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LANDMARKS PRESERVATION
COMMISSION

BOARD OF EDUCATION: SCHOOL SITE 8

CEQR No. 88-130Q

ARCHAEOLOGICAL
SOIL BORING
STUDY

579

ARCHAEOLOGICAL SOIL BORING STUDY FOR NEW YORK CITY BOARD OF
EDUCATION SITE #8

Evaluation of Existing Soil Boring Logs and Results of Soil
Borings Taken in June, 1989

In agreement with the recommendations of a Phase 1 Archaeological Assessment Report submitted in December of 1988 by Historical Perspectives, Inc. (HPI), the New York City Landmarks Preservation Commission (LPC) directed that a soil boring study be performed in order to obtain information which could help to determine the potential for significant prehistorical cultural remains to exist below the fill overburden on Block 2452, a Board of Education site, in Queens, New York. (Figure 1) For a full history of the site and the rationale of HPI's conclusions and recommendations, the reader is referred to Archaeological Assessment Report for the Board of Education School Site 8, Queens Boulevard, Ireland and Hillyer Streets, CEQR 88-1300 on file at LPC.

The purpose of the soil boring study was to determine whether or not field testing for archaeological resources is necessary. Three borings were taken on June 12 and the following report details the results. Three loci had been selected for borings based on a number of factors including previous boring locations, areas of known prior disturbance, and portions of the site which will and will not be impacted by school construction. Figure 2 shows the proposed boring locational plan and Figure 3 shows, based on construction documentation, areas of the site where severe subsurface disturbance is known and areas where the amount of disturbance could not be precisely documented. Figure 4 shows the actual locations of the June borings as well as some pertinent earlier borings.

Boring 1-1 was taken in the northwest section of Lot 12. (Photo 1) Because of the known minimum depth of fill overlying the entire site, the first 4 feet (well above the interface of fill and natural soils) were augered through. Thereafter, 2 feet samples were extracted with a 3½ inch spoon. The first 8½ feet below grade were composed of various levels of fill with the intrusion of a thin dark gray clay lens at approximately 7 feet. From 8½ to 12 feet, where the boring was discontinued, the material was grey-brown medium-fine soil with some silt and some decomposing rock. This naturally occurring stratum has a

Munsell classification of 7.5yr 5/0. Ground water was noted at approximately 10 feet below grade. (Photo 2)

The southeast corner of Lot 1 was the location of Boring 1-2. An auger was used for the first 4 feet below grade. From 4 feet to 8 feet 2 inches, the fill was an unconsolidated brown sand matrix containing fill such as metal, glass, and tire rubber. It had a very strong gasoline odor. From 8 feet 2 inches to 8 feet 11 inches (9 inches thick) there was a level of black organic material (2.5yr 2.5/0). Twigs were clearly visible, but it was not dense root material. From about 8 feet 11 inches to 10 feet was a transition layer containing some organic material ending with water worn pebbles which overlaid the omni-present gray, medium sand down to 12 feet where the boring was discontinued. Ground water occurred at approximately 8 feet 9 inches below grade.

The boring slated for the southern portion of Lot 16 could not be taken because that area is currently covered with derelict cars and surrounded by a sturdy chain-link fence. (See Photos 3 and 4.) The location was moved further west on Lot 16, still within both the impact zone of the school construction plan and the potentially sensitive portion of the site. (Figure 4) The first 5 feet - known to be fill - were augered through. The sample from 5-7 feet contained relatively clean medium brown sandy fill. Of the 7-9 feet sample, the first 8 inches were fill containing, for example, wood and ceramic. The recovered material from 7 feet 8 inches to 9 feet was gray-brown medium-fine sand with some silt (7.5yr 5/0). The boring was discontinued at that point because this stratum is the natural soil which occurs throughout the site below fill and - in a few instances - below organic levels. Ground water appeared to be at approximately 9 feet below grade.

