figure 1.)

The project site is bounded by Maspeth Creek on the north, 48th Street on the east, Newtown Creek on the west and a Department of Sanitation (DOS) lot on the south. Footings are in place over much of this DOS property, where a garage is under construction. There are three buildings on the project site which house trucking firms, and the southwest portion of the parcel is devoted to a sand and gravel facility.

II. ARCHAEOLOGICAL RESEARCH DESIGN

This cultural resource sensitivity survey was carried out in three basic steps. The standard methodology from which the following list was abstracted was written by Ed Lenik for Historical Perspectives Inc.'s "Resource Recovery Project: Barretto Point Site", a 1986 Phase 1A documentary study.

A. Background Research

In an attempt to identify known or potential prehistoric and historic cultural resources, an intensive search of the literature was carried out at the Long Island division of the Queens Borough Public Library, the New York Public Library, the New York Historical Society, the New York City Landmarks Preservation Commission, and the State Historical Preservation Office and New York State Museum in Albany. From the outset, the accumulation of historical documentation of all types pertaining to the project area was considered to be of primary importance. Maps of the 17th, 18th, 19th, and 20th centuries formed the basis for the start of the cultural resource survey.

Several contacts were made with individuals knowledgeable in the history and prehistory of the area. Interviews were conducted with and written data solicited from historians, professional and avocational archaeologists as well as one long-time resident and worker in the area to elicit information about the location and nature of prehistoric and historic sites, and to determine land use within the project area. In summary, primary data was sought from all of the sources consulted including historical documentation, archaeological site reports, and personal knowledge of the area.

B. Field Survey

A careful walk-over reconnaissance of the Maspeth sludge management facility site was conducted in an attempt to locate and identify any existing cultural resources and to evaluate the archaeological potential of the area. This aspect of the research design had to address a major land-use situation that was present within the project area, namely the site has undergone considerable disturbance in the past in the form of land filling and dumping, as well as building construction and destruction activities. These land alterations will be described later in this report, as will the effect of such activities on the integrity of potential cultural resources. Nevertheless, the project area was examined closely during the course of this project. A follow-up visit and photography session took place in May, 1991.

C. Environmental Analysis

The prediction of prehistoric site locations involves the use of various kinds of information including environmental, archaeological, historic, and ethno-historic data. At this particular site, environmental and geomorphological conditions were important criteria in developing a hypothesis regarding the presence or absence of prehistoric cultural resources. In making this determination, the following environmental factors were considered:

1. Topography: Variables within this category include landform and elevation. This information was primarily derived from historic maps, the U.S.G.S. topographic map, and our own field reconnaissance.

2. Geology and Soils: The factors considered here are type and areal extent of bedrock formation and soils. The permeability of the soil within the site was also considered.

3. Water: Under this category are variables concerning the nature and location of water supply. The proximity to a fresh water source would have been a primary determinant in site location for prehistoric peoples.

4. Availability of Floral and Faunal Resources: The availability and utilization of the natural resources within the area would have been of crucial importance to prehistoric groups. Prehistoric peoples; search for subsistence resources was continued: they naturally chose those areas in which food resources appeared in greatest abundance.

5. Paleoenvironmental Conditions: The environmental context in which prehistoric occupation zones within the project area.

6. Availability of Technological Raw Materials: The availability of the raw materials needed to fashion tools and other items is an important consideration in the assessment of an area for likelihood of prehistoric occupation.

7. Historic and Current Land Use: As previously noted, known land alterations must be considered in order to assess the extent of potential disturbance to any cultural remains that may have been deposited over thousands of years by prehistoric peoples. Such environmental factors could equally affect the cultural deposits of the more recent historic populations as well.

III. ENVIRONMENTAL SETTING

The surface of western Long Island consists of several interesting landforms. Each land feature originated through the action of some past geological process which led to the development of a variety of flora and fauna. In turn, these factors have had a tremendous impact on prehistoric peoples and their settlement and subsistence patterns in this area. However, the historic period land use, particularly in the twentieth century, has drastically altered the original features of the landscape. The following narrative is a synopsis of the major natural environmental characteristics of the study area.

The sludge management - Maspeth site on western Long Island is physiographically part of the Coastal Plain. Long Island is the top of a Coastal Plain ridge formation that is covered with glacial drift. In reality the plain is an elevated sea bottom demonstrating low topographic relief and extensive marshy tracts. (Eisenberg, 1978:p. 7) Continental glaciation affected the surficial geology of Long Island as the glacier advanced and receded at least three times in the last million years. The Ronkonkoma and Harbor Hill were two sub-stages of glaciation, whose melting fronts left a series of ridges (moraines) across the length of Long Island. (Wisniewski, 1977: p.1; See Figure 2) Glacial till and outwash, consisting of clay, sand, gravel, and boulders were deposited by the melting ice sheet. For approximately the last 3,000 years the project site has been part of a meandering creek system. "These develop in the first place purely as drainage channels, and are the result not so much of erosion as of non-deposition." (Small, 1972:p. 465)

The topography of the Maspeth project site is generally low and flat. The highest land elevations (20 foot contour level) are at an unnatural rise in the southeastern corner of the site, bordering the DOS property. Construction of trucking terminals and large scale dumping activities on the project site have considerably altered the pre-1900 landscape. The World War II

mobilization efforts drastically altered the street plan in the project site vicinity. For example, the original route of Maspeth Avenue moved west, southwest from the intersection with Maurice Avenue, running parallel to Grand Street, until crossing Newtown Creek at approximately the same location that the current 58th Road intersects with Newtown Creek. (See Fig. 3) Prior to this century the project site was the marshy part of an island completely surrounded by three watercourses: Maspeth Creek on the north, Newtown Creek on the west and south and Shanty Creek to the east. (See Fig. 4) Both the western boundary and the northern boundary of the site are now stabilized by an approximately six foot high rip rap bulkhead.

Presently situated on the project site are three major building complexes (which include one and two story offices, basements, loading platforms), each housing a warehouse/trucking terminal business. Major portions of the property are covered with concrete or asphalt pavement. The vegetation presently found on the site is typical of disturbed or waste disposal places. In particular, the trees are rapidly growing species that are commonly found on waste sites and burned areas. Several specimens of Ailanthus were found on the western and northern periphery of the project sites, as well as American or Trembling Aspen, a quick growing poplar found in sandy or rocky soils and burnt-over land, and wild cherry species. Sumac, goldenrod, poison ivy, and a mixture of weed grasses cover the unpaved portions of the project site.

The 1991 site visit photographs are attached to this report.

IV. CULTURAL BACKGROUND: THE PREHISTORIC PERIOD

A. Introduction

The north shore of Long Island is regularly indented by bays and estuaries - a legacy of the last advance of the Wisconsin glacialiation of 10,000 - 12,000 years ago. Indian settlement at each of these verges between fresh rivers and salt bays is known both from early documents and archaeological research conducted over the past 100 years. The proposed sludge management facility is situated at the confluence of Maspeth Creek and Newtown Creek. As can be noted on several of the attached maps, the project site was a marshland prior to the twentieth century when it was greatly altered by landfill activities. (See Figures 5 & 6) Both avocational and professional archaeologists have collected Indian artifacts, and conducted excavations within close proximity to the project site and to other locations of comparable topography. Therefore, the archaeological research on the prehistoric potential of this property focused on the probable exploitation of the geographic advantages of the site area. In other words, the prehistoric settlement pattern indicates that salt and fresh water wetlands were of a great deal of importance to the Native Americans. We must determine the probability that this known preference was realized in the past on the sludge management -Maspeth site and whether the intensity of such site exploitation would warrant any further archaeological consideration.

To understand how native Americans exploited different environmental niches over time, it is necessary to separate the prehistoric peoples into time periods according to their distinct cultural differences. Archaeologists divide the Native American period into three sub-periods: the Paleo-Indian, the Archaic, and the Woodland, which are further divided as shown below:

<u>PERIOD</u>	<u>YEARS BEFORE PRESENT (BP)</u>
Paleo-Indian	13,000 - 10,000
Early Archaic	10,000 - 8,000
Middle Archaic	8,000 - 6,000
Late Archaic	6,000 - 3,700
Terminal Archaic	3,700 - 2,700
Early Woodland	2,700 - 2,000
Middle Woodland	2,000 - 1,200
Late Woodland	1,200 - 300

The following discussion of prehistoric human occupation provides a basis on which to anticipate the kinds of cultural remains or site that may be found in the Maspeth site study area. A brief description of the three periods of prehistoric culture history is presented first. This information summarizes the ways in which prehistoric peoples lived in the northeastern United

States in general and in coastal New York in particular. These prehistoric cultural sequences describe the particular technologies, lifestyles, and environmental contexts of the three time periods.

The prehistory of Queens has been researched extensively, and the available data provides excellent background material with which to assess the project area. A search of the literature on the project area, which includes Bolton 1922, Solecki 1941, Grumet 1982, and THE COASTAL ARCHAEOLOGY READER 1978 and 1982, has identified a prehistoric site in close proximity to the Maspeth site. This documented site, although directly outside our immediate project zone, when studied in conjunction with other recorded sites on Long Island that demonstrate environmental characteristics comparable to the Maspeth site, gives us a good picture of prehistoric settlement and subsistence patterns. Furthermore, additional information was sought through personal contact with local informants.

The absence of previous systematic field investigations has made it difficult to identify the study area's prehistoric cultural resources. Nevertheless, our survey and analysis evaluates the probable attractiveness of the study area for prehistoric peoples and the areas where they were likely to have lived and worked. We consider the archaeological potential of the area by correlating environmental and cultural history in the region.

B. Prehistoric Culture Periods

The Paleo-Indian Period (c.13,000 B.P. - 10,000 B.P.)

Early man arrived in the New World sometime before 13,000 years ago. These early Americans, who we call Paleo-Indians, migrated from Siberia across the Bering Land Bridge to Alaska during the Late Pleistocene or Ice Age. They undoubtedly came down from Alaska during the Two Creeks Interstadial around 12,000 years ago when an ice-free corridor opened up between two massive glaciers that covered Canada. During this period, the Indians relied heavily on large pleistocene herbivore for food, such as mammoth, mastodon, caribou, and musk ox. These Indians were hunters and gatherers, a nomadic people who roamed widely in search of food, and their settlement pattern consisted of small temporary camps. The diagnostic artifact of the Paleo-Indian period is the fluted projectile point. However, these people made other sophisticated tools as well, such as graters, steep-edge scrapers, knives, drills, and other unifacial tools. The only evidence of Paleo Period occupation in Queens County is a projectile point mentioned in Saxon (1973), as noted in Rutsch (1970), for which no provenience has been obtainable from the Museum of the American Indian. The scarcity of recorded Paleo-Indian sites in this region, due in large part to the rise in sea level since 3,000 years ago, is evident on the two following maps. (See Figures 7 and 8.)

In relation to this specific parcel, there is a strong likelihood that the nomadic hunters of the Paleo-Indian Period would have exploited the natural elevated knoll on the site for hunting and/or camping. The Sludge Management site that was a salt marsh when the Europeans first settled in Queens was an exposed dry meadow during this time. There is, however, such a minimum of knowledge on the habitation system and population density of this earliest time that we cannot predict the extent of any such possible resource. It is evident that more scientifically documented field excavations of this Period would greatly aid our understanding of southern New York's past.

The Archaic period (10,000 B.P. - 2,700 B.P.)

In the coastal and tidewater area of New York the Archaic Stage followed the Paleo-Indian stage (c.9,000 years ago) and is "represented by numerous, small, nearly always multi-component sites, variously situated on tidal inlets, coves and bays, particularly at the heads of the latter, and on fresh-water ponds on Long Island, Shelter Island, Manhattan Island, Fisher's Island, and Staten Island and along the lower Hudson River on terraces and knolls, at various elevations having no consistent relationship to the particular cultural complex" (Ritchie, 1980:p. 143). The Archaic Period produced a major shift in the settlement and subsistence patterns of the Native Americans. Hunting and gathering were still the basic ways of life during this period, but the emphasis in subsistence shifted from the large pleistocene herbivores, who were rapidly becoming extinct, to smaller game and plants of the deciduous forest. The settlement pattern of the Archaic people indicates larger, more permanent habitation sites than the Paleo-Indians. These people were increasingly more efficient in the exploitation of their environment. The hallmarks of this period are grinding implements, ground stone tools, and, toward the end of this period, or Terminal Archaic, the use of stone (steatite) bowls.

Discoveries in Staten Island by amateur archaeologists produced the first unequivocal evidence for Early Archaic expressions in New York State comparable to those in the southeastern United States. One of the most well known sites in Staten Island, the Tottenville site, was discovered under modern landfill overburden (6-27 inches thick) containing sand, pebbles, bits of coal, and iron (Ritchie and Funk, 1973:p. 38).

The Wading River site on eastern Long Island is one of the largest Archaic stage sites in the Northeast and is the most completely explored in the New York coastal district. This small stemmed point complex is located on a marsh on the north shore of

Suffolk County. The Wading River salt marsh occupies an embayment that is surrounded on three sides by the Harbor Hill terminal moraine, which is as much as 180 - 200 feet high, locally. The hills surrounding the marsh are dissected by several small valleys with streams, mostly intermittent, that flow northward into the Wading River tidal creek. Four sites actually made up the Wading River Archaic component and these sites can be studied for a trend in the Archaic exploitation of a water resource that might be applicable to the Maspeth Sludge Management project site. Three of the sites were situated on low protected spots on the lee or eastern side of a prominent finger of land fronting the marsh. "They occupied small stretches of essentially level ground, in one case in an old erosional valley. The sites shared similar elevations, the edge of the dry ground ranging from about 2 to 7 feet above mean high water" (Wyatt 1982:71). Cultural deposits at two of the sites extended underneath the marsh and three of the sites were immediately adjacent to fresh-water springs. One of the sites, a toolmaking station, was situated on low, open, flat ground on the northeastern side of that same prominent finger of land, facing out across a finger of marsh onto the Sound. All of the sites were small in scale, ranging from 10,000 square feet and revealed shallow cultural deposits, often less than two or three feet deep (ibid.:71).

The Woodland Period (c.2,700 B.P.-300 B.P.)

By the time of the Woodland stage, the sea level and exposed coastal regions were, in most respects, as they appear today. In general, the hunting and gathering way of life persisted in this period, but several important changes took place. Horticulture began during this period and later became well established with the cultivation of maize, beans, and squash. Clay pottery vessels replaced steatite bowls, and tobacco pipes and smoking were adopted. The bow and arrow were also invented during this period.

The habitation sites of the Woodland Indians increased in size and permanence as these people continued to extract food more efficiently from their environment. The archaeological evidence from Woodland stage sites indicates a strong preference for large scale habitation sites to be within very close proximity to a major fresh water source (e.g. a river, a lake, an extensive wetland), and smaller scale extractive-functioning sites to be situated at other resource locales (e.g. quarrying sites, butchering stations, and shellfish-gathering localities). During the Early Woodland times, the interior sites were rarely used. Middlesex Phase sites

of Early Woodland items have been encountered during gravel and sand digging in a knoll or terrace near a river or lake (Ritchie 1980:201). Late Woodland stage sites of the East River Tradition in southern New York have been noted on the "second rise of ground above high water level on tidal inlets" and situated "on tidal streams or coves" and on "well-drained sites" (ibid.:264-5). The archaeological record details many coastal sites and defines a preference by Woodland stage peoples to exploit well-drained localities. Carlyle S. Smith, who studied and analyzed the distribution of prehistoric ceramics in coastal New York, states that village sites "are found on the margins of bays and tidal streams (Smith 1950:130).

A great number of archaeological investigations have dealt with the Woodland subsistence pattern - winters spent at sheltered inland hunting camps, springs at river falls and estuary-head fishing villages, summers with whole families at locations near their planting fields (often near the coast) and through the harvest, autumns at dispersed hunting camps (Luedtke 1980:26).

There remain many unanswered questions on the human adaptation to both the seasonal and the long term environmental changes and stresses that faced the Native Americans. It is crucial to these research topics that research designs and methodological approaches to archaeological sites with potential subsurface integrity be appropriately developed to provide data to address these questions.

C. Archaeological Sites in the Maspeth Area

There are no recorded prehistoric or historic sites located within the specific boundaries of the sludge management - Maspeth site. However there are reports of a prehistoric village site within close proximity and records from the 1930s place a prehistoric site due east of the project site. At our request the New York State Education Department/New York State Museum Anthropological Services conducted a site file search for the location and description of prehistoric archaeological sites in the project area. According to their records, prehistoric site #4536 is located due east (approximately 1300 feet) of the southern limit of the project boundaries. This site location has not, however, been field verified by the Services and is derived from Arthur C. Parker's THE ARCHAEOLOGICAL HISTORY OF NEW YORK (1920) (Phil Lord, personal communication 8/8/86). It is possible that Parker's identification of this prehistoric site (Queens County 13: a village site at the head of Newtown Creek) was dependent upon the same nineteenth century sources that guided Reginald Bolton. A review of the inventoried sites filed with the State Historic Preservation Officer (as listed on the topographic quads) did not reveal a prehistoric or historic archaeological site within close proximity to the project site.

As can be seen on Lightfoot's map of "The spatial pattern of

coastal New York sites that are reported in the published literature", there are numerous sites on the Long Island coast line and these sites are mostly concentrated at bays and inlets. (See Figure 9.)

In ANNALS OF NEWTOWN (1852) Riker states on page 73 that a scattering of Indians remained for a number of years, "some of whom had their wigwams at Mespeth Kills", after the purchase of their property by the colonists. He further writes that "The rude implements which they used in the pursuits of peace and the prosecution of war, are the only existing mementoes of the red men of Newtown. These consist chiefly of stone axes and arrowheads, and arrows of reed. The late Judge Furman, of Maspeth, had a handsome collection of them, procured in that neighborhood." We can only speculate that Judge Furman recovered a portion of his collection from his own estate which included the island and marsh, referred to as Furman's Island, that now hosts the sludge management - Maspeth site.

Earlier in this century Reginald Bolton researched the Indian past of New York City and reported that at the time of European influx the Rockaway Chieftancy stretched diagonally across Long Island from Maspeth to Rockaway, and its territory included all of the modern township of Newtown, the southern part of Hempstead, the region around Rockville Center, and the ocean front of Far Rockaway. The Rockaway territory was largely disposed of by an immense sale of land extending from Hempstead to Rockaway inlet, in 1685, by Pamas (then the "Sagamore") and others (Bolton 1920:275). These Native Americans, according to Bolton, had formed subordinate chieftancies and maintained numerous stations in what is now the borough of Queens. One such subordinate chieftancy, the Mispeth, resided in the region around the extensive inlet of Newtown Creek, known to the natives as Mespethes.

Maspeth creek, which extends in a northeasterly direction between the Laurel hill and Linden hill sections as far as Maspeth, perpetuates the native name of the entire inlet, and was probably applied to the native station as well.

The position of that settlement is indicated by the discovery from time to time of native artifacts upon the Maspeth hills. The situation also appears to have been desirable for native residence, as the creek provided fresh water at its source, and the elevation afforded a wide view over surrounding country. A village-site might have been looked for in the vicinity of Borden avenue and Willow avenue. [Borden Avenue is north of the project site.] Neighboring territory lying south and east of this station was desirably sloping and well-drained land upon which the natives doubtless had their cultivated clearings. (Bolton 1922:174)

Robert Grumet's more recent research into the verification of Indian sites and names in New York City states that, although a "wigwam at Mashpathkills" was noted in July of 1669 and past investigators have suggested that Maspeth was also the name of a Canarsee division that had its settlements scattered above the wetlands of Newtown Creek, the existence of such a division or village at Maspeth has not been revealed in the surviving documentation (Grumet 19981:27). (See Figure 10.) Instead of an established village there could very well have been a concentration of temporary and seasonal specialized procurement camps on the hillocks bordering the confluence of the two streams, that is, the Indians were collecting shellfish and other aquatic food resources in the area.

Evidence of prehistoric activity to substantiate a Native American presence in the Maspeth Creek/Newtown Creek site area has come from archaeologists active in Queens during the 1930s. Ralph Solecki, Columbia University professor active in Queens archaeology since the 1930s, has mapped many of the sites that he knows were extant in the Borough of Queens prior to the 1940s. As can be seen on Figure 11, Solecki and the Committee on American Anthropology of the Flushing Historical Society identified a concentration of prehistoric activity fronting on the confluence of the Newtown and Maspeth Creeks. More precisely, Solecki stated that "A large site was situated near the Furman burial plot on Maspeth Creek, an arm of Newtown Creek." (This location is directly east of the sludge management project site. See Figure 23; Solecki 1941:n.p.) The Long Island Division of the Queens Borough Public Library (Merrick Avenue, Jamaica) maintains the photographic file of Solecki's work in the borough. As evident by some of these archaeological site photos (See Figures 12-17.) the area east, southeast (approximately 2000 feet) of the sludge management project site was a locus of prehistoric exploitation. Lithic materials were collected from this then-vacant land by Solecki, his associate Stan Wisniewski and Michael Sarmuksnis. These investigations and findings have been summarized by Wisniewski.

