Block 8218, Lot 26

Brooklyn, New York

Scope of Work for Archaeological Testing

Prepared for the New York City

Department of General Services Division of Real Property

Prepared by Joan H. Geismar, Ph.D.

August 27, 1987

TABLE OF CONTENTS

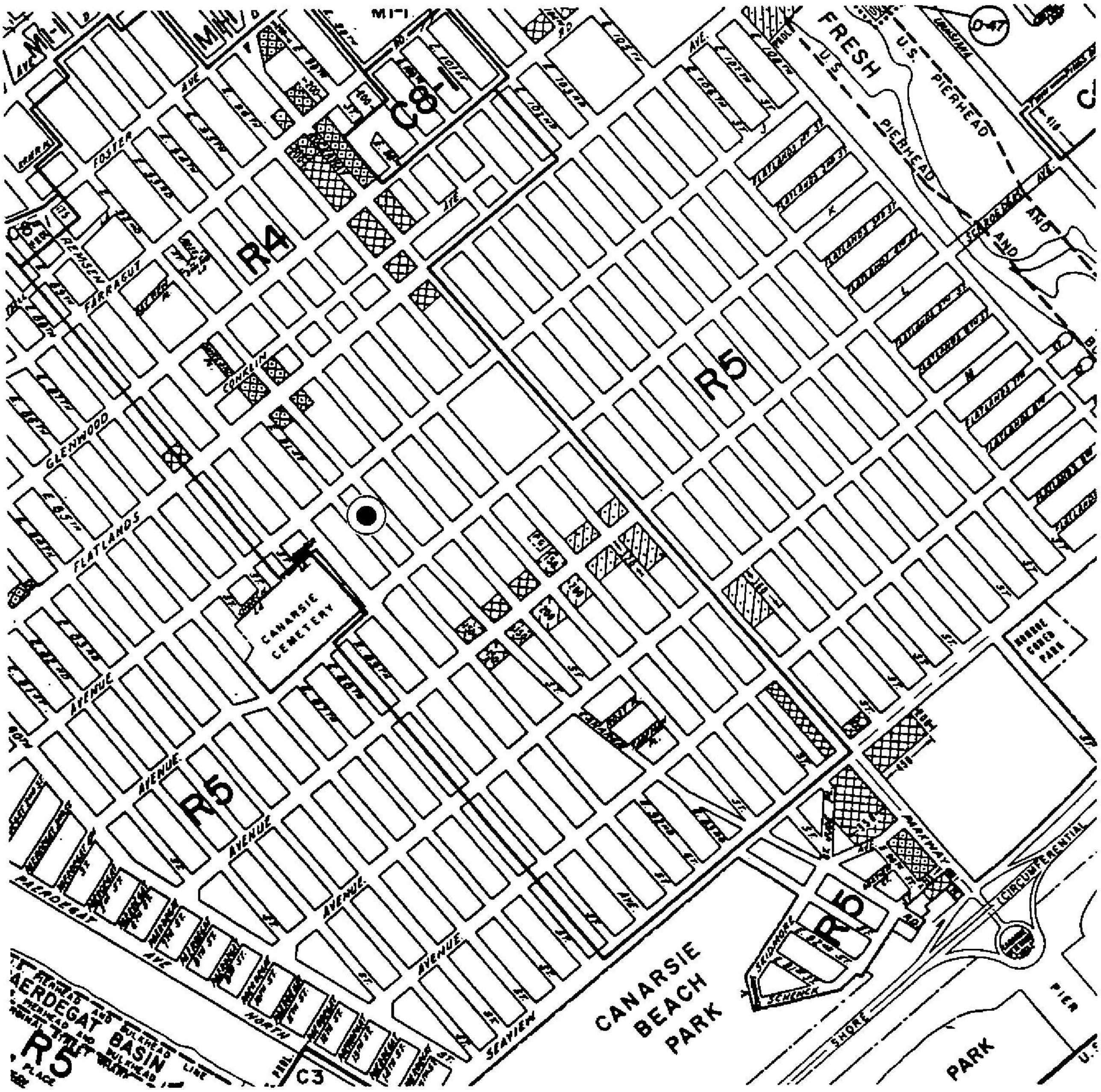
INTRODUCTION

This scope of work for archaeological testing of Block 8218, Lot 26 in Brooklyn (Figure 1) was prepared for the New York City Department of General Services, Division of Real Property. It was prepared to fulfill Task B of the RFP distributed on May 1, 1987, and cited as a separate document in a contract dated May 27, 1987. It is intended to provide a viable field program to determine the presence or absence of burials identified in prior documentation (Geismar 1987) and locate these grave sites..

Research established that the project site, known historically as "Old Cemetery" and more recently as "Indian Cemetery," comprised approximately one half of a burial ground that functioned at least from 1846 until 