Since 1947, four sets of soil borings have been taken on this site and one set a block east. They total 34 borings. There was significant variation in the parameters of data recording among them. Also, unfortunately for archaeological purposes, the most extensive series - 19 borings taken in 1989 - did not use a continuous sampling technique. Only the 1947 series mentioned organic material, with 2 entries labeled "bog." One of them was quite near B 1-2 in this series, and the other was near Queens Boulevard in the middle of the block. (Figure 4) The surface of the site is level, so grade was used as a common reference. An average of 7 feet of fill (the known range is 5-8 feet) has been deposited episodically during

the historic era. Below the fill are naturally occurring strata of silty sand over clay over sand and gravel over bedrock. Organic material was noted in only 3 borings; two of them were close together, but the other further north towards Queens Boulevard. The layer is no more than 12 inches thick and its horizontal extent is either quite small or very erratic. (It is possible that organic material might occur in the southwest sector of the block; that area was not tested in the recent series because it is outside the impact zone of proposed school construction.) The ground water table fluctuates and has been recorded at a range of 7-10 feet below grade. That is, it is at or near the juncture of landfill and naturally occurring soils.

Therefore, one can re-construct the prehistoric topography of the site with some assurance by extrapolation from existing data, despite some gaps in the record. The fact that the water table is at or near the juncture of fill and natural soils coupled with the fact that there is no significant variation in the thickness of the landfill stratum, suggests a low-lying flat area. It was probably swampy or possibly contained a shallow pond (organic material) whose surrounding banks sloped gently upward towards the north side of Queens Boulevard. As can be seen on Figure 1, a 1906 topographic map, there is a distinct slope which continues north of Queens Boulevard.

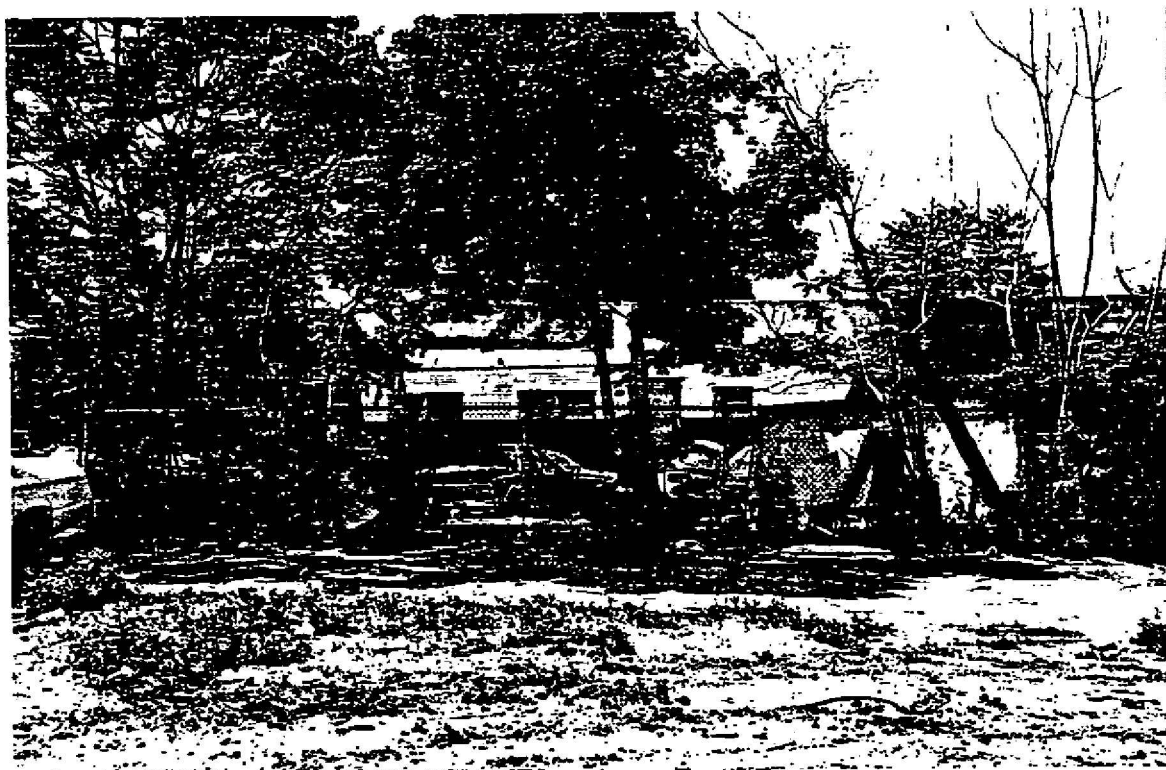
It is certainly possible that prehistoric peoples hunted and foraged on the site for wetland resources such as water fowl and tuberous grasses. However, it is doubtful that it would have functioned as a camp/village site or burial locus because of its low-lying position. Instead, any significant occupations would have taken place on the elevated area north of the project parcel.