The region between Maspeth Avenue and the creek to the north, and the sloping ground south of Maspeth Avenue produced hundreds of artifacts when Ralph Solecki and I visited the area in the early 1930s. At that time, Maspeth Avenue cut through a sandy embankment in this vicinity, and seemingly terminated at the on going dumping that was taking place on the swampy ground east of Furman's Island. [The filling in of the Shanty Creek marsh.] A variety of Archaic type projectile points, as well as knives and scrapers, surfaced during the several years we explored this area. A small shell midden existed on a bluff south of Maspeth Avenue, and a small pit of oyster shell was excavated on a slope north of the Avenue, none of which, to my knowledge,

produced anything of significance. Only two small ceramic sherds of Indian origin were found during this period - indication of a rather short occupation by the Woodland Period People. A round, well worn grinding stone indicates the presence of agriculture in the area. A notched stone adze and a broken gouge were signs that dugouts were made and used in the nearby creek waters (Wisniewski 1986:14).

In the 1930s the low portions of the actual project site were already being covered over with garbage and fill, and this prevented Solecki and Wisniewski from fully investigating the elevated land west of Shanty Creek - including the project area (Solecki, personal communication, 4/28/86).

Dr. Solecki has published an article on the Maspeth Contact Period site, "A Seventeenth-Century Fireplace at Maspeth, Long Island", that he and Stan Wisniewski found in 1935. Located 30 feet south of Maspeth Avenue between Maspeth Creek and the now extinct Shanty Creek, the c. 1650 fireplace remains were associated with "two pieces of reddish-clay pipe bowls, which seem to have been fashioned in crude imitation of European kaolin pipes", red and black flint debitage and a "broken reject artifact of dark flint" (Solecki 1948:327). Dated principally by the style of recovered white kaolin pipe fragments, this site represented the "borderline phase" of Queens' history (ibid.:329).

It has been impossible to precisely locate on the modern landscape Bolton's village site, and references to artifacts from the Maspeth Hills are not geographically definitive. The Solecki and Wisniewski sites were directly east of the project area. The sites discovered and excavated earlier in this century no longer exist in the highly developed and disturbed industrial park of west Maspeth. Furthermore, it must be noted that all of the sites described above are outside but within one mile of the Maspeth project zone. Therefore, although no sites have been recorded within the project site, the potential is there for the existence of undiscovered prehistoric cultural resources. We will discuss and analyze this possibility in the Field Survey section of this report.

V. CULTURAL BACKGROUND: THE HISTORIC PERIOD

The first white men to inhabit that part of Long Island now known as Queens were fur traders under the administration of the Dutch West India Company who came in the early years of the seventeenth century. Toward the middle of that century the lands were opened to settlement by both Dutch and English. In 1642 "Reverend Francis Doughty received patent to Mispot or English Kills ('Kill' is the Dutch word for a small stream or tidal inlet) at the head of Newtown Creek" (Queens Borough Library, BULLETIN

#650, 1939). Doughty, who had come to this country seeking religious freedom, was granted 14,000 acres "including practically all of the present Long Island City and Newtown", which would take in the sludge management site (Von Skal 1908:24). But he had a land dispute with Governor Kieft, who, as Director-General of New Netherland had granted the land patent. Kieft fined him "ten dollars and twenty-four hours imprisonment", and Doughty thereupon left for Flushing in a huff (ibid.:24).

Considering the amount of encroachment by the white man onto his lands, it was inevitable that conflict between the Indians and the settlers should erupt. "In August, 1643, the hostility burst out in Kieft's War. Provoked by an unresolved murder, the Dutch massacred an inoffensive Indian village. In retaliation the Long Island bands joined with their New Jersey and Westchester neighbors in a massive effort to burn the Europeans' farms. Among those they fell upon were the settlers at Maspeth. With their farmsteads in flames, townsmen fled to Manhattan" (Erlich 1979:8).

Maspeth is the current name of the area in which both the original village settlement of Mespeth and the sludge management site are located. Maspeth "is derived from both the English and Dutch versions of Mespethes or Maspethes, which approaches the idiom of the aborigines. The names 'Mespeth' and 'Mispat' appear in seventeenth century writings and maps...Mispat appears on A. Van der Doncks map of 1656, which apparently had been copied by later cartographers" (Solecki 1948:325). (See Figure 18.) Mespeth village was situated at the end of a tributary - called Maspeth Creek - of Newtown Creek. The sludge management parcel was at that time part of an island lying west and slightly south of the village and bounded by both Newtown and Maspeth Creeks. Newtown Creek opens into the East River and is part of the boundary between Queens and Brooklyn. The Maspeth area was also part of what was once known as English Kills, which referred to "the side of Newtown Creek which was colonized by English settlers, while Dutch Kills refers to Bushwick on the other side of Newtown Creek [Brooklyn], where the Dutch began their settlement" (Stankowski 1977:9). On Figure 6, a copy of James Riker's 1852 map, the following places are located: Bushwick, English Kills, Newtown Creek, Maspeth, and Furman's Island. Maspeth Creek, while not named on the map, is the little finger of Newtown Creek pointing toward Maspeth.

The island, whose land mass was between 35 and 45 acres, was known over the years as Smith's Island, Maspeth Island and finally Furman's Island. It survived into the second decade of the twentieth century when filling and silting gradually erased the pattern of inlets which separated it from the mainland.

There is lively speculation among scholars about the origin of the first appellation - Smith's Island - which was in use during one of the most interesting periods in the island's history. After Kieft's War of 1643, another attempt was made to establish the

village of Mespat, but during the English-Dutch war of 1652-1654, many of the settlers abandoned their precarious location for the relative safety of Connecticut. Yet, "another alarm was made in 1656, when this time the Dutch neighbors of the English at Mespat, in fear of retaliation from the Indians, banded together for safety. They concentrated themselves for safety on Smith's Island at English Kills" (Solecki 1948:325). The name was apparently already in place at that time, since "Smith's Island" appears on the tax assessor's list for 1656. "Some historians believe that the island was named for the brothers Smith who, through their agent Reverend Doughty, were granted the Newtown Patent of 1642. Other historians believe that Smith's Island was named for Hendrik Barentze; a Dutch smith, who owned property in the area of Flushing Avenue and Onderdonck Avenue, Ridgewood, and who was active with the Dutch government in New Amsterdam" (Stankowski 1977:9).

The Dutch who settled on the island were led by Nicasius De Sille, who had obtained the patent to the island on March 27, 1656. The new settlement was named Aernhem after his birthplace on the Rhine River (Solecki 1948:325). "At that time, the Governor ordered the Island surveyed and houselots and streets laid out for building...No record of the settlers who occupied Arnhem [sic] exists, but we do know that several families were dwelling there in 1660 when the Dutch town of Boswyck (Bushwick) was laid out and founded. At that time, Governor Petrus Stuyvesant was concerned that the village of Arnhem would prove an impediment to the development of the new Dutch town, so he ordered the village destroyed and the houses torn down" (Stankowski 1977:9). According to historian James Riker, "This spring [1660] terminated the existence of the village of Aernhem, on Smith's Island...the following year the tenantless cottages were removed" (Riker 1852:50).

From that year in the mid-seventeenth century until the nineteenth century, the small island - now attached to the mainland and the site of the proposed sludge management facility - was used very little if at all. One important reason for this was undoubtedly its separation from the mainland by three watercourses and its uneven and partially marshy topography described in Section III: ENVIRONMENTAL SETTING of this report. Therefore, it should be noted when reading the following historical summary, that the events and places discussed relate to the general Maspeth area rather than to the specific project parcel unless so indicated.

One of the earliest landowners in the area was James Way, an Englishman, who settled at the "English Kills" about 1650. He died in 1685 and his son John acquired the paternal farm in 1691. John's son James came into possession in 1729. He died in 1788, leaving two unmarried sons. The land passed to Samuel Way; son of James' brother Samuel; he died there in 1798. His only daughter Jane married Dr. Henry Mott in 1784. Mott resided at Glen Cove

until 1799 and then came to Maspeth. In 1815, Dr. Mott sold the Way Estate to Garrit Furman.

The Way farmhouse was a small two-room structure located just north of what is now Maspeth Avenue and just west of the present railroad tracks. It was still standing down to about 1928. The Motts established a family burying ground alongside the Way farmhouse, and Dr. Henry was buried there in December 1839. The plot was enclosed by a strong granite wall and iron railing (Seyfried 1986:1). When commerce and vandals threatened to overwhelm the little plot, the Quakers in January 1950 dug up the thirteen graves and transferred them to Prospect Park in Brooklyn (PRIVATE AND FAMILY CEMETERIES IN THE BOROUGH OF QUEENS, 1932. An insert in the volume says "New York Supreme Court, File 73, 1950: Application for the New York Monthly Meeting, Religious Society of Flushing, as trustee of certain trust under the last will and testament of Eliza Mott and Maria Mott Hobby. Received January 10, 1950 an order authorizing the Society to disinter the bodies in Queens cemetery and bury in Prospect Park Cemetery, Brooklyn). The Motts had been the most prominent Quakers in Maspeth. Figures 19 and 20 are photocopies of two pages from the CEMETERIES volume, one showing a plan view of the approximately 40 x 40 plot and the other listing the interred persons. Figure 21 is a 1927 photograph showing the Way-Mott farmhouse and the burial ground to its right. Figure 22 is a tracing of a 1908 Belcher Hyde Atlas showing the locations of the farmhouse and cemetery (note the distance from the island which was then still extant). The cartographer has erroneously identified the burial plot as a "reservoir". Figure 23 also shows the relative positions of the various landmarks and topographical features being discussed.

Like the Mott and Furman families who followed them as owners of the Maspeth property, the Ways were prominent citizens of their community. In his ANNALS OF NEWTOWN, James Riker included a chapter on the genealogical history of some outstanding and old families of the area (Maspeth was part of the larger Newtown area). Of the Way family he said, in part, that James Way was "an early and reputable settler at the English Kills, where he acquired a large estate, including the premises of the late Judge Furman" (Riker 1852:378). By 1760, the Quakers, to which religion Maspeth settlers largely belonged, decided to construct a Meeting House. They obtained a plot of land through the offices of Captain Richard Betts and James Way and soon had built their Meeting House. The location of this old structure lies under the present St. Stanislaus R.C. Church of Maspeth, located at 61st Street and Maspeth Avenue, a number of blocks east of the project area. The cemetery which adjoined the Meeting House fell into poor condition in the 1930s, and its site also lies under the property of St. Stanislaus Church (Wisniewski 1986:4).

During the first decade of the 1700s, Judge Joseph Sackett built a large Dutch colonial house on a hill at the top of Maspeth

Creek. This building had a double veranda, in the manner of Dutch plantation houses, and commanded a fine view of the length of Maspeth and Newtown Creeks. The house had several distinguished owners over the years, including the Governor of New York State and builder of the Erie Canal, De Witt Clinton. In 1765 during the French and Indian Wars, Judge Sackett died, and his home went to Walter Franklin, a wealthy New York merchant who occupied the house until 1780. In that year the house passed to Colonel Issac Corsa, a hero of the French and Indian War. When the British took possession of Long Island, the Sackett-Clinton House became the headquarters of General Warren. This site has been leveled and lies at the foot of 56th Terrace on the right and before the railroad tracks (ibid.:5). (Figure 24 shows the commemorative marker.)

"During the Revolution considerable numbers of the people joined the loyalists, and the county was mostly in quiet possession of the enemy" (French 1860:545). "The village [of Maspeth] was of importance in the Revolutionary war; from the porch of the Old Queen's Head tavern, which stood near the corner of Fifty-eight Street and Maspeth Avenue, General Howe watched his troops embark triumphantly, after the Battle of Long Island, down Maspeth Creek for Manhattan" (WPA 1939:579). "In summer and in winter the soldiers [British] spent their idle moments at the local tavern called the Queens Head. The Queens Head Tavern was located at the Maspeth Town Dock, on the South East corner of Maspeth Avenue and 57th Avenue, which was then Old Flushing Avenue. The tavern was built by the Township of Newtown, about 1720, and was rented to various tavern keepers over the years. During the Revolution it was owned by Captain Peter Berton, who sold it in 1783 at the end of the British occupation. It was owned privately thereafter and survived to become an Amoco Gas Station in the 1930s before it was finally demolished" (Stankowski 1977:29). (Figure 25 shows the location of the old town dock.)

When the Furman family took over, they made the Maspeth Creek area famous. Garrit Furman was a successful lawyer and bought the Maspeth site as part of the property of his summer retreat. The purchase included not only Furman's Island (as it then became known) and the location where the sludge management facility is to be built, but also the land east to Maspeth Village and south to the Bushwick line. Here, in 1817-1819, Garrit Furman erected an imposing mansion in the Federal style. It was two and a half stories in height, with a recessed portico in the front. The sloping roof formed a classic pediment with Palladian windows in the corners. Here Garrit Furman spent his summers. In 1827, he and his wife, Mary Eaton Furman, built themselves a town house at Madison and Monroe Streets in New York, where the couple spent the winter season. It was the house in Maspeth, however, that was dearest to Garrit Furman's heart; year after year down to the 1880s he retired to this beautiful summer retreat. The house and its pleasant surroundings - the singing birds and the meadows -

inspired the judge to write, during the 1840s, a poem entitled "Rural Hours". Judge Furman published his work privately and to its frontispiece we are indebted for the sole surviving portrait of the author and his Maspeth mansion. (Figure 26 is a copy of the drawing of the gracious house.) The property map of land belonging to the heirs of Garrit Furman, made August 1877, shows only one structure on plot #3 which is probably the Way farmhouse. (See Figure 27.) However, it is thought that the mansion survived until 1899 (Seyfried 1986:2). (Figure 23 shows its approximate location.)

In April 1836, Judge Furman laid out and opened Maspeth Avenue to serve as a means of approach to this mansion, hitherto accessible only by water. The new road ran from the junction of 58th Street and Maurice Avenue westward over marshy ground to the creek shore. The new road was also a commercial venture: The Maspeth Avenue and Toll Bridge Company. A bridge was thrown over Newtown Creek and the road was continued on the Brooklyn side. Toll was collected on the bridge. Judge Furman watched the building of the road over his land, and in which he had a financial interest, and dedicated a little poem to the workers in his "Rural Hours" (ibid.:2). Various maps of the period show the path of the road and sometimes the toll house and other unidentified structures. (See Figures 5, 28, 29, 30 and 31.)

Judge Furman died at Maspeth on June 6, 1848 and left his estate to Willilam H. Furman, his son, who had been born in 1818. William was passionately fond of trout fishing as a hobby and whenever business permitted, he visited the numerous small streams on the south side of Long Island. When he was about forty-five and well established, he resolved to set up on his own property a trout hatchery that would stimulate the waning sport and compensate the streams of Long Island for all the gamefish he himself had caught over the years. About 1860 he selected a five acre site on the south side of Maspeth Avenue, just opposite his mansion (about 56th Street).

The revolutionary feature of Furman's project was that he proposed to raise trout in an artificial excavation in the marshy ground near Newtown Creek instead of in a cold, swiftly running stream. Furman's friends pointed out that the ground seepage would not be rapid enough to simulate a mountain stream and whatever water he struck would be brackish from tidal flow. Despite all attempts to dissuade him, Furman persisted; he devoted to the task unlimited time, means, devotion and perserverance and was rewarded. To everyone's amazement, numerous springs of cold, pure water bubbled into his excavations. This was the beginning of the trout hatchery, a project that was to be perfected over the next twenty years and which brought a measure of fame to Maspeth.

In its final form, the trout hatchery took the shape of the letter S drawn twice and connected end on end. Furman tried to

make the spawning race as "natural" as possible by duplicating mountain conditions and scenery. Every effort was made to screen off the stream from invading water rats and human poachers. By 1870 the Maspeth Trout Hatchery was nationally known and Furman became famous as the leading exponent of natural breeding, as opposed to milking adult trout and artificially fertilizing the eggs in indoor hatcheries. During this period the influx of visitors was often more than Furman could accomodate, and he began to discourage parties of the curious who came out on the horse cars from Brooklyn and used his estate as a picnic ground and sightseeing attraction.

After about 1885, William Furman began to spend a greater proportion of his time at a summer residence and trout stream in Smithtown, Long Island, and the Maspeth installation received less and less attention. It is highly likely that the rapid development of commerce along the bank of Newtown Creek after 1870 and the consequent gradual pollution of the water was a factor in the decline of Furman's interest in Maspeth. On December 5, 1893 he died suddenly of apoplexy in Smithtown and with his death the trout hatchery at Maspeth was abandoned. (Figures 23, 31 and 32 show the approximate location of the hatchery stream. The description of the enterprise was compiled by Vincent Seyfried 1986:2-3 from the following newspaper accounts:

HEMPSTEAD INQUIRER, June, 1868
BROOKLYN TIMES, July 20, 1868; July 30, 1872;
February 5, 1870.)

Another wealthy and prominent neighbor of the Furmans was James Maurice, born in 1814. He was a lawyer, State Assemblyman and United States Congressman. In October 1840 he bought eight acres of land from the Furmans and built a mansion on the south side of Maspeth Avenue which he occupied in June 1841. Maurice died in 1884. (The location of his mansion may be seen on Figures 6, 23 and 30.)

History of Maspeth Avenue

As mentioned above, Maspeth Avenue and Toll Bridge Company was incorporated on April 8, 1836 to build a toll road from 58th Street and Maurice Avenue in Maspeth in a straight line over William Furman's land to the junction of Kingsland and Metropolitan Avenues in Brooklyn. In 1848 the company won the right to charge one cent toll for foot passengers over Newtown Creek, provided it raised the road two feet above ordinary tides.

The company's charter expired in 1866 but it tried to extend its life by turning itself into a railroad company - the Williamsburgh and Newtown Railroad. The company laid iron rails on its road in 1867, but before it could begin operation, the City of Brooklyn took over the part of the road in Williamsburgh as a

public street and raised the grade. Rather than regrade the whole Queens County section of the road to match and relay the rails, the company abandoned the railroad project. In 1873 the property and franchises were sold under foreclosure and the unused rails sold for \$10,000.00.

The old road and bridge, now receiving no maintenance, fell into disrepair and the bridge over Newtown Creek became so unsafe that in 1876 the authorities removed it. In the same year, 1876, Grand Street was extended through from Brooklyn into Queens County with a new bridge over Newtown Creek. Grand Street paralleled old Maspeth Avenue at a distance of only a few hundred yards. Travelers preferred the new and better road, especially since old Maspeth Avenue now dead-ended at the creek and went nowhere. In a very short time, Maspeth Avenue lapsed into little more than a dirt path. From time to time efforts were made by the Brooklyn and Queens Supervisors to appropriate money to rebuild the Maspeth Avenue bridge and renew the road, but because Grand Street was adequately accomodating the current traffic, the authorities felt under no pressure to appropriate the money. The last efforts were made in 1896, since which time the old road has faded into oblivion (Seyfried 1986:4). A 1903 Belcher Hyde Atlas shows that the bridge no longer exists (Figure 33) and two others (1908 corrected to 1912 and 1929) indicate that all the portion of Maspeth Avenue in the project area is opened but not paved or otherwise improved. (See Figures 22 and 34.) On a 1929 corrected to 1954 Belcher Hyde Atlas, Maspeth Avenue is interrupted several hundred feet east of the sludge management site only to resume for a few hundred feet right at the bank of Newtown Creek. (See Figure 35.) Figures 36 and 37 are copies of photographs taken in 1923 and 1929 respectively and show the state of the abandoned road at that time. The portion shown is where the road ended at Newtown Creek looking west to Brooklyn. The path of Maspeth Road is not presently visible on the sludge management parcel.

Commercial History of the Study Area

The Furman's Island (previously Smith's and Maspeth Island) area has had a long commercial history. It was the opening of Maspeth Avenue in 1836 as a through road to Brooklyn that first stimulated the appearance of commercial ventures in the area. The earliest businesses seem to have sprung up on the Brooklyn side of the turnpike, but Peter Cooper (founder of Cooper Union) moved his glue factory in 1849 to a ten acre site on Maspeth Avenue between Grand Avenue and Debevoise Avenue where it was active until c.1905 (Stankowski 1977:32). On Morgan Avenue at Maspeth Avenue was the ropewalk of Lawrence and Cooper which was operating into the 1890s.

On the island itself, which encompasses the site of the sludge management facility, the first venture was the fertilizer works of Cord Meyer. Meyer, a German immigrant, was born on December 4, 1823 and came to America as a young man. He started the Acme

Fertilizer company on Furman's Island in the 1840s on creek-front land purchased from the Furmans. He prospered and built a house for himself on Grand Street at 59th Street. Using the capital from his fertilizer business, Meyer became a partner in the sugar refining firm of Dick and Meyer on North 7th Street in Williamsburgh. This enterprise proved immensely successful and made both partners very wealthy; the Cord Meyer fortune in 1891 was estimated at seven million. Cord Meyer died on June 10, 1891 and the fertilizer business on the island was then shut down. His well-educated sons went into real estate, and Cord Meyer Jr. eventually became the developer of Forest Hills. The sons kept title to the old fertilizer works (Seyfried 1986:5). The factory is shown as early as 1859 on the Walling Map (Figure 5) and the structures are shown on atlases long after the enterprise was no longer operating (for example Figure 22). An 1887 company advertisement is reproduced on Figure 38.

On the north side of the island above Maspeth Avenue and again on creek-front land bought from the Furmans, was located for many years the lumber and coal yard of Covert and Sons. Charles G. Covert was born at Maspeth in 1826; his father Underhill Covert had farmed here in the 18th century. When Charles grew to manhood, he started a coal and lumber business on Furman's Island which continued as his main source of income. He later went into politics and served as Supervisor of Newtown in 1858 and 1865. He died on November 24, 1873. This seems to have been the end of the lumber yard on the island (ibid.:5). There are at least five structures shown on that parcel in Beer's 1873 map (Figure 31) and Figure 23 shows more clearly the former location of the lumber yard. However, after 1873 up until the present buildings appear on the land-use atlases, only a few small frame structures are shown. (See Figures 32 and 34 for example.)