1907. However, due to clearing, filling, and possibly plowing, this cemetery function is no longer evident. Although intensive research failed to locate the grave sites, many burials documented in a gravestone survey and a cemetery registry, and remembered by longtime local residents, undoubtedly remain.

The report recommended that no testing should be undertaken unless the cemetery was to be sold. In that case, since it might ultimately be slated for non-cemetery use, testing would be required. To avoid inadvertent disturbance of these burials, testing would also be recommended to determine existing grave sites should the property be reactivated as a cemetery.

The following scope of work considers several issues. Primarily, it recognizes the appropriateness of non-intrusive testing (remote sensing) while accepting the fact that varying degrees of disturbance--as mentioned above, possibly in the form of plowing and



0 1200 ft.

N

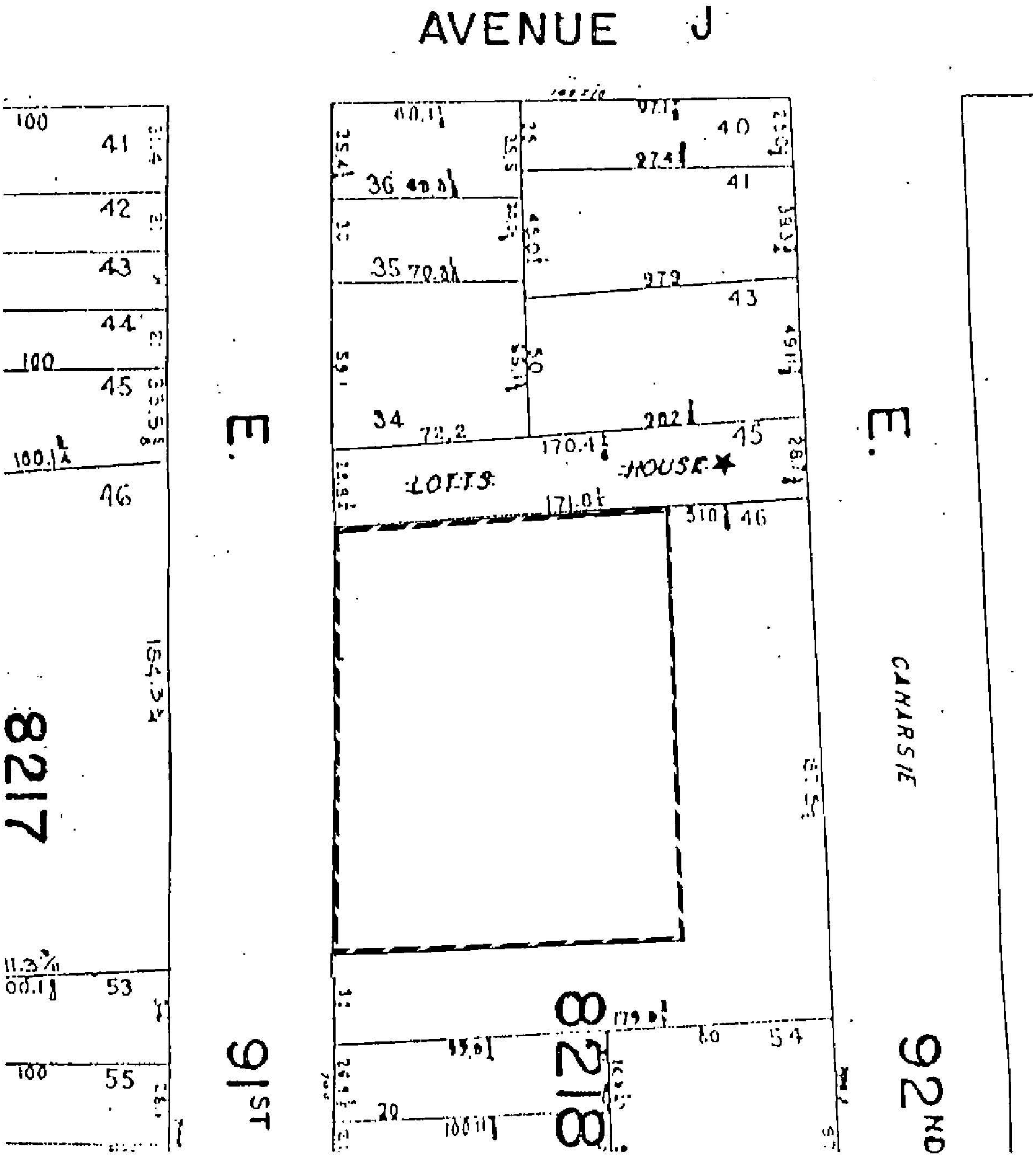
◉ site location (not to scale)