Conclusion and Recommendation

Although it is possible that archaeological excavations might reveal random artifacts from aboriginal activities, it is not likely that a habitation or mortuary site would have been on the block. To test the original ground strata would involve the expense and danger factors of excavating in water-logged sites; firm indication of significant resources being found is too tenuous to warrant such efforts. It is recommended that archaeology no longer be an issue at the Board of Education Site #8.



Photographs 3 and 4: Looking east and south, respectively, toward Lot 16.



Photograph 1: Borings being
taken at BoE site #8.
June 12, 1989.

Photograph 2: Close-up of
natural soil stratum
underlying fill.

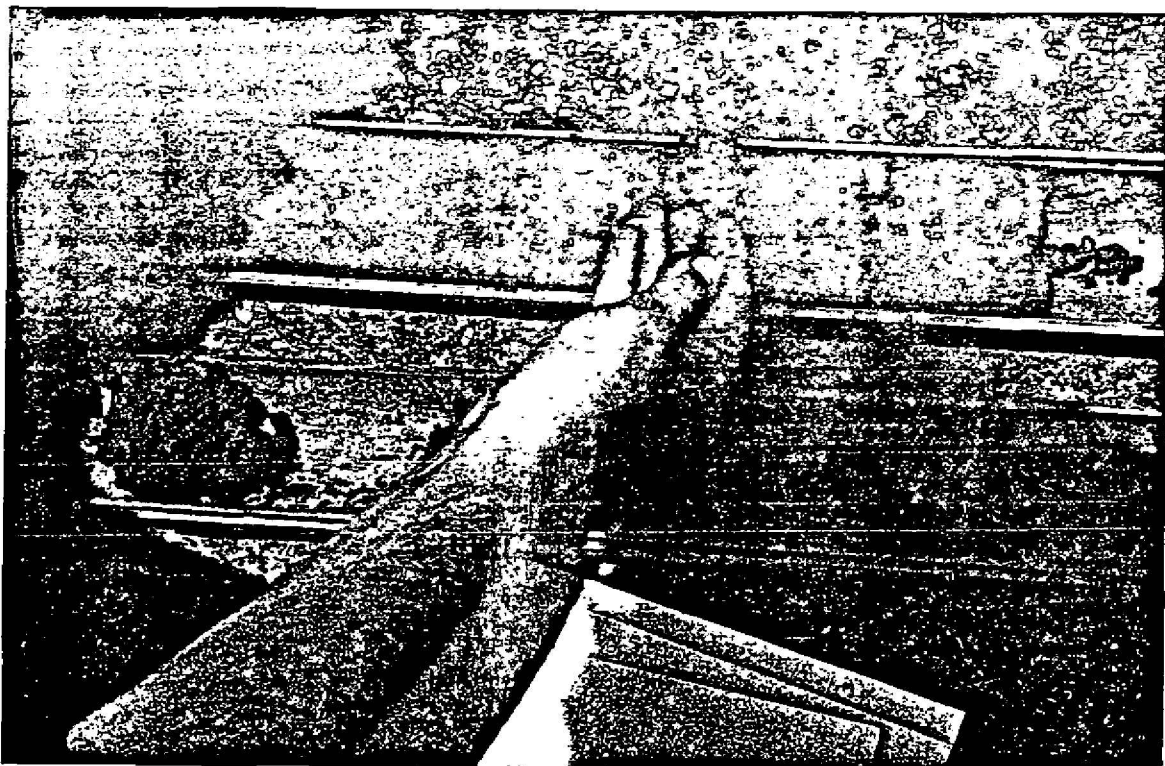
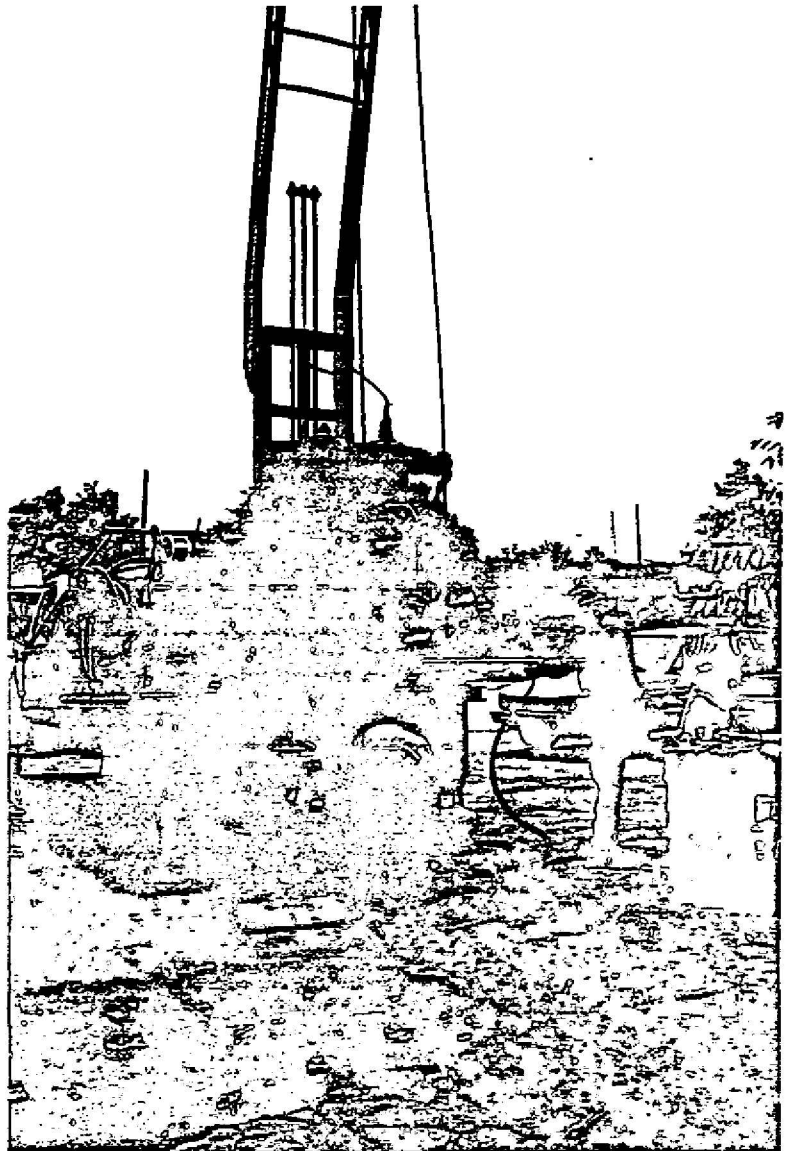
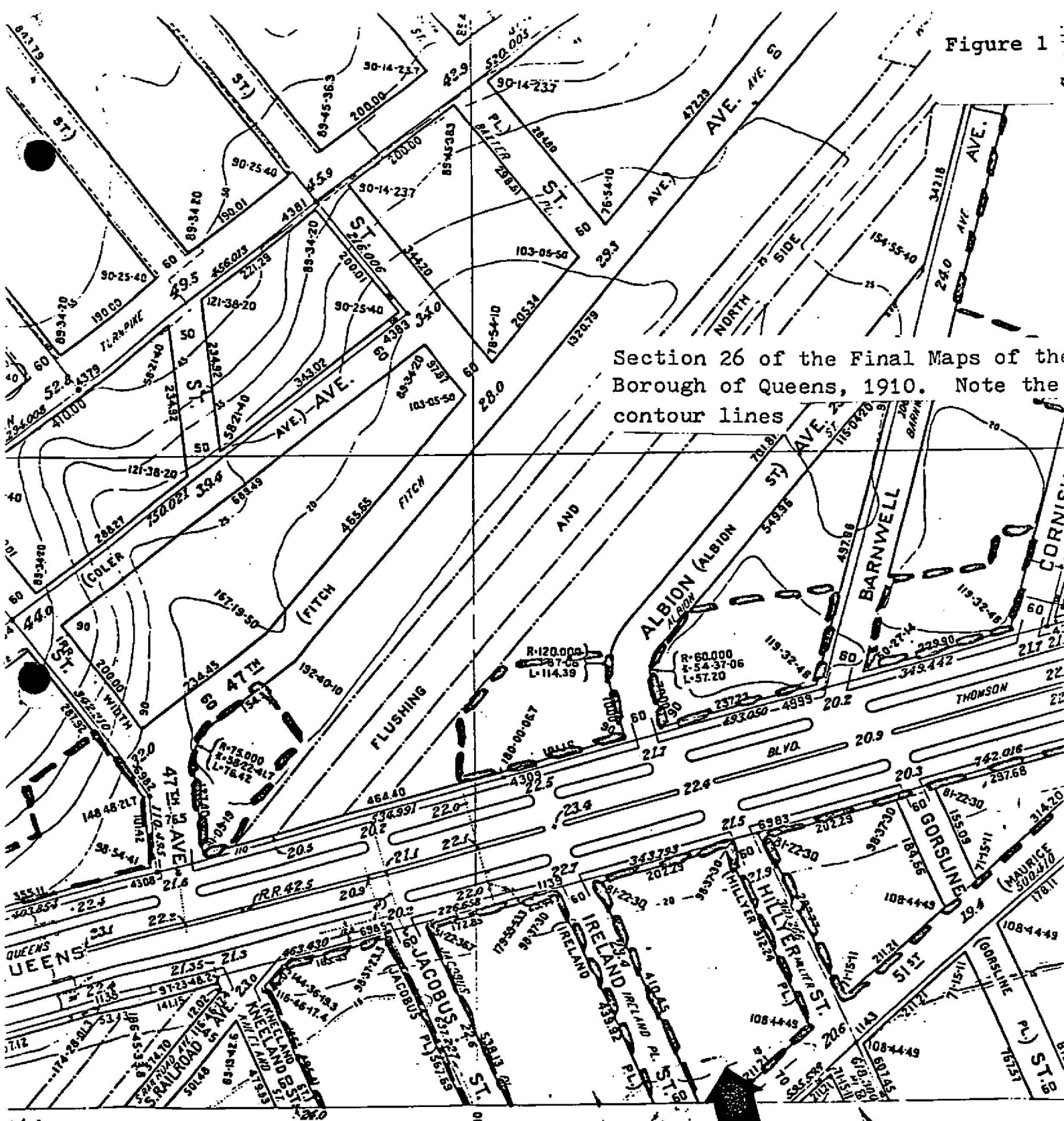