In 1867 the newly opened South Side Railroad built a spur from its main line into Bushwick across Grand Street and Shanty Creek (the inlet which originally separated Furman's Island from the mainland) to Furman's Island. The branch added to the freight business of the road by tapping the Covert lumber yard and the Meyer fertilizer plant. The spur was still in service in 1886 but, according to land-use atlases, was gone by the 1890s, probably because of the closure of the fertilizer works after the death of Cord Meyer Sr. in 1891. The approximate location of the railroad spur is shown on figure 23.

"In 1852, Maspeth...emerged from the strung-out settlement by the Maspeth and Newtown Creeks and began to take shape along Grand Avenue up as far as modern 69th Street. Two surveyors...laid out streets and houselots with orderly precision, forming a grid pattern called a village plat. The streets of the village plat were arranged so that they ran into the Colonial Period highways of the area" (Stankowski 1977:33). The project site itself apparently was exempt from the grid plan, probably because the marshy

topography would have necessitated the building of road beds to make the new streets. (See Figures 32 and 34.)

In 1899 the Furman heirs sold all their land holdings, including Furman's Island, to Lowell M. Palmer, a Brooklyn entrepreneur, for \$450,000. Palmer envisioned transforming Furman's Island with its railroad and water facilities into a rival of Bush Terminal in south Brooklyn, at that time the largest and most successful industrial park in the country. To effect this ambitious project, he formed a syndicate composed of himself, the Havemeyer sugar trust, and Cord Meyer Jr. who still owned his father's old plant. The syndicate - the Palmer Waterfront Company - waited several years to begin moving on the industrial park scheme; finally in 1911, they petitioned the city to exempt the property from proposed street opening proceedings in the matter of 54th and 53rd Streets so that the site could be improved as an industrial park and as a canal and railroad terminal.

A year later, the syndicate received the concessions from the Borough president. The men estimated that the cost of the improvements would require an expenditure of ten million dollars. In 1914 Palmer appeared before the Board of Harbor Lines of the War Department in New York and presented a plan for reforming the bulkhead lines of upper Newtown Creek and Maspeth Creek so as to widen the creek to 250 feet and create a turning basin. That date marks the last newspaper reference to the ambitious project. Possibly the War Department disapproved; possibly, too, the price tag for the whole scheme proved too high. More likely, the advent of the European war in 1915 changed the whole economic picture, making the project too chancy a venture to risk (Seyfried 1986:6). Figure 33 shows the extent of the Palmer syndicate holdings.

About 1920 the Liquid Carbonic Company built a plant between the old Way farmhouse at 55th Street and the Long Island Railroad (Shown on Figure 34). By the end of the 1920s, this had become the Circle Wire and Cable Company. However, all the land to the west - from 55th Street to Newtown Creek including Furman's Island - remained undeveloped through the 20s and 30s. By 1920 even Shanty Creek had silted up and disappeared, leaving Furman's Island only an expression. Had Maspeth Avenue survived as a road, the tract might have experienced some commercial use, but the want of a through road and the marshy character of the ground, plus the general commercial stagnation all during the 1930s precluded development of the area. A photograph taken in 1923 shows the desolate state of the area (See Figure 39). The perspective is looking east past the Way-Mott farmhouse to the Liquid Carbonic Corporation. The project parcel would be behind the photographer to the west.

There is no record of a concerted effort to fill and level the streams and marshy portions of the Furman's Island area. However, some dumping\filling along with the silting process has obviously

taken place over the decades to create today's land mass. Any low-lying, deserted tract is a convenient dumping ground. As stated earlier, Stanley Wisniewski recalls seeing evidence of such activity in the 1930s, and one can discern fairly recent fill episodes today, especially on the southern portions of the study area.

Francis J. Principe, president of the West Maspeth Local Development Company, moved to Maspeth in 1942. At that time he was employed by the Aluminum Company of America which, aided by the U.S. Government in its war effort, built a plant on the 100 acres lying on the east side of 48th Street. According to Mr. Principe, it was on the area to the east and south of the current St. Johnsbury's frontage on 48th Street, and the property stretched from 48th Street to Newtown Creek. Due to national concerns, the government disregarded all planned streets and sewer easements and the result was the confusion of changed street names and locations that exists today. The placement of the plant probably corresponds somewhat to the Naval installation shown on Figure 35.

Mr. Principe recalls that the Department of Sanitation property south of the project site was hilly vacant land that had been dumped upon; he remembers the fill as the same sort of thing as can be seen today - debris, construction and demolition bits and pieces. In the center of the parcel was a mound on which stood a small radio station, and there were two radio towers. These had been erected after World War I for radio station WEVD - named for Eugene V. Debs, Socialist candidate for president - and stood until fairly recently. (See Figure 40 for the location.) Mr. Principe is unable to remember anything remarkable about the project site, saying that it contained "hillocks of dry solid ground between Newtown Creek and the meandering Maspeth Creek" (Frank J. Principe, personal communication, 8/86).

The three trucking company buildings which stand on the project site today were erected in 1965 and 1966. (See Figure 40.)

Archaeological Sites in the Maspeth Area

In 1935 an early colonial fireplace dating from circa 1650 was found by Ralph Solecki and Stanley Wisniewski. (This is the same Contact Period fireplace mentioned in the Prehistoric Archaeological Sites section of this report.) Its location was south of Maspeth Avenue and west of the railroad tracks between the extinct Shanty Creek and Maspeth Creek, south and east of the project site.

Among the European material were 22 pieces of white kaolin pipestems, 7 complete pipe bowls of which three were marked with the initials PG on the heel, 1 fragmentary pipe bowl, 17 lead buckshot balls about .26 caliber, 2 lead balls about .70 caliber, a dark gun-flint, 6 small pieces of blue china plate, 39 hand-

wrought nails, and 26 pieces of clay bricks mentioned above. These were crudely fashioned,, not all of the same dimensions and somewhat smaller than modern bricks. There were five whole bricks in the collection. (Solecki 1948:327)

Wisniewski has reported on other finds in the area:

The property map of land belonging to the heirs of Garrit Furman, made August 1877, shows only one building structure on plot No. 3 which is north of Maspeth Avenue and west of the railroad tracks. [Figure 27 of this report] No large foundation was present in this area when Ralph Solecki and I explored the area in the early 1930s. There was only a small house foundation located about a hundred feet N.W. of the old Mott Cemetery plot. This small foundation measured approximately 9' x 15' and may have been the remains of the old James Way structure. As I recall, it was composed of rough field stone, with stone steps entering the basement from the east side. (Wisniewski 1986:11).

The Vander Ende-Onderdonk House is located on Flushing Avenue and Onderdonk Avenue east of the project site. It is included on the National Register of Historic Places. A number of archaeological projects have been undertaken at this site which was built on by Handrick Barentz Smidt about 1660.

In MASPETH: OUR TOWN, Barbara Stankowski reported that "Maspeth had several large pottery concerns which employed local men and women. Young girls worked at the Garvis Pipe Factory where they were employed after school snipping the ends of clay pipes before they were placed in the kilns. Garvis Pipe was located in an old frame building near the ancient Mott Quaker Cemetery, both of which have been replaced by the Cerro Wire Company" (1977:68).

Solecki and Wisniewski may have found remains of Garvis Pipe.

Another interesting feature that was still present in the 1940s was a pipe makers kiln, located several yards west of the aforementioned small house foundation (James Way?). This consisted of a brick pedestal, some 2 to 3 feet above ground level and measuring about 18" square; no doubt the remains of the lower kiln section, still showing bits of fired clay during our initial discovery. Ralph and I dug through some of the debris that was discarded down the slope adjacent to the north side of the kiln and found broken specimens of many different pipe forms, including some with the initials TD raised on the bowl portion which faced the smoker. The late Julius Lopez investigated the source of some of the kiln bricks marked Henry Maurer

No. 1. He was informed that the bricks were made between 1870-1920. Lopez also visited The American Clay Pipe works in N.Y.C. (Dec.1956) and was told that they made TD's in their Brooklyn plant till 1955 and for 50 years previously. The TD bowls found at the Maspeth site were 1 3/4" high with a 1/4" long round spur at the base and having a maximum bowl diameter of 1" at the top opening. No complete TD pipes were found in the debris, but a plain type, minus the round heel spur, measured 4 1/2" overall length. Also found in the refuse was a portion of an unglazed plate showing an impression of the capitol building at Washington, D.C.. A portion of a cylindrical type wax record player with a garnet point stylus was also excavated from the pipe makers dump heap. These cylindrical players were patented from 1878 to 1916. My guess is that this particular pipemaker manufactured an assortment of pipe styles that were in style from the very late 1800's to the early 1900's. I recall there was a nearby spring at the base of a sandy bluff that trickled into the marsh and creek to the northwest. Fresh water of course would be an essential ingredient to working with clay. (Wisniewski 1986:11-12)

No archaeological sites have been reported on the project parcel in itself.

Summary

In summary, documentary research has revealed that settlement and development of the study area in the historic era began in the mid seventeenth century. In fact, the Maspeth section of Queens was the earliest European settlement in that borough and has ever since played a vital role in its community. As for the project site itself, however, land use has been sparse and none of it archaeologically significant. For many years the unused marshy sector of an island, the site did house Covert's coal and lumber yard for several decades in the mid 19th century. Any further use was too insignificant to appear in the documentary record until the three existing structures were built in the 1960s. Their construction was made possible by the filling, dumping, and silting necessary to raise the naturally low-lying parcel to the grade level of the surrounding area.

VI. FIELD SURVEY

An intensive pedestrian survey or field reconnaissance was conducted within the entire project area in an attempt to locate prehistoric or historic cultural resources and to evaluate the archaeological potential of the area. The entire project area was covered by foot, and the results of this fieldwork are as follows:

The proposed Maspeth sludge management facility site encompasses approximately eight acres. Fencing for the trucking companies located on part of the project site separates a small southern portion from the larger northern portion of the parcel. In 1986, this southern portion blended imperceptibly with Department of Sanitation property extending as far south as 58th Road, which was once the path of Maspeth Avenue. The surface of the ground in this southern section was, in 1986, covered with debris such as bricks, wood, glass, and concrete chunks. It is evident that numerous dumping episodes of this rubble created the uneven terrain which in some places showed evidence of at least six foot mounds of refuse.

During a site visit on May 25, 1991, the southern section mentioned above was found to have been leveled and large piles of gravel of varying coarseness had been deposited as part of a gravel yard. The previously undeveloped DOS property immediately to the south is now graded and concrete footings have been poured over a large proportion of the area. A deep (approximately 20 feet) excavation here showed clearly the levels of fill, with a thick layer of bricks, that had been deposited. (See photographs 5 and 6.) Soil boring logs from neighboring parcels were analyzed for the on-going DOS foundation construction, indicating an extremely uneven landfill overmantle, between 3 and 28 feet below grade, in the immediate vicinity of the sludge site. Fill materials, described as at least 40 years old, included sand, gravel, cloth, plaster, wood, bricks, rubber, plastics, concrete, metal and glass. Stone & Webster Engineering, Inc. has concluded that "significant filling is likely to have occurred at the [Maspeth sludge] site" (Stone & Webster Engineering, Inc., 1991:p. QN22CR.NY1).

The earlier field reconnaissance revealed that extensive land making/filling has taken place in the northern portion of the project site bounded by Maspeth Creek, Newtown Creek, DOS property, and 48th Street. Figure 3 shows the project site; the northern portion includes all but the small projection to the south. Nineteenth century maps indicate that this portion of the project area was once marshland. (Figures 1-6) Documents also support this assertion: "Animal fodder was gathered from the salt hay growing in the region called 'cripple bush' by the Dutch. This swamp was vast and lay along the Newtown and Maspeth Creeks until late in the 1920s. The swamp was filled with stagnant salt water pools, and the Mespeatches Indians who hid themselves in the swamp region to escape persecution by the neighboring tribesmen called the area 'place of bad water'" (Stankowski 1977:6).

Atlases of 1912 and 1915 show that the parcel is undeveloped, with part of Furman's Island still basically intact at that time. (See Figures 22, 22-A and 32.) Eyewitness accounts by Solecki and Wisniewski as well as photographs taken by Solecki also attest to the fact that the area was still low-lying and undeveloped, but

gradually being filled and silted in. (See, for example, Solecki's photograph, Figure 14.) The St. Johnsbury trucking terminal today occupies the center of the northern portion of the project site and is known to have at least a partial basement. (The St. Johnsbury building is the largest building shown on Figure 40, a tracing of the most recent atlas.) Thus it is apparent that an enormous amount of fill must have been placed between the 1930s and the mid 1960s when the building was erected.

In the previous review of the environmental setting, it was noted that the highest natural elevations in the study area occurred outside the specific project site - that is, to the south and east. The 1907-1910 topographic map (Figure 43) clearly shows this as well as the nineteenth century maps mentioned on the previous page. These elevations are no longer visible.

Our analysis indicates that the parcel of land immediately south of the project site and the parcel of land east of the project site/north of the Page Place and Maspeth Avenue intersection would have been an excellent location for prehistoric occupation. Both of these locales offered the advantages of an elevated knoll at the confluence of waterways. Although the Native Americans apparently preferred occupation sites situated on well drained terraces or knolls overlooking bodies of water, they did take advantage of the natural richness of the low areas. From swampy lands they harvested ample crops of berries, roots, and seeds for food. From the marshes also came such raw materials as rushes for mats and roof coverings and soft cattail fluff for absorbents. Of natural food sources the most dependable day-to-day supply seems for many aboriginally inhabited areas to have been fish. Another resource of spring and fall, ducks and geese would brake their flight at inland fresh meadows and the salt marshes at the shores. In prehistoric times the project parcel would have afforded the above important resources. The project parcel would have most likely functioned as an extracting station and not a habitation site. As indicated by archaeological field investigations throughout the Northeast and by Solecki's research in the project area, the Native Americans would have concentrated their settlement activities on the terraces/elevated terrain at the confluence of the Maspeth, Newtown, and Shanty Creeks. (Note on Figure 43 that the 5' - 20' contours to the east of the project site correspond to the areas that yielded prehistoric artifacts during Solecki's investigations.)

Field investigations, studies of early photographs and documents and cartographic analysis indicate that considerable filling and grading has taken place on the project site. The bulkhead building activities would have extensively disturbed the topography. The map on Figure 34 illustrates how bulkheading changed and enlarged the original land mass. The deep rip rap along the project site's shoreline supports, at least in part, a considerable yardage of introduced material. These terrain-altering procedures and the trucking terminals construction would have most likely obliterated any significant evidence of prehistoric extraction activities.

VII. SUMMARY AND CONCLUSIONS

The documentary research and field reconnaissance of the Maspeth Sludge site have failed to identify any evidence of prehistoric occupation within the study area. The nearest documented prehistoric sites were located approximately 2000 feet to the east of the project site.

Our analysis of the environmental and geomorphological conditions indicates that the land immediately south of the project site would have been desirable for human occupation in prehistoric times. This parcel was a flat elevated terrace in proximity to aquatic food resources. (This elevated parcel has been discussed in previous pages. It was located on what is now DOS property, 58th Road - formerly the path of Maspeth Avenue - and somewhat to the south of 58th Road. It is clearly visible on Figure 43.) The project site itself would have functioned as an extraction station. Although it is very likely that random prehistoric artifacts might be discovered on the project site, it is unlikely that the site would yield valuable research data on settlement patterns, burial practices, or nascent agriculture. Recent land development and construction on the project site have greatly altered the original marshland terrain.

Documentary research indicates that historic period development in the study area began in the early seventeenth century. A small settlement east of the project area - which was at that time an island - was built at the head of Maspeth Creek. On the island a small village called Aernheim existed from about 1656 to 1660. However, it stands to reason that the village could only have been built on the soled ground in the elevated portion of the island rather than in the marsh which covered the project site at that time. Likewise, maps prove that the path of the original Maspeth Avenue and its toll house ran across the high ground south of the project site. The earliest known historic occupation of the project site was by a coal and lumber yard which has long since disappeared. There is no record of any other land use - historically significant or otherwise - until the three presently existing structures were built in the 1960s. Bulkheading, filling, silting, dumping, and grading activities have enlarged the original land mass while obliterating all traces of the ancient island configuration.

In conclusion, this cultural resource survey has determined that the Maspeth project site is culturally non-sensitive. The construction of the proposed sludge management facility will have no impact upon the cultural resource base of the area.

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Photo 1

Maspeth Sludge Site

view: east to west from 48th Street

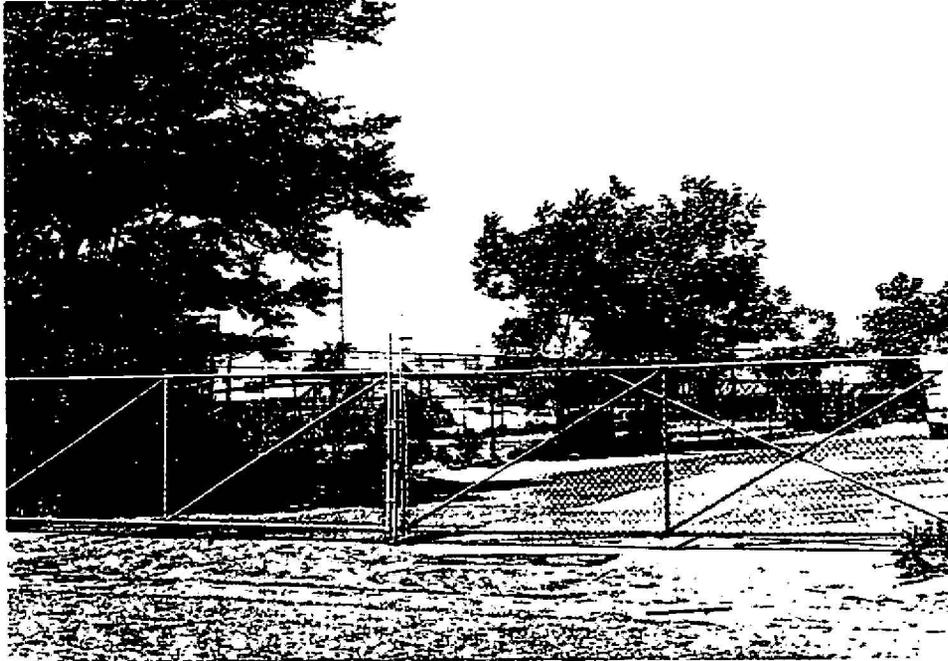


Photo 2

Maspeth Sludge Site, northern limits, Maspeth Creek immediately to the right.

view: east to west from Maspeth Avenue

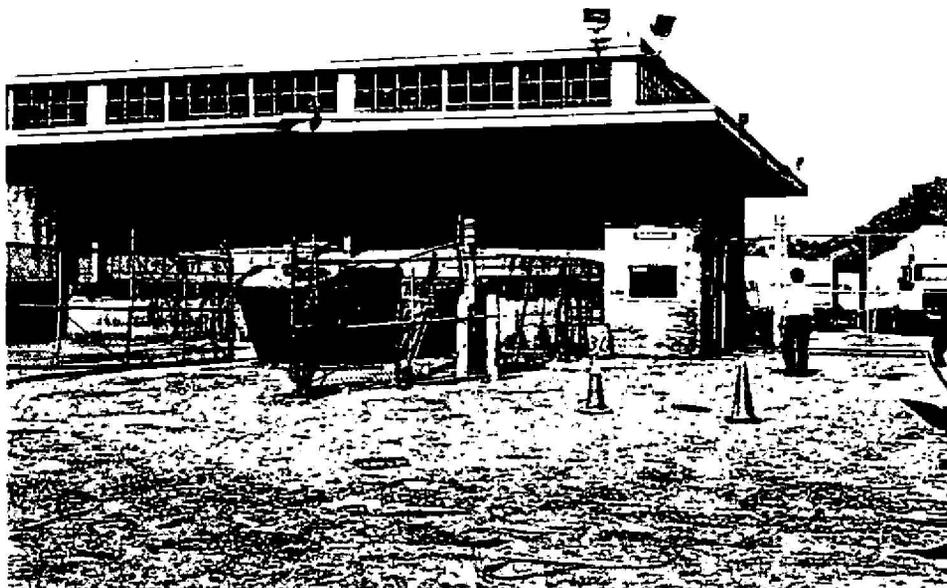


Photo 3

Maspeth Sludge Site, northern portion occupied by truck bays.

view: south to north

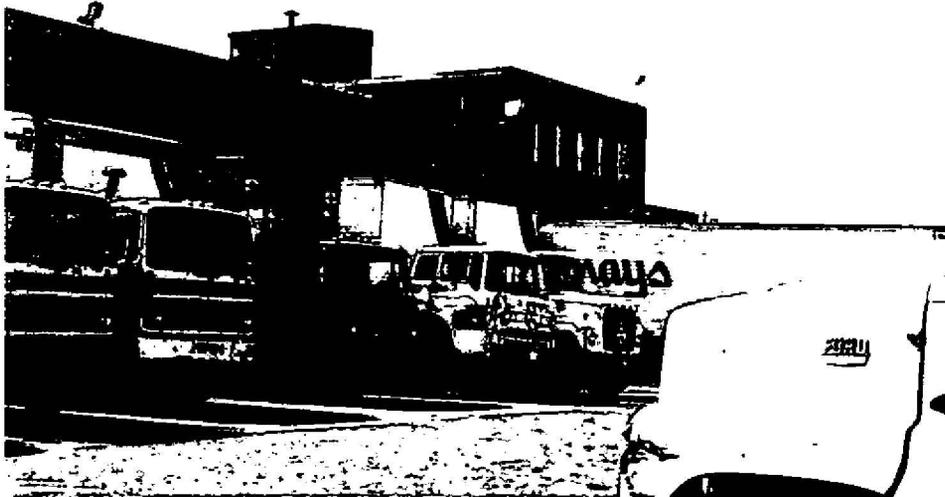


Photo 4

Maspeth Sludge Site, northern portion occupied by truck bays.

view: north to south, along 48th Street



Photo 5

Gravel yard on southern portion of project site, with DOS garage construction in foreground. view: southeast to northwest, with Kosciuszko Bridge in background.

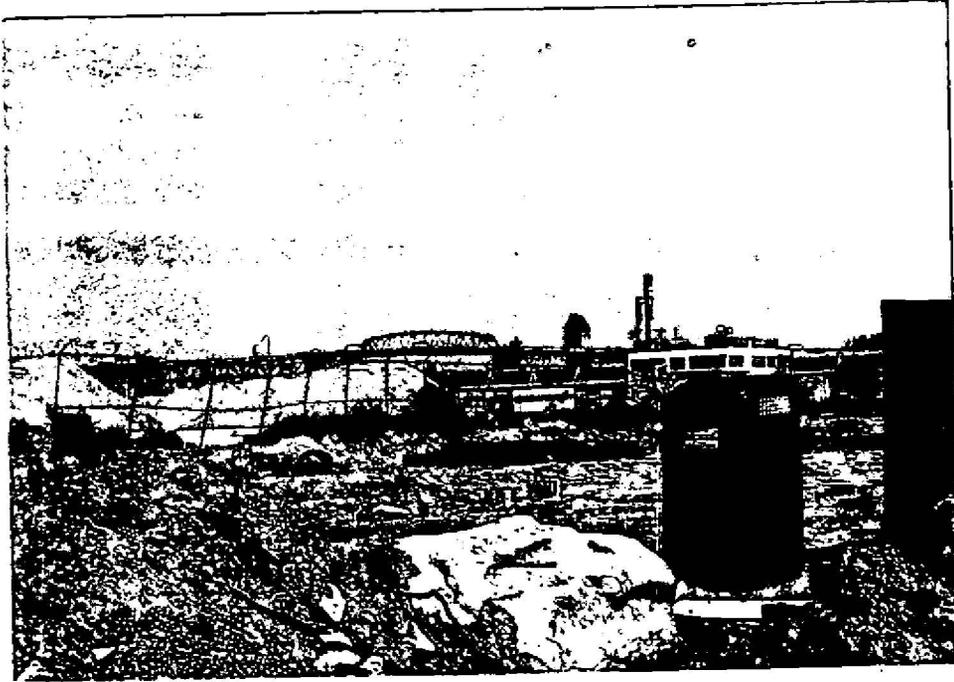
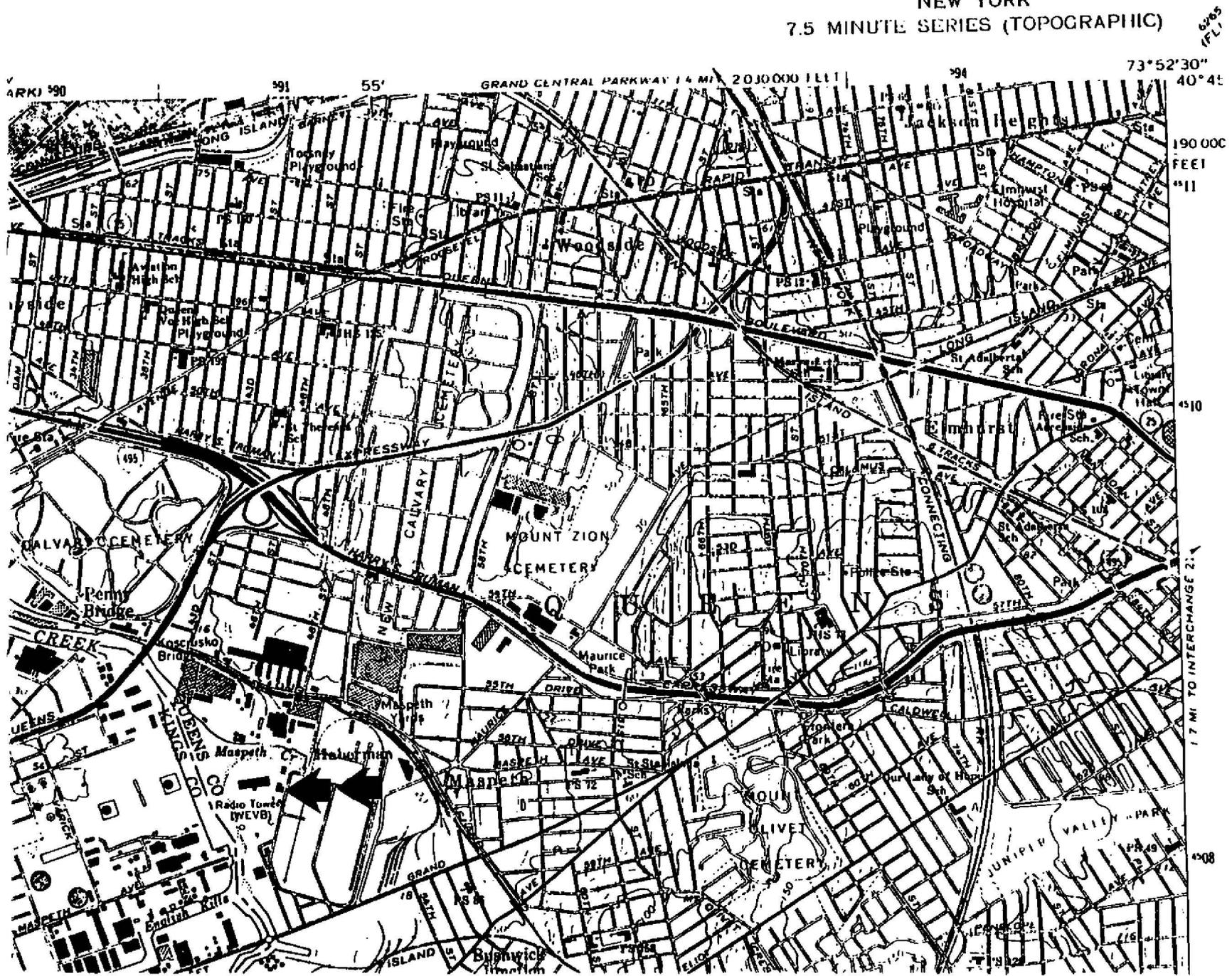


Photo 6

Northern portion of project site with DOS property in foreground. Note layers of fill exposed in excavation. view: south to north.

BROOKLYN QUADRANGLE
NEW YORK
7.5 MINUTE SERIES (TOPOGRAPHIC)



Sludge Management Plan
Maspeth Site

Figure 1

Photocopied from:
Eisenberg, 1978: p. 10

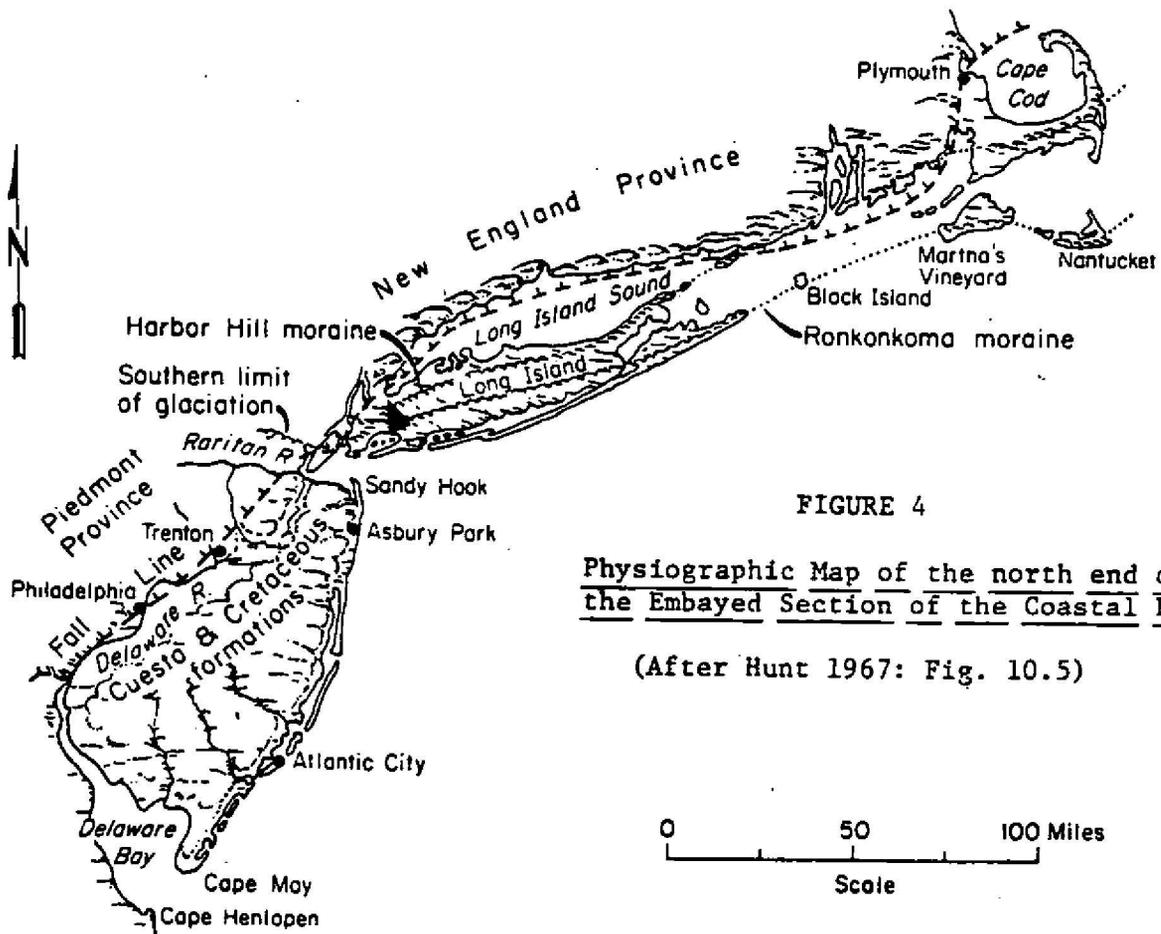


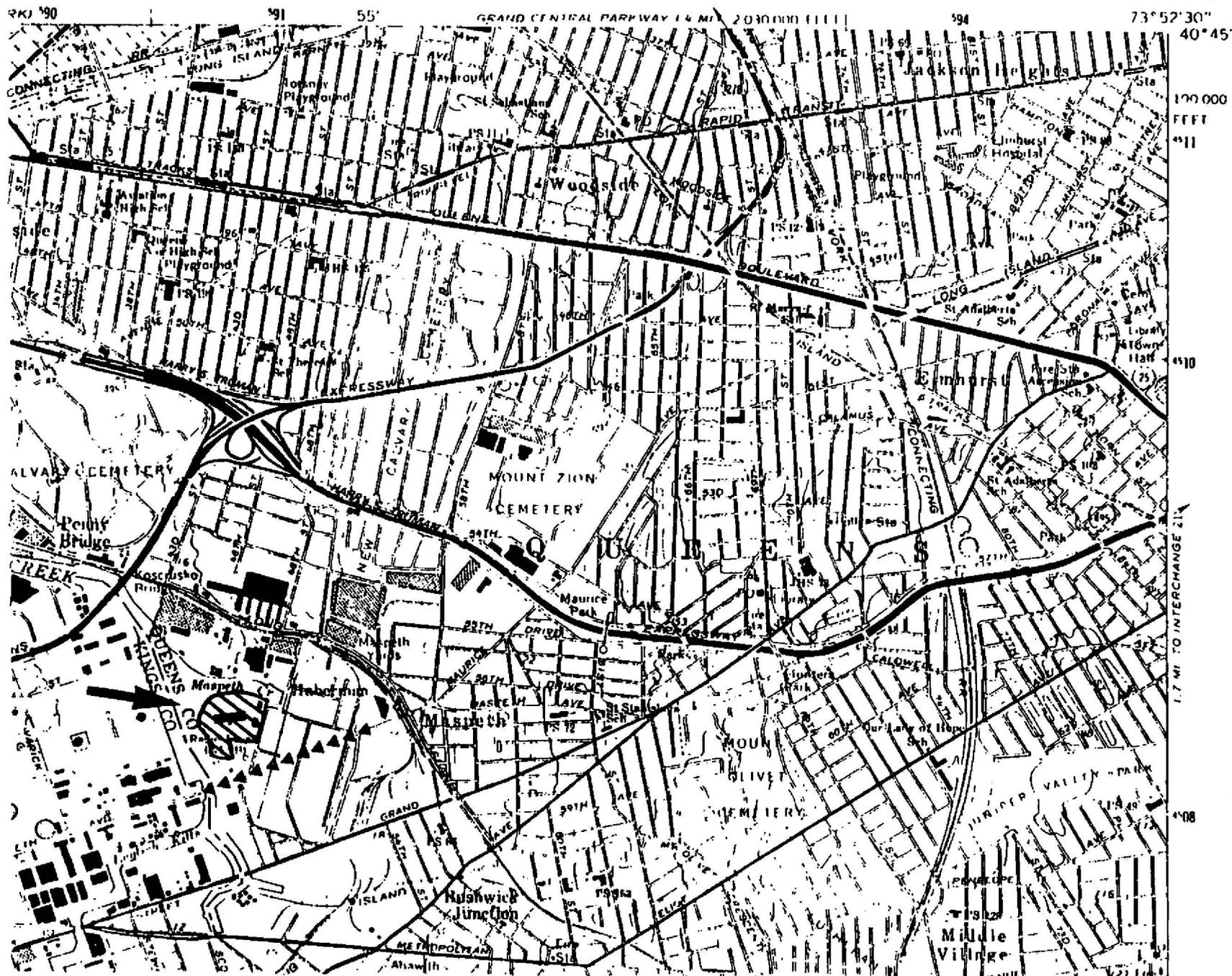
FIGURE 4

Physiographic Map of the north end of
the Embayed Section of the Coastal Plain

(After Hunt 1967: Fig. 10.5)

BROOKLYN QUADRANGLE
NEW YORK
7.5 MINUTE SERIES (TOPOGRAPHIC)

6285 IV SF
(FLUSHING)



◀◀◀
ORIGINAL ROUTE
OF MASPETH
AVENUE

Fig. 3

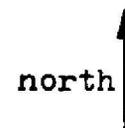
Tracing of:

MAP OF THE BOROUGH OF QUEENS SHOWING OWNERSHIP AS OF
THE YEAR 1800

Office of the President, Topographic Bureau
n.d.

repository: Queens Borough Public Library

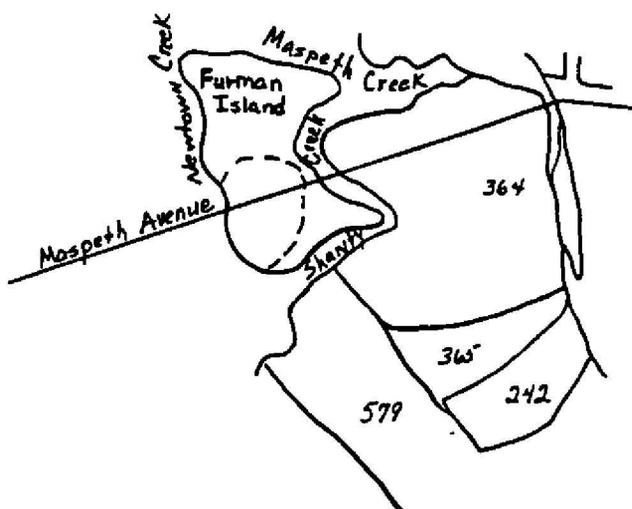
scale: 1" = 1/3 mile



364: Henry and Jane Mott to Garret Furman
1815
±119½ acres

242: J. Way to Thomas Folk
1799

365: DeWitt Clinton, 1799, 40 acres



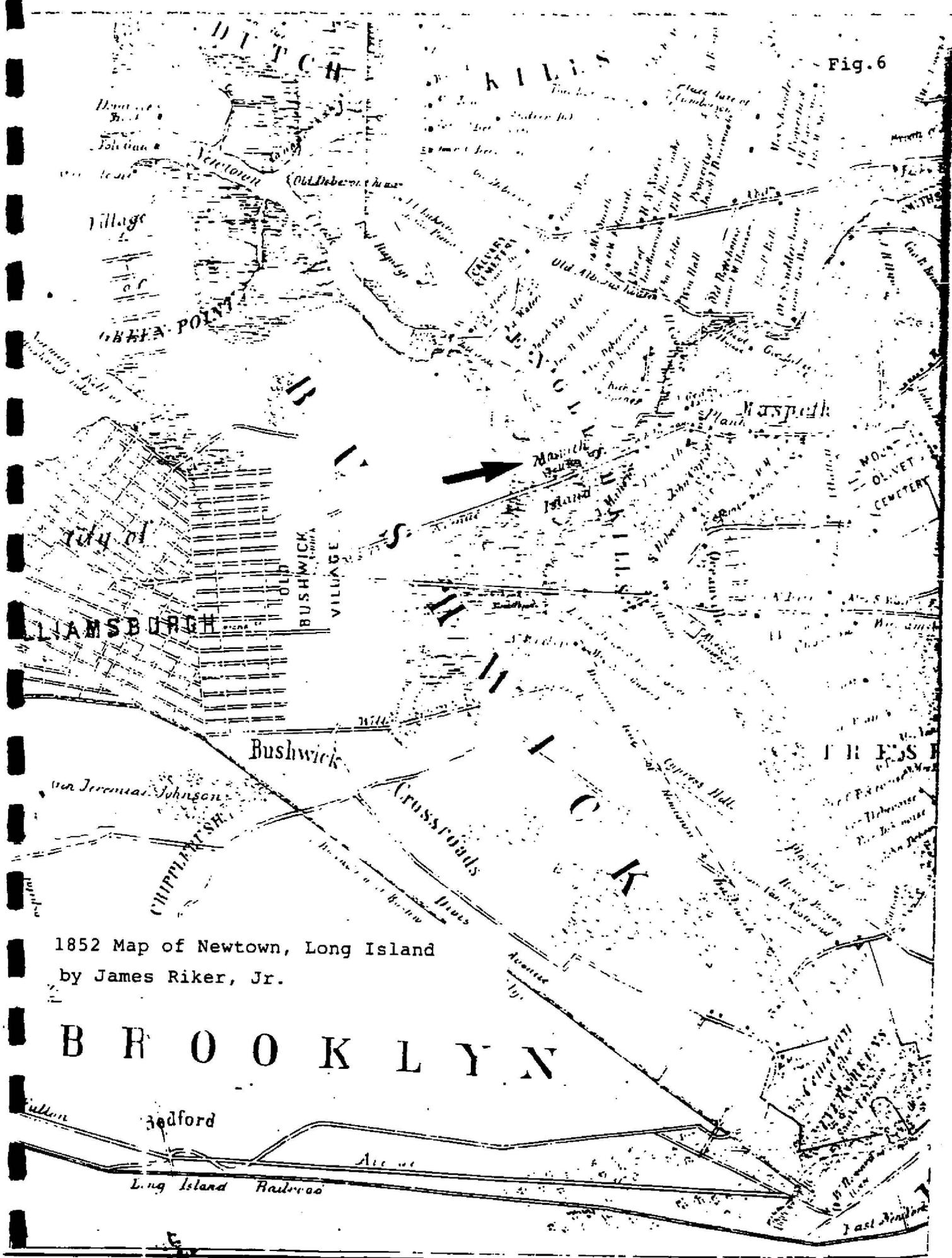
579: Jered Brower to Geo. DeBevoise
1814
50 acres

TOPOGRAPHIC MAP OF THE COUNTIES
OF KINGS AND QUEENS. H.F.Walling,
New York. 1859. Scale: 320 rods =
1 mile.