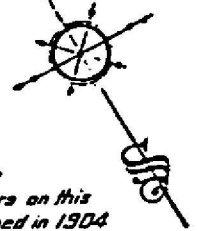
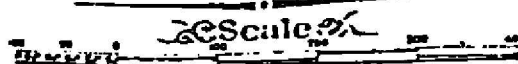
Figure 1



Section 26 of the Final Maps of the Borough of Queens, 1910. Note the contour lines

etc
is indicated with reference to a
collectively.
25' above U.S. Coast & Geodetic
intersections of center lines of
and are shown thus: 5.0
shall thus ===== included within
and are ultimately to be discontinued

CITY OF NEW YORK
Office of the President of the Borough of Queens
Topographical Bureau



Note
Data for contours on this
map was obtained in 1904

NEW YORK CITY BOARD OF EDUCATION PROPOSED SCHOOL SITE #8
BLOCK 2452, IRELAND AND HILLYER STREETS, QUEENS

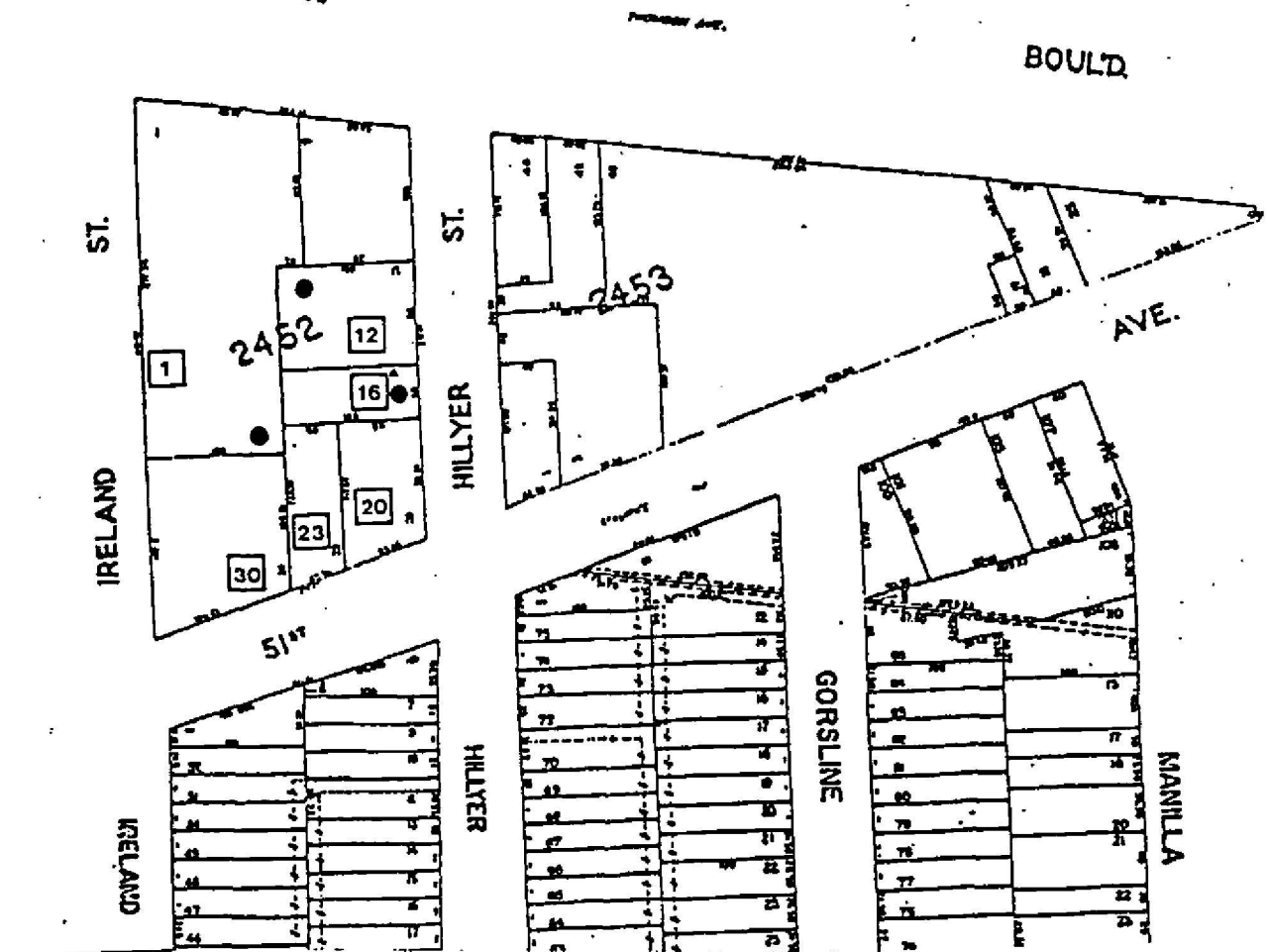


ARCHAEOLOGICAL ANALYSIS OF SOIL BORING TESTS

Archaeological Consultant: Historical Perspectives, Inc.

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QUEENS



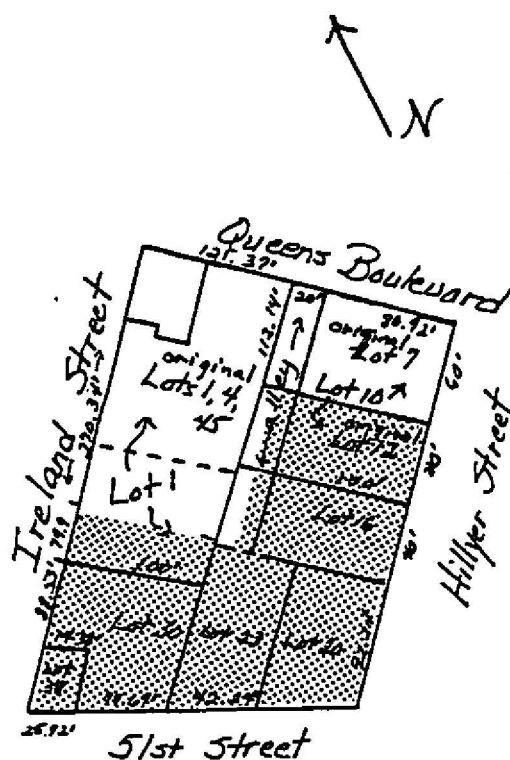
□ Lot Numbers


● Approximate location of necessary borings.