1 mile = 320 rods



Fig. 6



1852 Map of Newtown, Long Island
by James Riker, Jr.

B R O O K L Y N

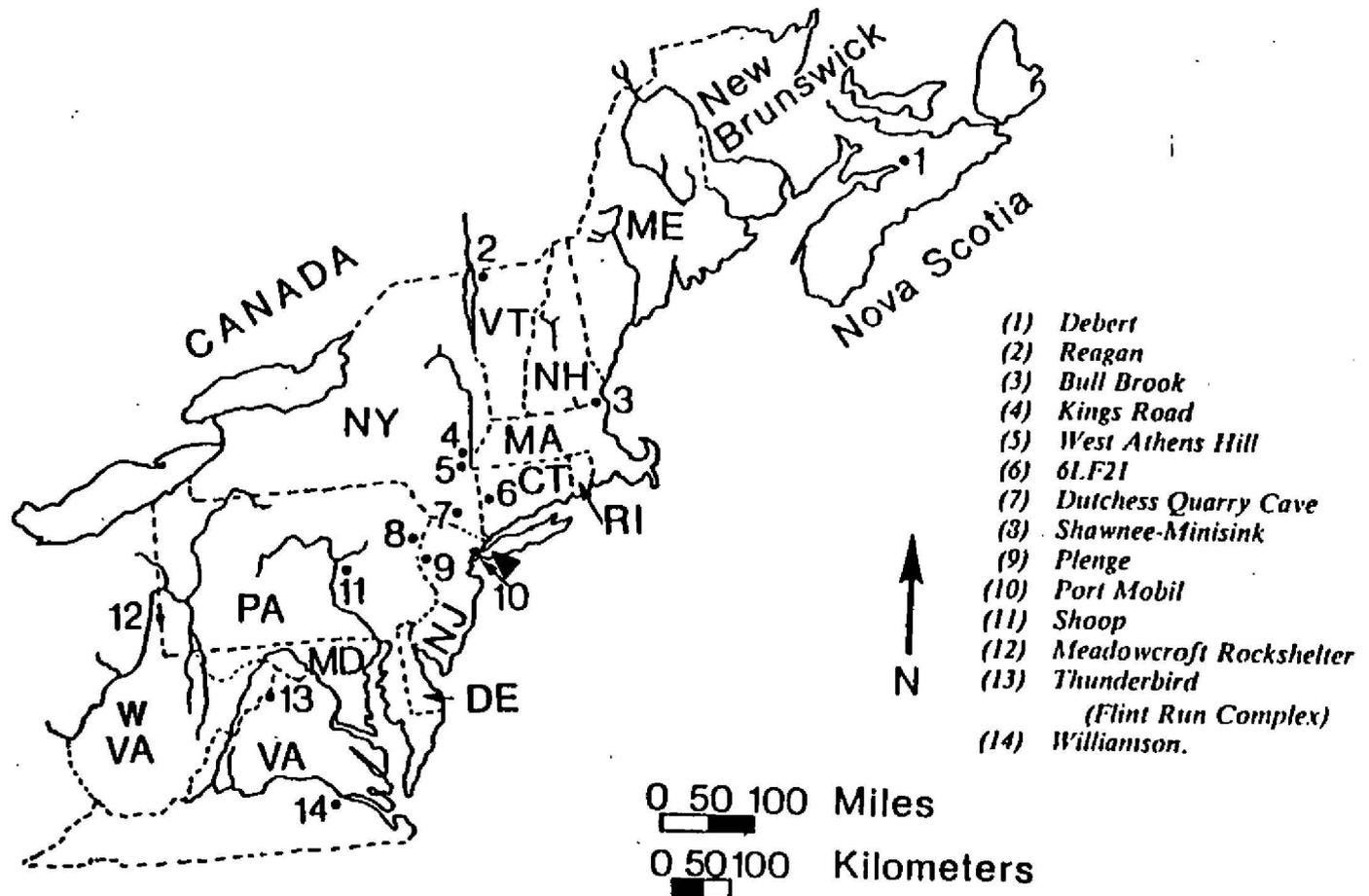


Fig. 1. Map showing location of fourteen Eastern United States and Canadian Paleo-Indian sites

Photocopy of:
Moeller, 1980: p. 133.

PALEO-INDIAN SETTLEMENT PATTERN

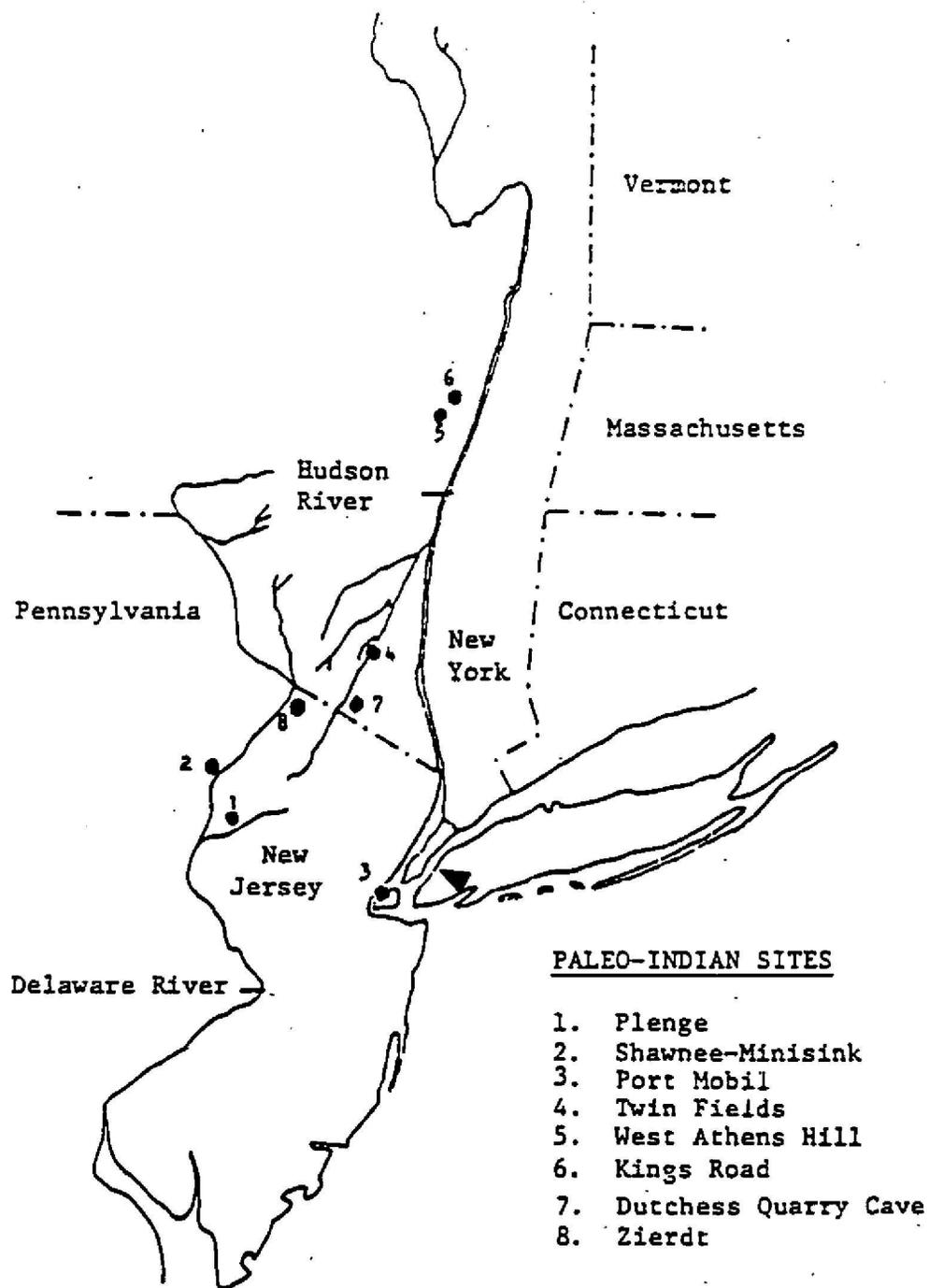


FIGURE 1

Map of the Study Area

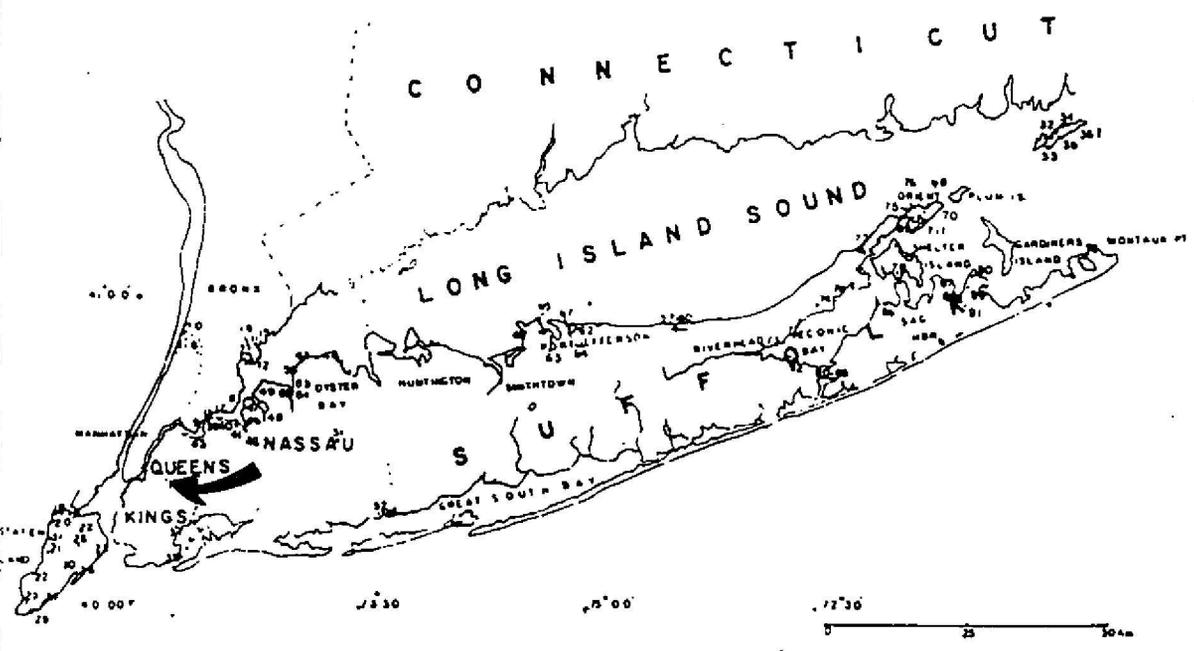
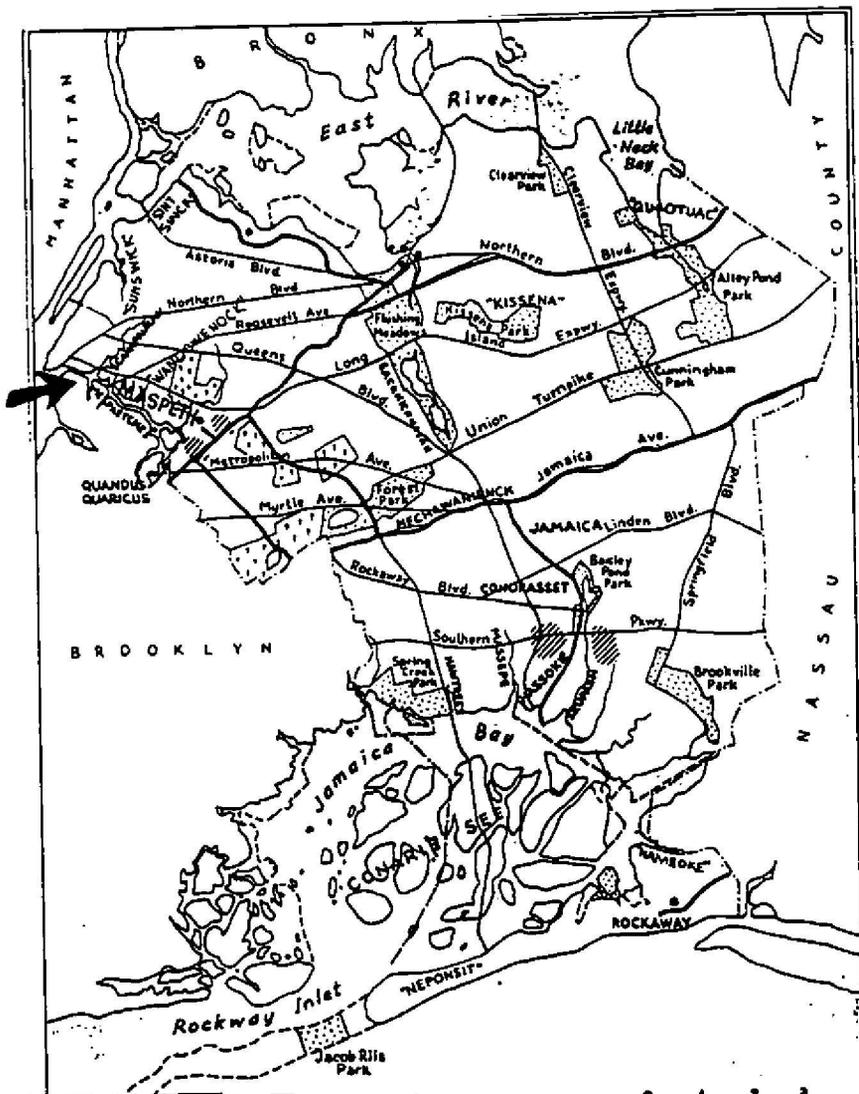


Figure 1. The spatial pattern of coastal New York sites that are reported in the published literature.

Photocopied from:

Grumet 1981: page 71



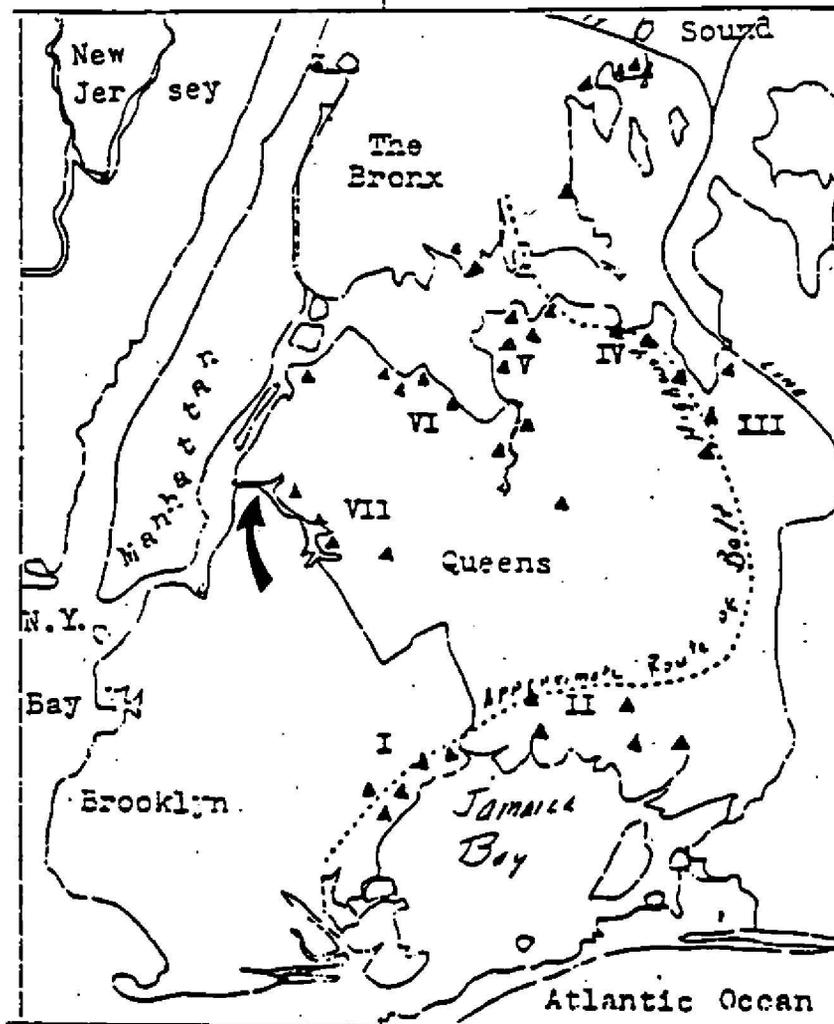
LEGEND FOR FIVE BOROUGH MAPS

-  TRAIL (AFTER BOLTON 1922)
-  PLANTING AREAS AND OLD FIELDS
- TOWNSHIPS** INDIAN NAMES OF LOCAL ORIGIN
- 'ABIK' NAMES NOT OF LOCAL ORIGIN
-  HABITATION SITE
-  PRESENT-DAY CITY PARKS
-  MODERN SHORELINE
-  CEMETERY

0 1 2
MILES

DW

Photocopied from
Solecki, 1941



INDIAN VILLAGE SITES: Triangles on diagram indicate sites explored by Committee on American Anthropology of the Flushing Historical Society. Important locations described in accompanying article are numbered.

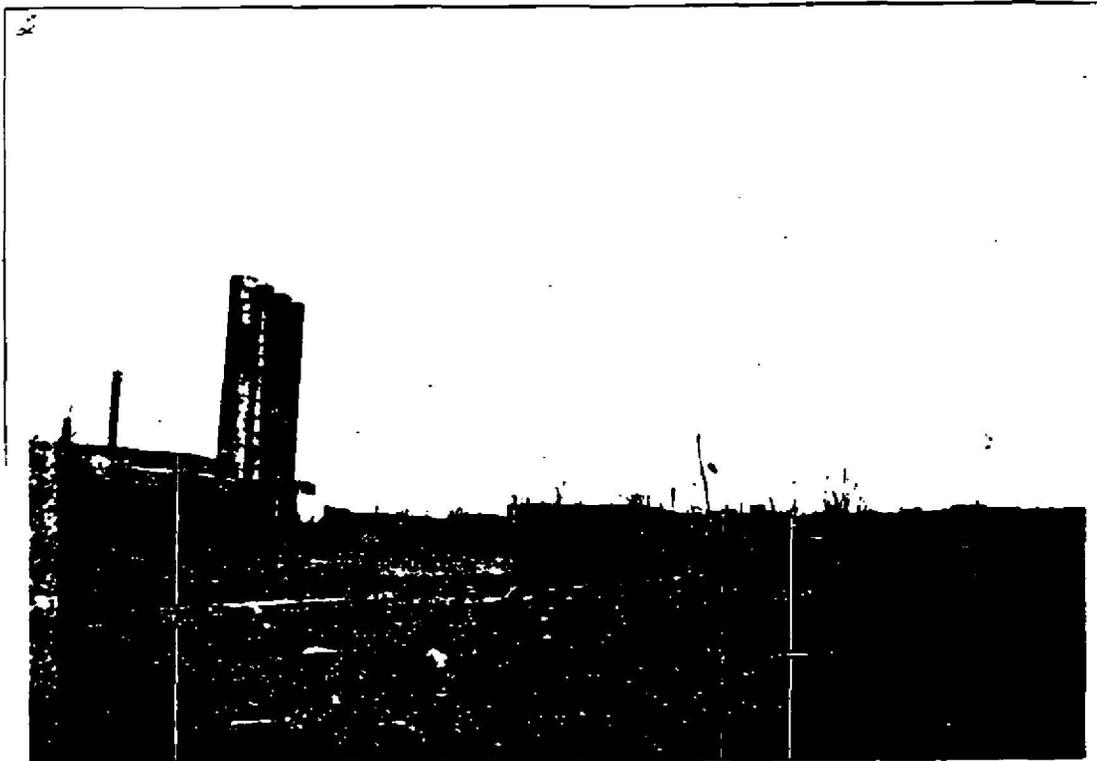
Figure 12

Photograph courtesy of the Long Island Division of the
Queens Borough Public Library, Jamaica

"Catalog of Photographs by Ralph Solecki - Long Island and
Environs, Local Archaeology

No. 2: Maspeth site. Looking east over the site with Burial Ground
(Furman) in center. 1938."

[The stacks were most probably associated with a carbonic plant.
This location is north of the present intersection of Page Place
and Maspeth Avenue, outside the project site.]



Photograph courtesy of the Long island Division
of the Queens Borough Public Library, Jamaica

"Catalog of Photographs by Ralph Solecki - Long Island and
Environs, Local Archaeology

No. 3: Maspeth site. Looking east toward Furman cemetery.
1938." [Same stacks as pictured in No. 2]

3



Photograph courtesy of the Long Island Division
of the Queens Borough Public Library, Jamaica

"Catalog of Photographs by Ralph Solecki - Long Island and
Environs, Local Archaeology

No. 8: Maspeth site. Maspeth creek looking west from Furman
cemetery. 1934." [The northern portion of the Resource
Recovery - Maspeth site is visible in the photograph,
the left center.]



Figure 15

Photograph courtesy of the Long Island Division
of the Queens Borough Public Library, Jamaica

"Catalog of Photographs by Ralph Solecki - Long Island and
Environs, Local Archaeology

No. 12: Maspeth creek being filled in. Looking north toward
cemetery. 1937." [It is possible that the ordinal direction
listed on the catalog should be east, not north.]

12



Figure 16

Photograph courtesy of the Long Island Division
of the Queens Borough Public Library, Jamaica

"Catalog of Photographs by Ralph Solecki - Long Island and
Environs, Local Archaeology"

No. 16: Ralph Solecki on shore of Newtown Creek, Furman Island.
1937." [This photo shows the western boundary of the Resource
Recovery - Maspeth site.]



Photograph courtesy of the Long Island Division
of the Queens Borough Public Library, Jamaica

"Catalog of Photographs by Ralph Solecki - Long Island
and Environs, Local Archaeology

No. 17: Maspeth site. Furman cemetery, Maspeth Avenue.
1934." [The Montauk Branch of the Long Island Railroad was
located to the east of this parcel/cemetery; the Resource
Recovery - Maspeth site is located to the west of the location
of this parcel/cemetery; and, the project site was separated
from the parcel/cemetery by Shanty Creek.]



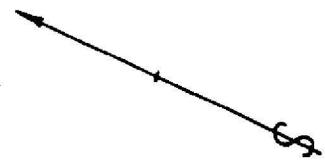
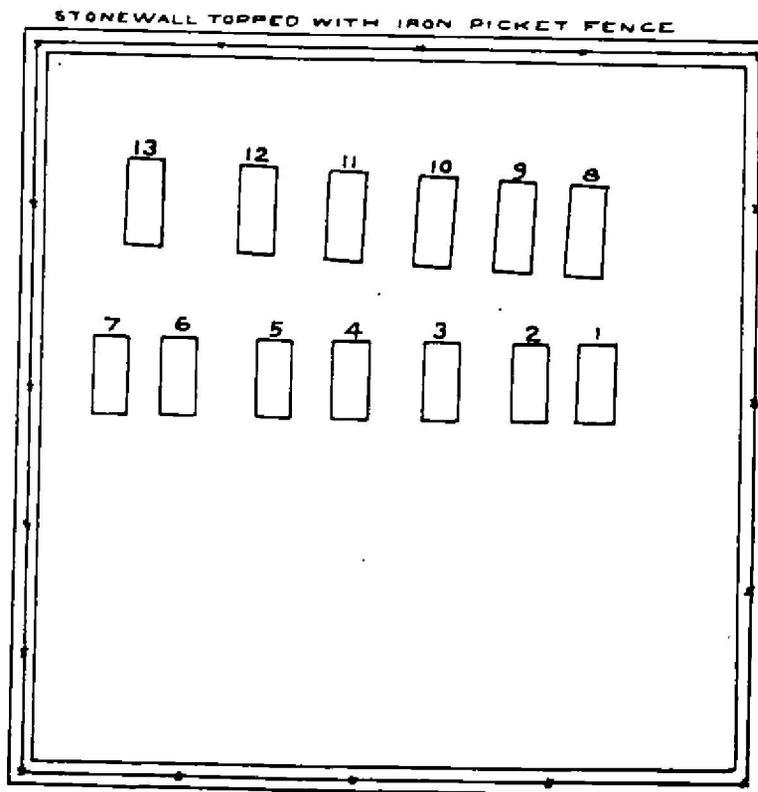
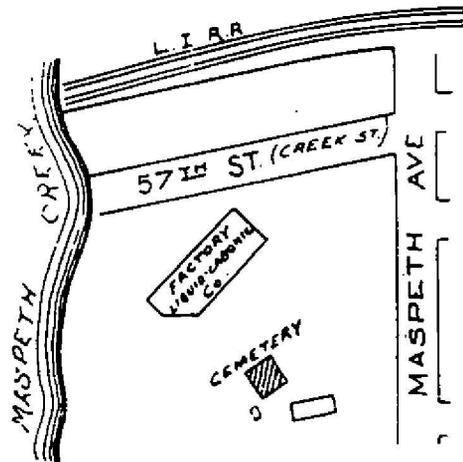
Copy of page from DESCRIPTION OF
PRIVATE AND FAMILY CEMETERIES IN
THE BOROUGH OF QUEENS.

Fig. 19

No. 9
MOTT CEMETERY
MASPETH
SURVEYED SEPT 19, 1919



SCALE.



Copy of page from DESCRIPTION OF
PRIVATE AND FAMILY CEMETERIES IN
THE BOROUGH OF QUEENS.

Fig.20

No. 9

LIST OF INSCRIPTIONS IN MOTT CEMETERY

No. 1. MARBLE (Good)

In Memory of MARIA M. HOBBY, who died
2nd mo 8th, 1877, aged 81 years and 9 days

No. 2. MARBLE (Good)

In Memory of ELIZA MOTT, who died April 1
1866, aged 73 years, 8 months and 7 days

No. 3. MARBLE (Fair)

In Memory of ESTHER W. MOTT, who died
March 20th, 1854, aged 64 years, 11 months
& 4 days.

No. 4. MARBLE (Fair)

In Memory of Doctr. HENRY MOTT, who died
12th Mo. December 17th 1839, aged 82 years,
6 months and 17 days

No. 5. MARBLE (Fair)

In Memory of JANE MOTT, wife of Doctr. Henry
MOTT, who died 4th Mo. April 12th, 1834, aged
72 years, 11 months & 4 days

No. 6. MARBLE (Fair)

In Memory of JOHN WAY MOTT, who died Oc-
tober 25th, 1827, aged 44 years & 6 days

No. 7. MARBLE (Fair)

In Memory of HENRY MOTT HOBBY, who died
September 25th, 1826, aged 4 months and 7
days.

No. 8, 10 and including No. 13 have MARBLE
HEADSTONES with no inscriptions

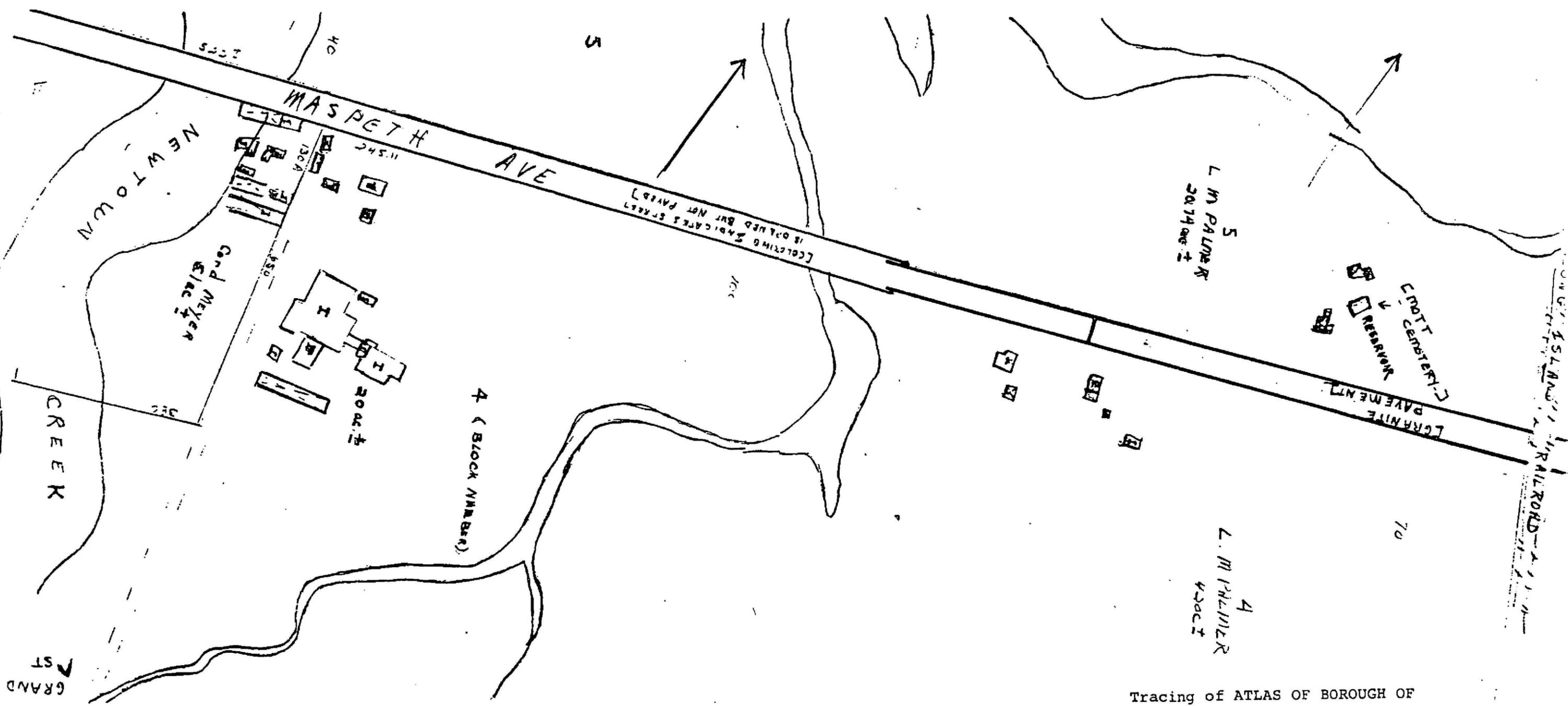


Copy of Photograph taken in 1927.

Way - Mott Farmhouse and Mott
Family Burying Ground.

Furnished by Vincent Seyfried

Fig. 21



Tracing of ATLAS OF BOROUGH OF QUEENS. E. Belcher Hyde. 1908
 Revised to 1912. Scale: 160'=1"
 Reduced 20%

Sub-Plan for 1908-1912 Belcher Hyde
Atlas. Scale: 300' = 1'

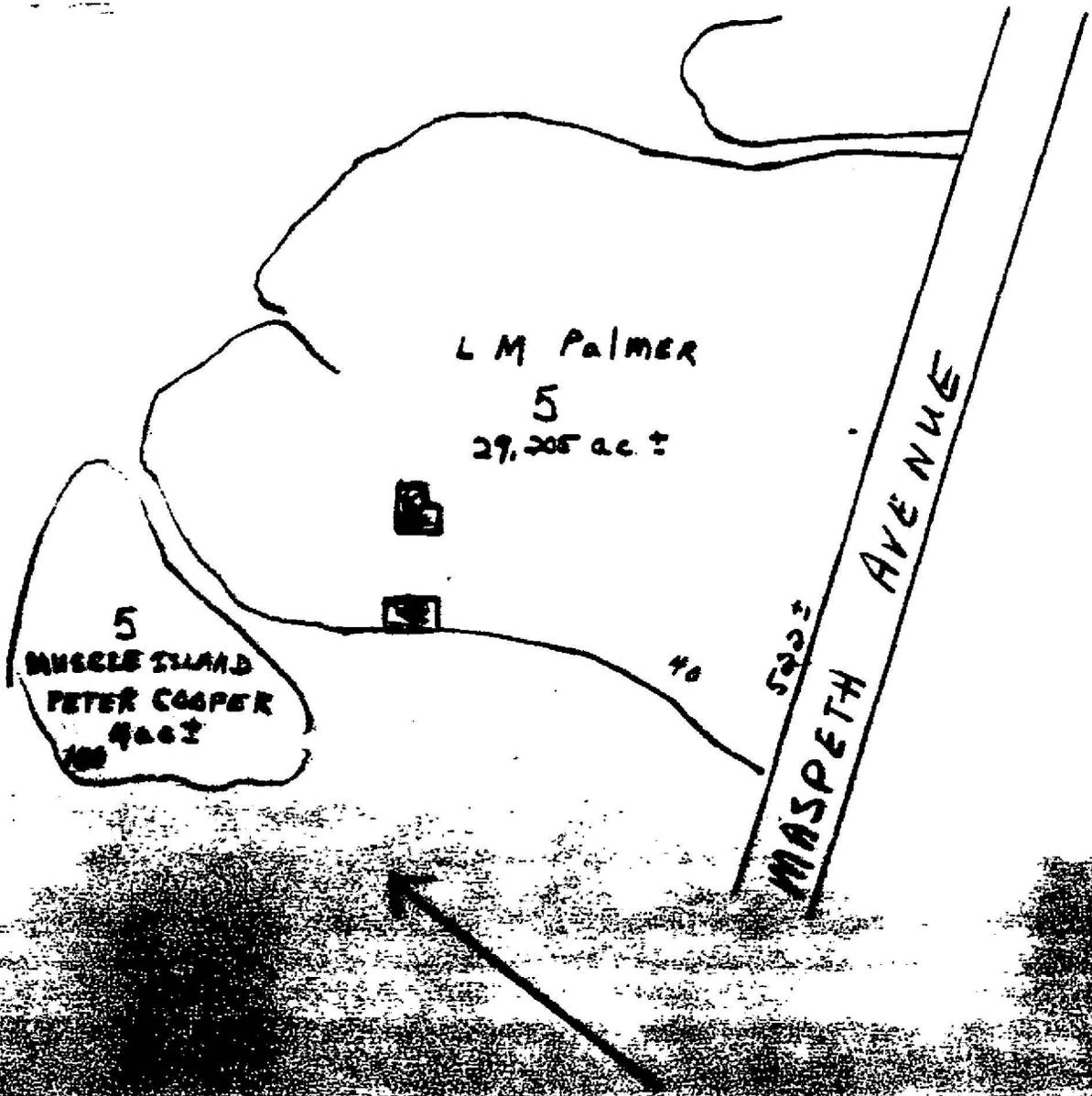
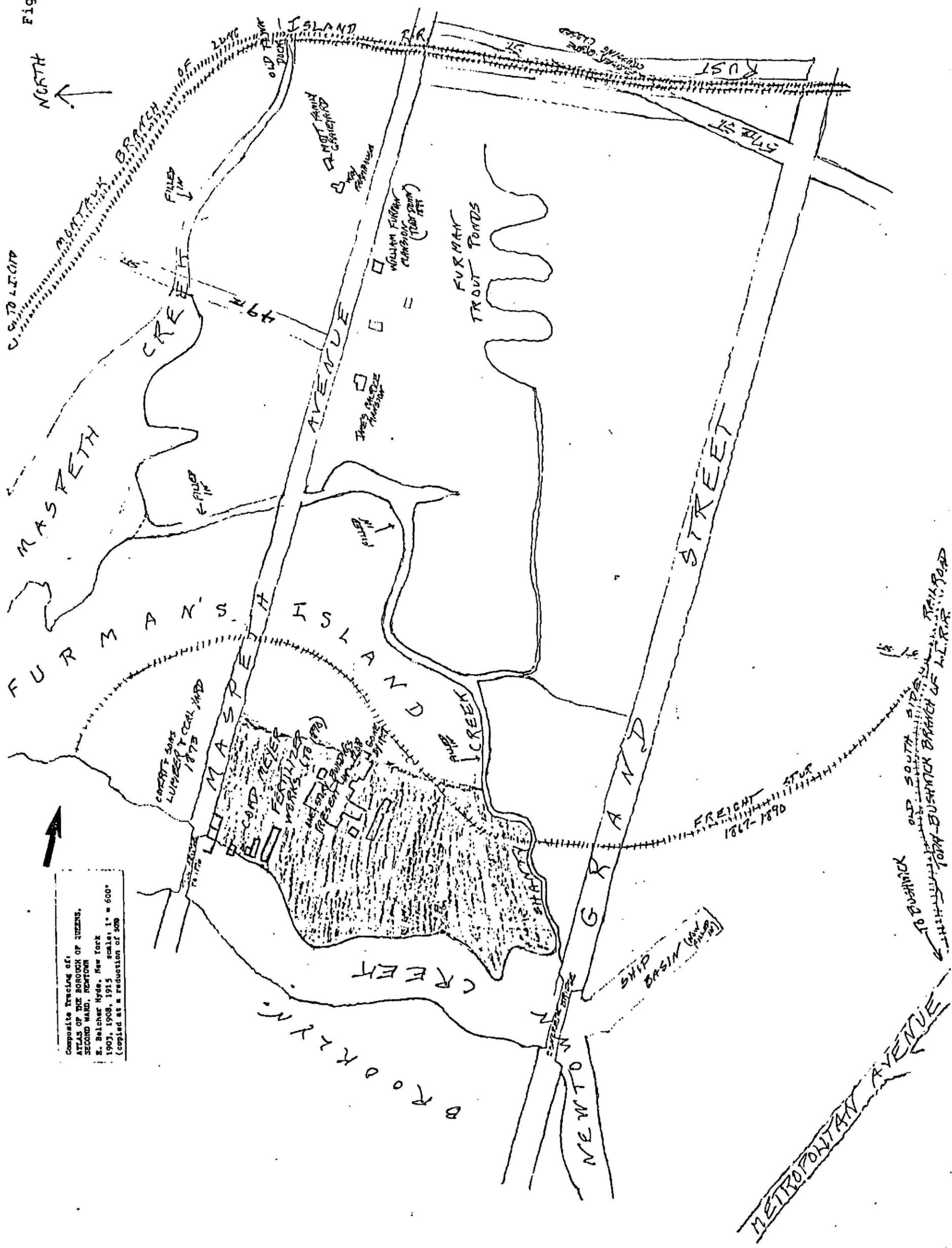


Fig. 23



Composite tracing of:
 ATLAS OF THE BOROUGH OF JERSEY,
 SECOND WARD, NEWTON
 E. Belcher Hyde, New York
 1903, 1908, 1915 scale: 1" = 600'
 (copied at a reduction of 50%)

Photograph courtesy of the Long Island Division
of the Queens Borough Public Library, Jamaica

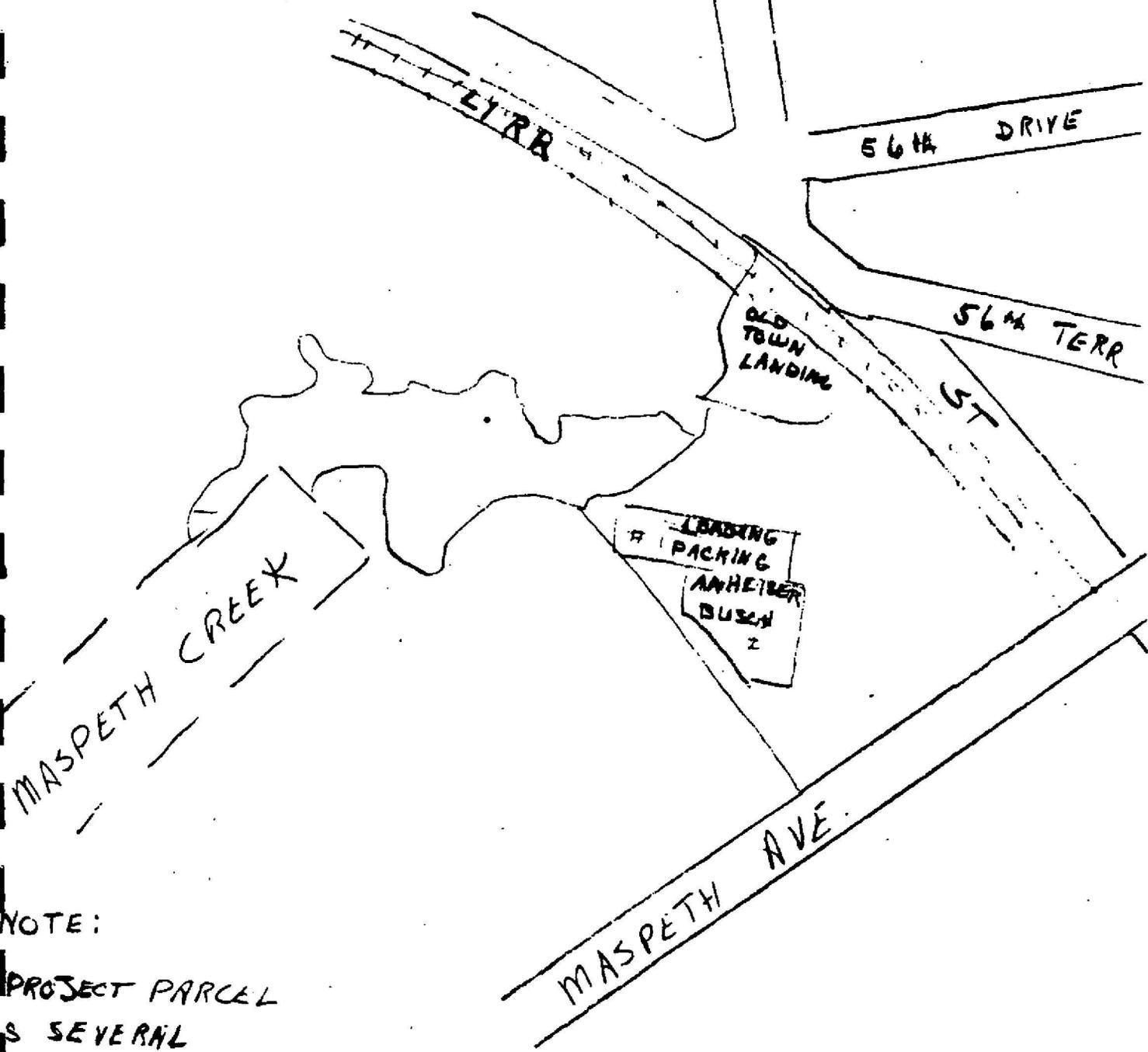
"Catalog of Photographs by Ralph Solecki - Long Island and
Environs, Local Archaeology"

Maspeth, Queens. De Witt Clinton house marker
at the end of Maspeth Avenue. 1938. Borden Avenue crossroad.