Figure 3

Archaeological Sensitivity Map:
based on documented construction histories

(Schematic, not-to-scale, measurements given.)



 Lots or portions of lots that have not been adversely impacted during historical times based on documented construction histories.

GENERAL BORINGS, INC. STRAITSVILLE RD., PROSPECT, CT

SOILS CLASSIFICATION SYSTEM

<u>DESCRIPTION</u>	<u>FROM</u>	<u>TO</u>
BOULDERS	8"	+
COBBLES	2 1/2	8"
COARSE GRAVEL	1"	2-1/2
MEDIUM GRAVEL	3/8"	1"
FINE GRAVEL	2 mm	3/8"
COARSE SAND	0.5 mm	2 mm
MEDIUM SAND	0.25 mm	0.5 mm
FINE SAND	.125	0.25 mm
VERY FINE SAND	0.62	.125
SILT CLAY	LESS THAN 0.62	

PROPORTIONS USED .

TRACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50%

EXAMPLES -

"BROWN FINE SAND
MEDIUM GRAVEL"

EQUAL AMOUNTS OF SAND AND GRAVEL

"BROWN MEDIUM TO
FINE SAND AND GRAVEL"

SAMPLE PREDOMINANTLY SAND
WITH 35 TO 50% GRAVEL

"SOME SILT"

20 TO 35% SILT

"BOULDERS"

VARIOUS PERCENTAGES.