Fig. 25

Tracing of ATLAS OF THE BOROUGH OF QUEENS. E. Belcher Hyde. 1929 revised to 1954. Scale: 1"=160'

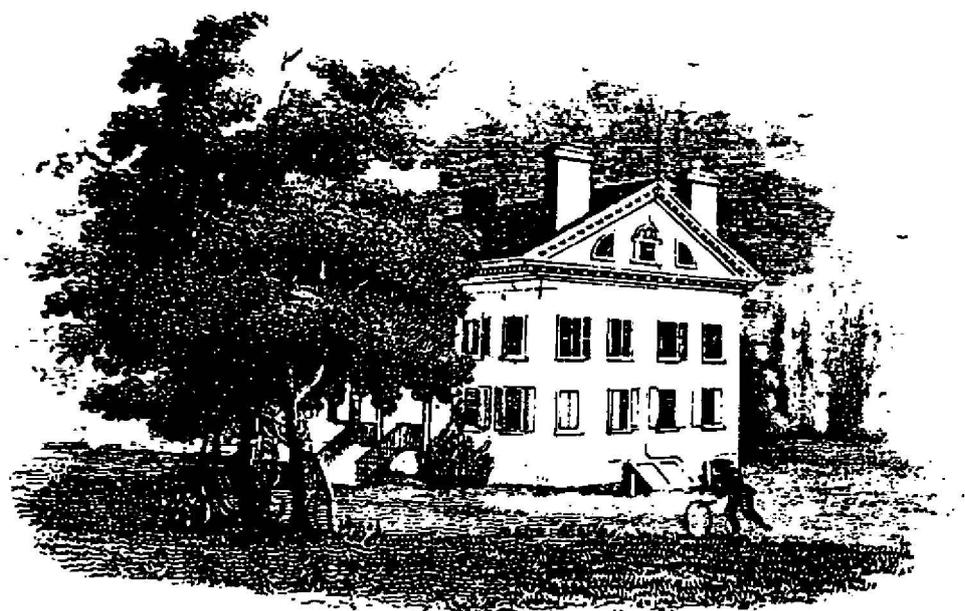


NOTE:

PROJECT PARCEL
S SEVERAL
BLOCKS

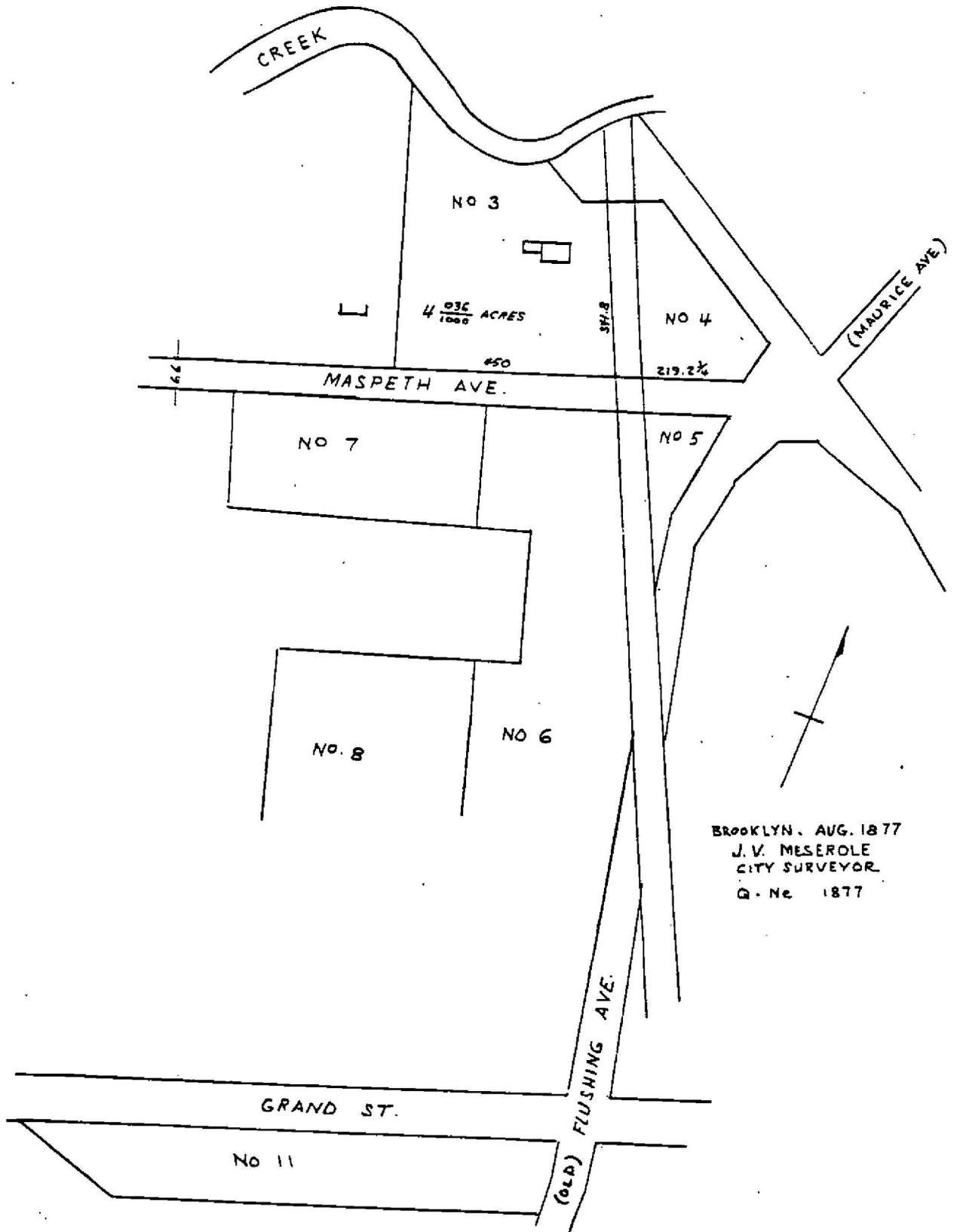
↙ SOUTH WEST

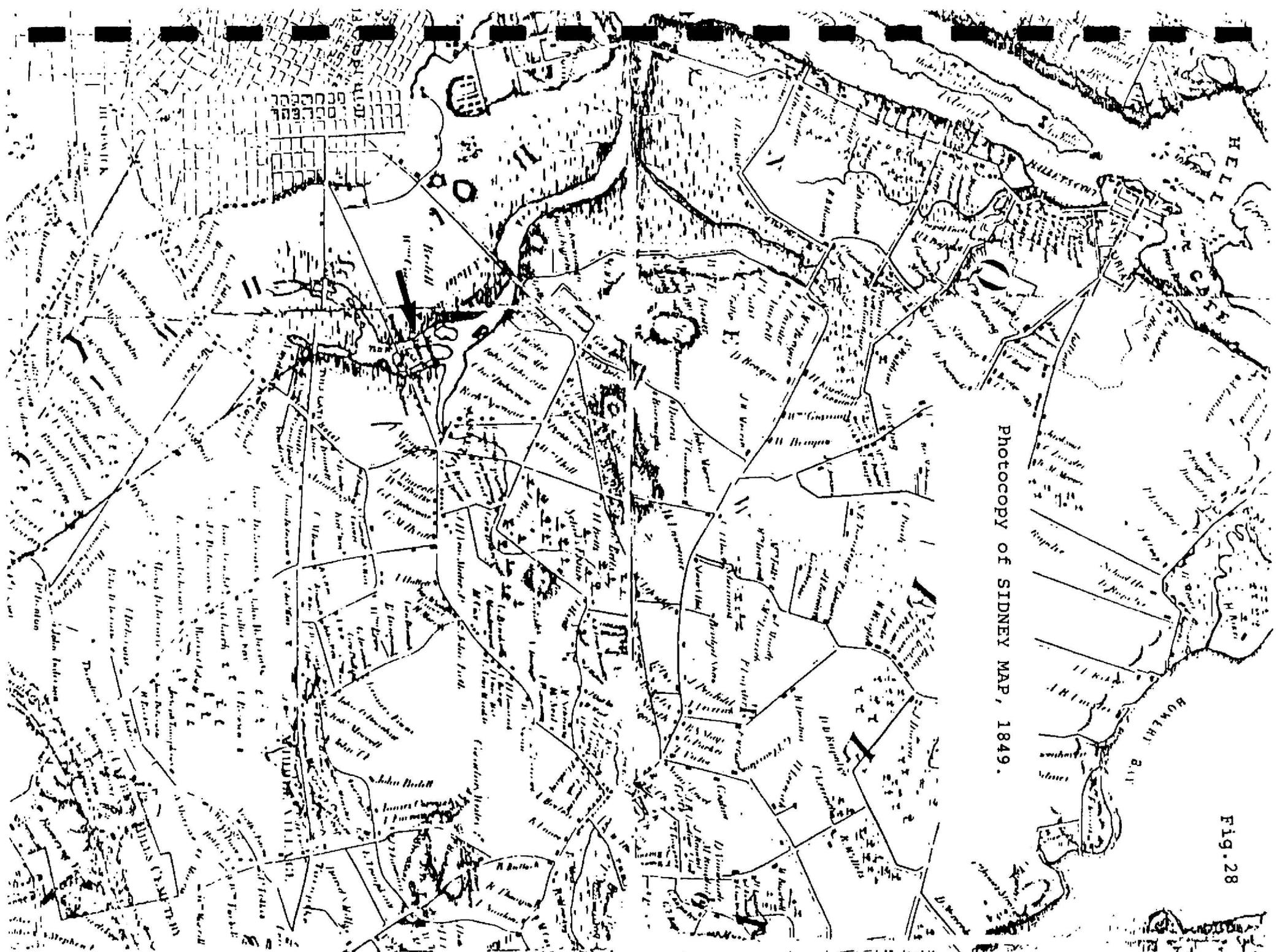
Copy of a drawing of the Garrit
Furman mansion on Maspeth Avenue.



Garrit Furman Copy

MAP OF
PROPERTY AT MASPETH
IN THE
TOWN OF NEWTOWN, L. I.
BELONGING TO THE
HEIRS OF GARRIT FURMAN, DECEASED





PHOTOCOPY OF SYDNEY MAP, 1849.

Fig. 28

Tracing of portion of 1852 Map by
James Riker

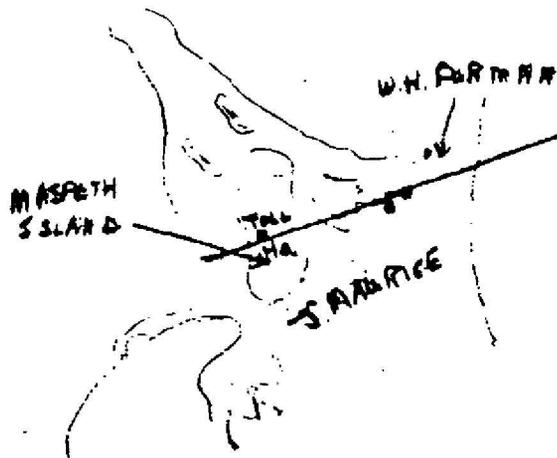
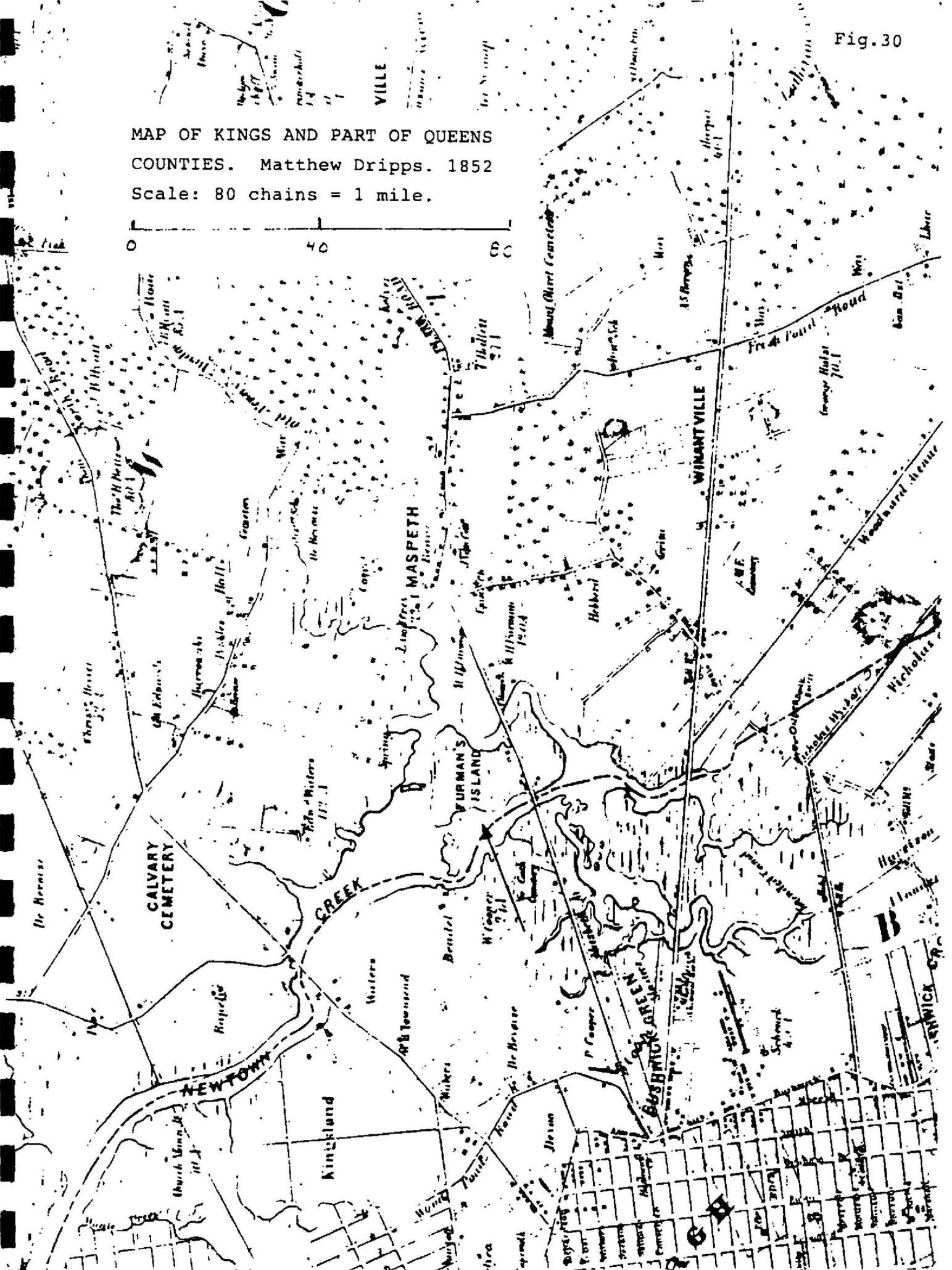
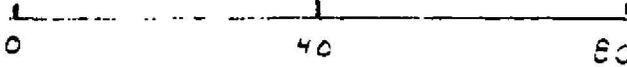


Fig. 30

MAP OF KINGS AND PART OF QUEENS COUNTIES. Matthew Dripps. 1852
Scale: 80 chains = 1 mile.





Tracing of ATLAS OF THE BOROUGH
OF QUEENS. E. Belcher Hyde. 1915
Scale: 1"=160' Reduced 20%

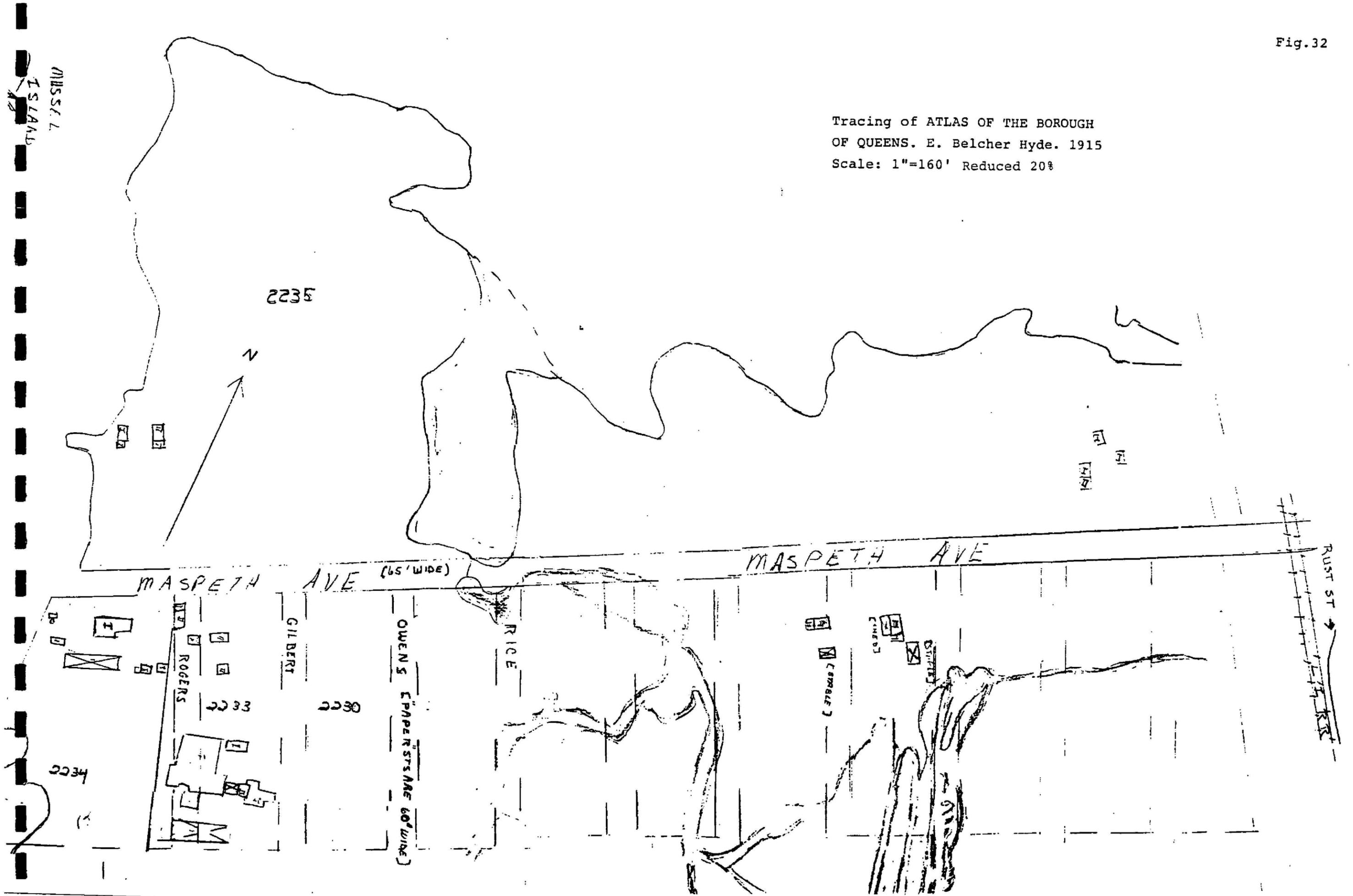


Fig.34

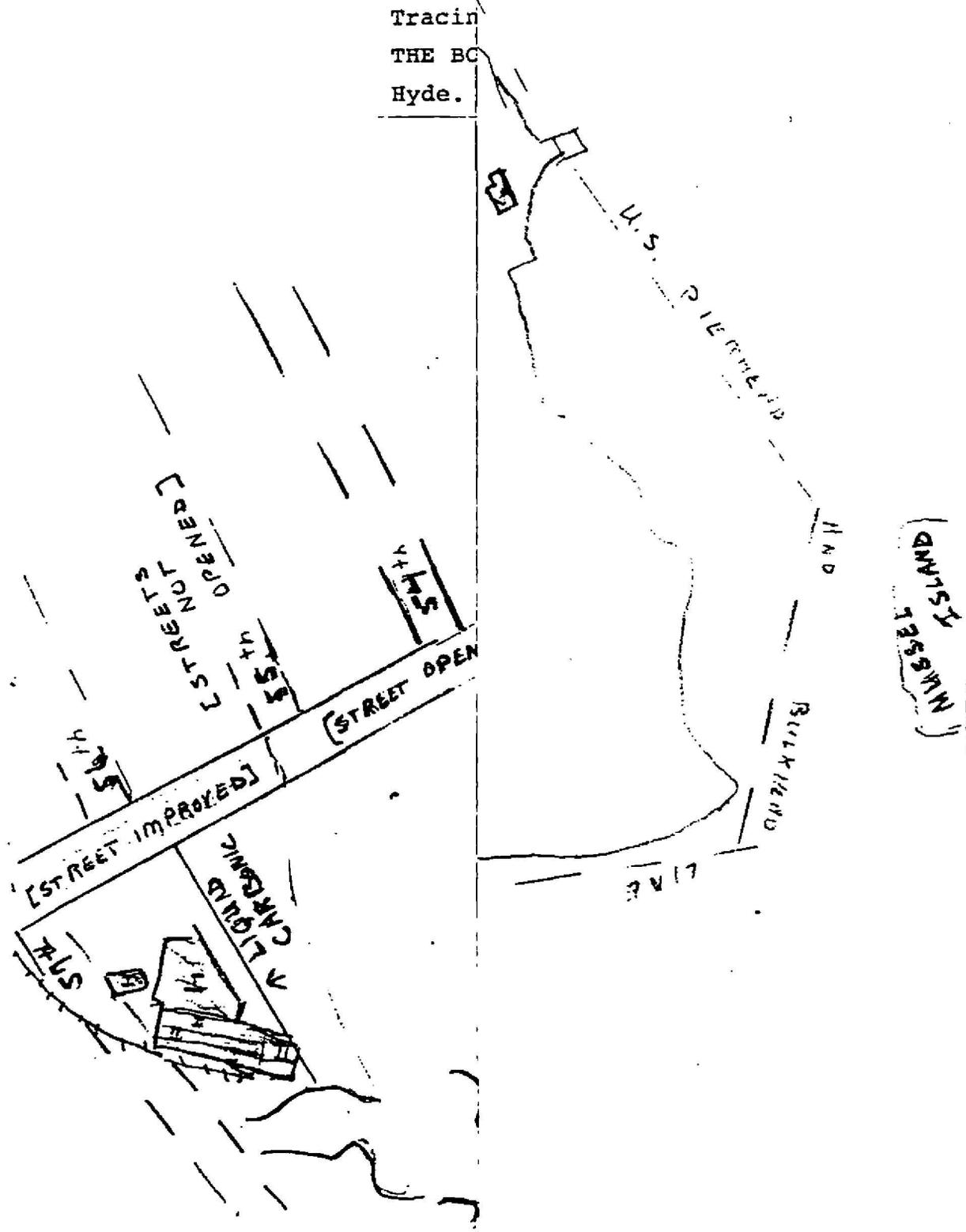
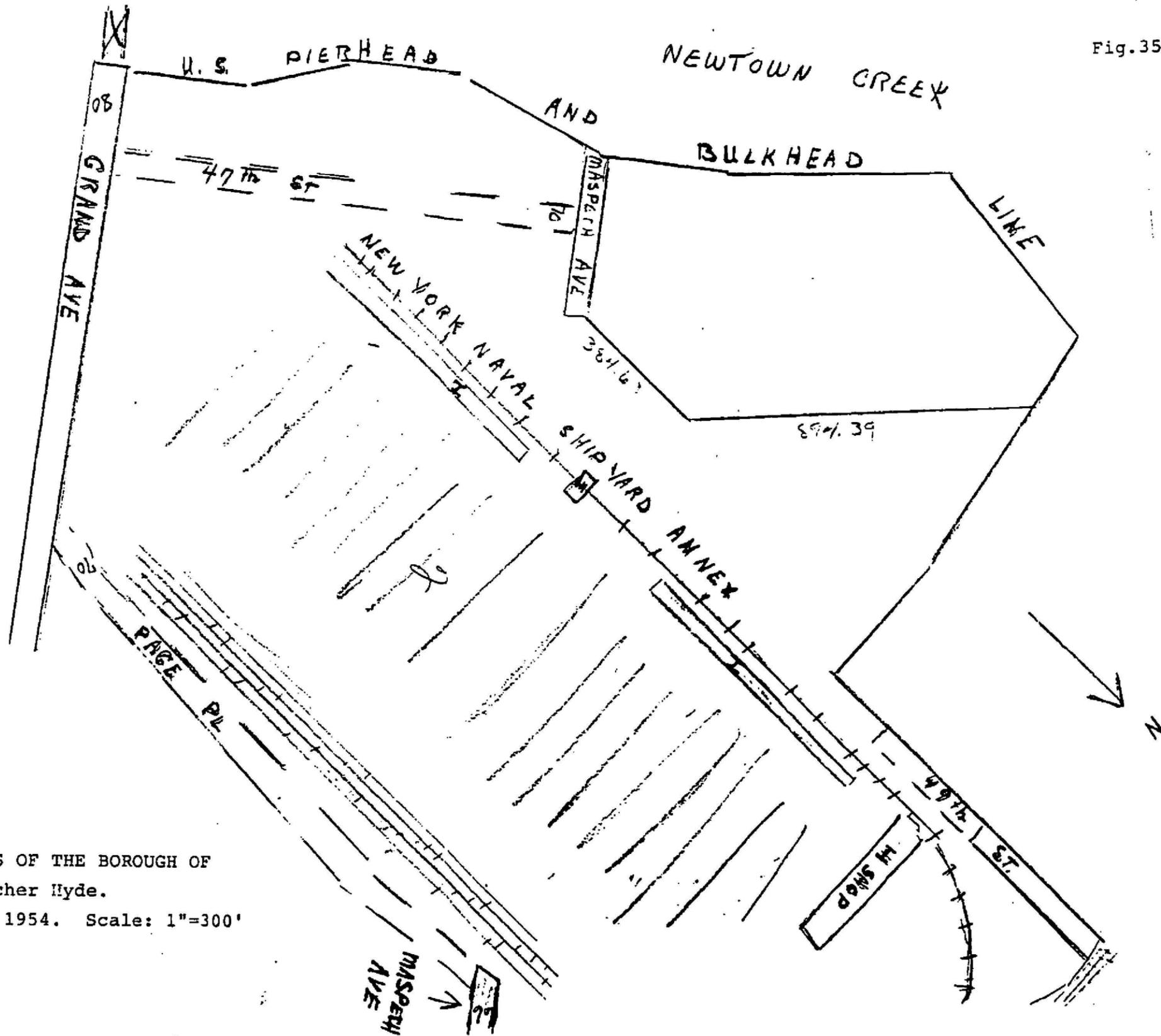


Fig. 35



Tracing of ATLAS OF THE BOROUGH OF QUEENS. E. Belcher Hyde. 1929 revised to 1954. Scale: 1"=300'

Copy of Photograph taken in 1923.
Looking West to Maspeth Avenue on
Brooklyn Shore from Furman's Island.
Furnished by Vincent Seyfried



Fig. 36

Copy of Photograph taken in 1929
The Queens End of Maspeth Avenue
Looking to Old Bridge Abutment and
Brooklyn from Furman's Island.
Furnished by Vincent Seyfried



Fig. 37

SEASON OF 1887.



THE "ACME" FERTILIZERS
ARE THE
Leading High-Grade
Complete Manures,

Endorsed by all Prominent Market Gardeners.

Its practical use a guarantee of abundant crops.

OUR ESTABLISHED HIGH STANDARD MAINTAINED.

GUARANTEED ANALYSES.

SUITABLE FOR	PERCENTAGE		
	Ammonia	Available Phos. Acid	Actual Potash
No. 1.—Potatoes, Peas, Beans, Tomatoes, Hops, Strawberries, Melons, Asparagus, Cucumbers, Squashes, Buckwheat, etc.	4 to 6	8 to 9	9 to 10
No. 2.—Cabbage, Corn, Wheat, Rye, Oats, Onion, Cauliflower, Turnips, Tobacco, Beets, Carrots, etc.	5 to 6	8 to 9	5 to 6

THE "ACME" FERTILIZERS IN THE LEAD.

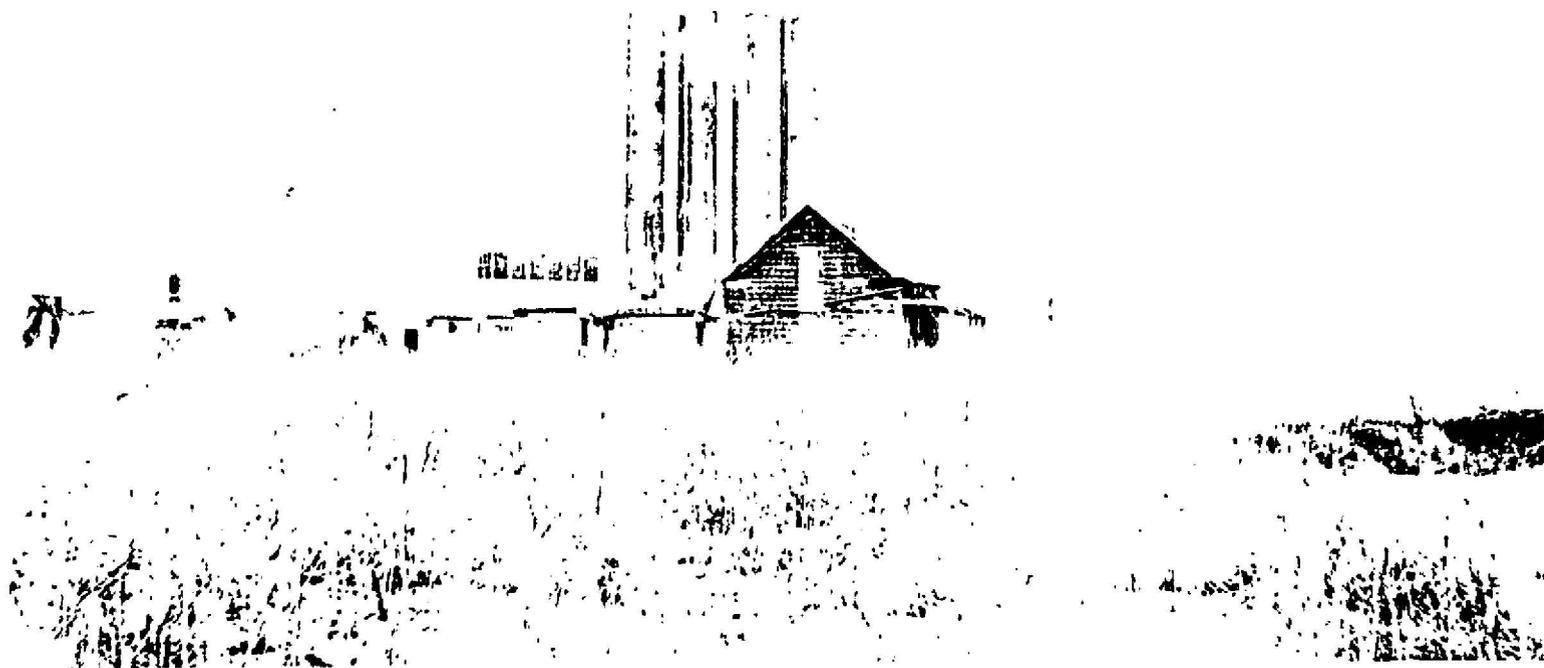
Reports from the Agricultural Experimental STATIONS in Connecticut and New Jersey, in 1886, show our goods to have a HIGHER agricultural value than any brand on the market.
 IN NEW JERSEY OUR "ACME" No. 1. received the HIGHEST VALUATION of any brand analyzed, there being one hundred and forty, (140) samples analyzed, representing the products of fifty-four (54) manufacturers.
 In Connecticut our "ACME" No. 2 received the HIGHEST VALUATION of any complete Manure there being sixty (60) brands representing the products of twenty-nine (29) manufacturers. Our "ACME" No. 1 stands fourth on the list out of sixty brands analyzed.
 The above samples were drawn by Station Agents, from stock on sale with dealers, and the reports being official, practically demonstrate our claim of superiority.

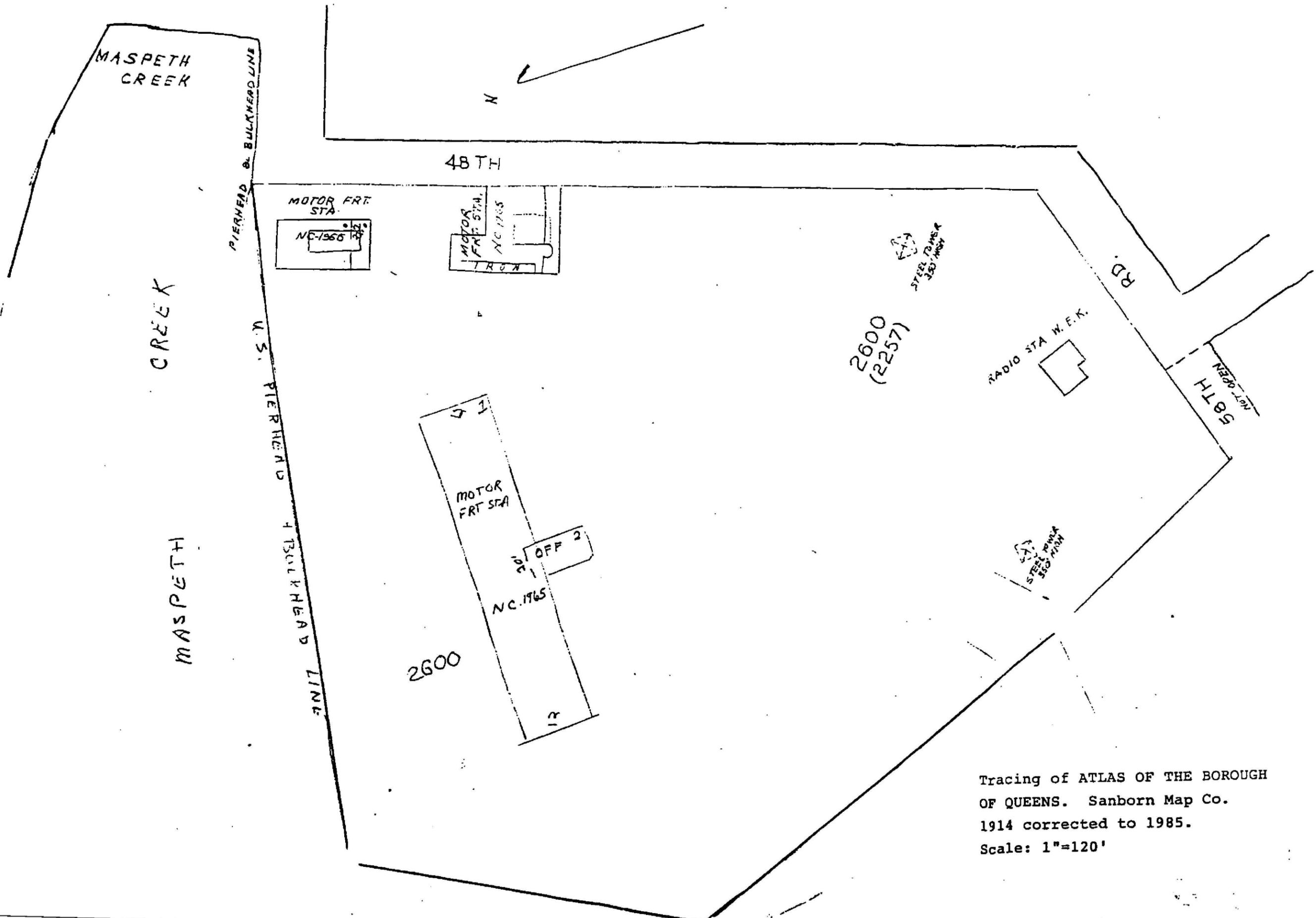
DITMARS ELDERT, . . . RICHMOND HILL.
 GENERAL AGENT FOR KING AND QUEENS COUNTIES.

MANUFACTURED BY
C. MEYER, JR.
 P. O. Box 26, MANHATTAN, L. I.

Don't Fail to send for our Descriptive Catalogue for 1887.

Copy of Photograph taken in 1923.
Looking east toward Way-Mott
farmhouse and the Liquid Carbonic
Corp. plant on 57th Street.
Furnished by Vincent Seyfried.





Tracing of ATLAS OF THE BOROUGH OF QUEENS. Sanborn Map Co. 1914 corrected to 1985. Scale: 1"=120'

Figure 41

Photograph courtesy of Vincent Seyfried

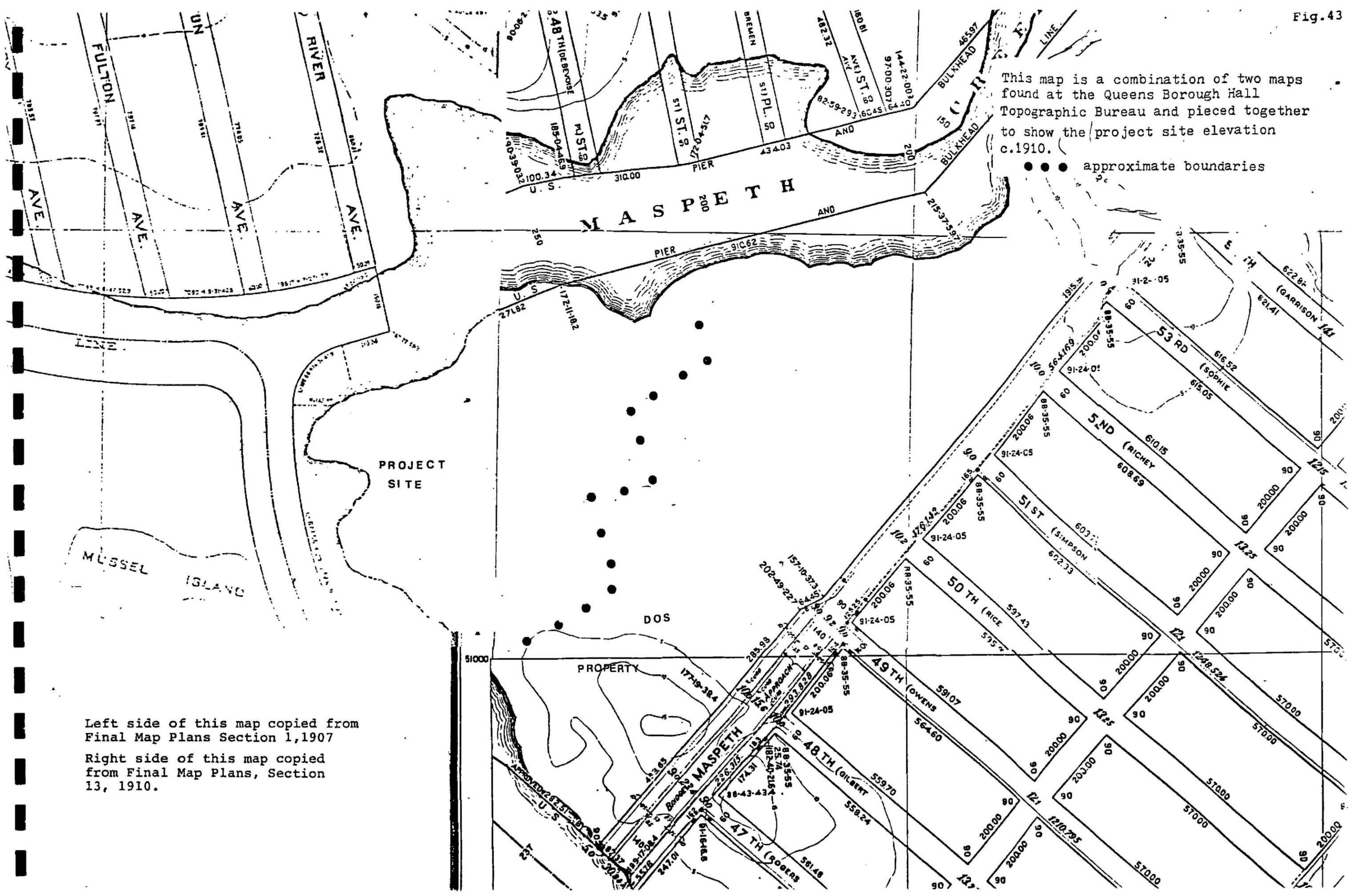
"Looking from Furman's Island along Newtown Creek on May 12, 1884"



Photo copy supplied by V. Seyfried

Note elevated knoll and original line of Maspeth Avenue which lie to the south of the project site.





Left side of this map copied from Final Map Plans Section 1, 1907

Right side of this map copied from Final Map Plans, Section 13, 1910.

Tracing of
ATLAS OF THE BOROUGH OF QUEENS, NEW YORK CITY
E. Belcher Hyde, New York
1928, updated to 1973
Volume 2A, plate 28

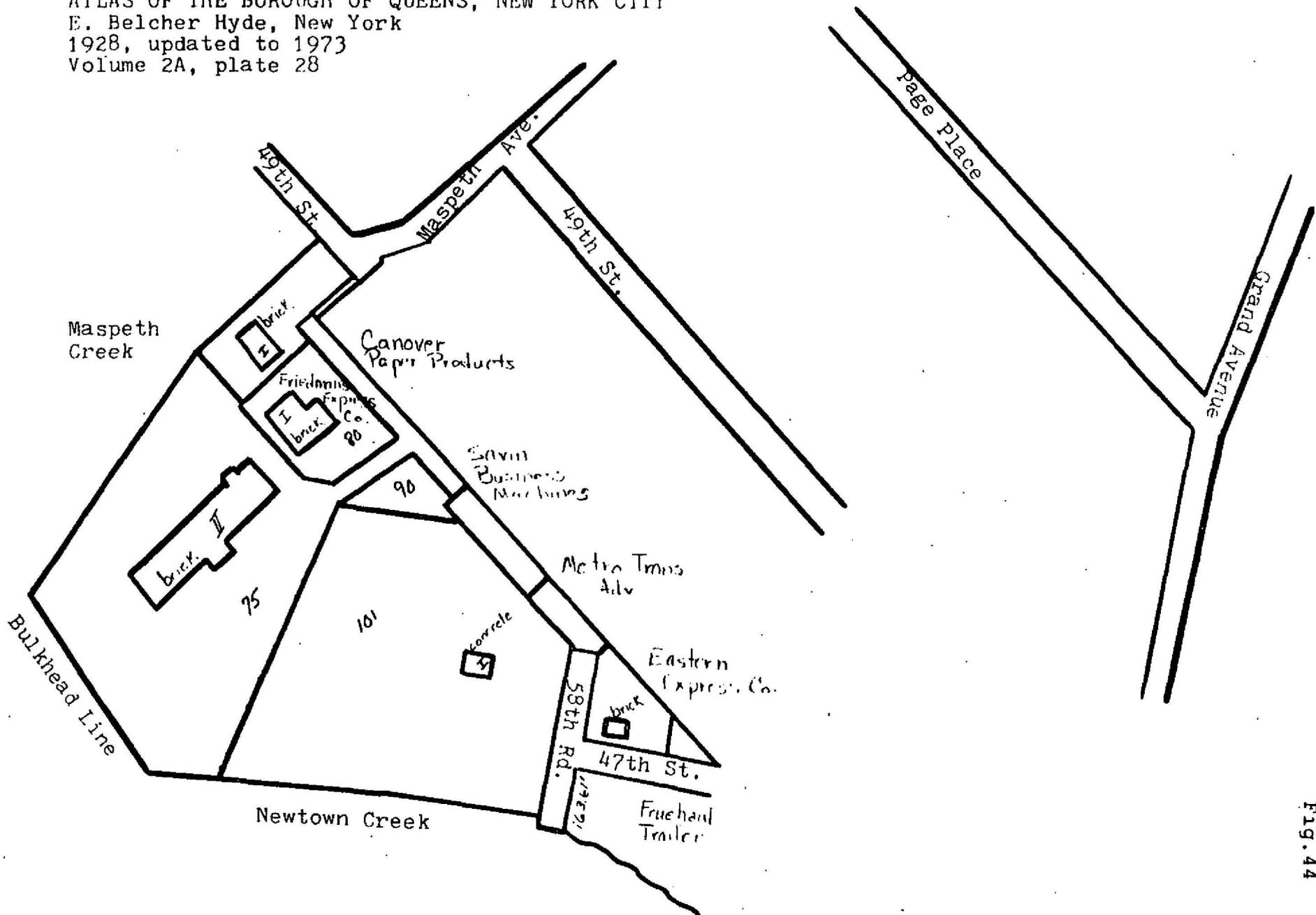


Fig. 44