NYC Zoning Map, nd, post 1979

filling--have occurred on the site. The decision to employ remote sensing rather than surface stripping with heavy equipment was made for a number of reasons. In addition to the proven effectiveness of this method for identifying and locating burials (see below for cited documentation), there is little question that remote sensing would be the method least offensive to local residents with family members and ancestors buried in the cemetery. Consequently, the two-part testing program outlined below is recommended. A cost estimate for an 8 to 12 day field investigation will be found on pages 11 to 13.

RESEARCH DESIGN

The proposed testing program is designed to determine the location of burial sites on the remaining portion of what is approximately half of "Old Cemetery;" this comprises .43 acre bounded by Church Lane on the north, the Grace Protestant Church and church property on the east and south, and E. 91st on the west (Figure 2). Documentation indicated 150 known burials of which 91 were still located within the limits of the original cemetery prior to 1932 when the cemetery was approximately twice its current size (Geismar 1987:Table 1, page 31). At that time, a sewer line was excavated and E. 91st Street was run through the property, bisecting the cemetery and separating Block 8218 from 8217. Minimally, two of these documented burials were destroyed during the sewer excavations, leaving approximately 89 graves. Since no cemetery plan has been located, their distribution remains unknown. However, old time local residents recall tombstones on the eastern part of the property, near the church, and it is assumed that about half of the remaining burials, or approximately 44 or 45 graves, remain on the project site. It is



based on 1937 NYC Tax Assessment map updated to 1983

project site

★ Church Lane

0 50

ft.

possible, however, that the documented burials represent only part of the actual number of remaining graves and it is therefore conceivable that many more burials remain; on the other hand, it is also possible that more than two graves were destroyed during the sewer excavations, reducing the potential number of intact burials.

In attempting to devise the most effective testing program, existing literature was researched and contact was made with archaeologists who have been involved with cemetery testing and salvage archaeology of burial grounds. Among the sites considered were those of two Massachusetts graveyards where construction was about to occur (Grumaer 1986), a Philadelphia cemetery which was to be destroyed by tunnel construction (Parrington and Wideman 1986; Parrington 1987: personal communication); another in Dayton, Ohio, inadvertently scheduled for development (Roberts 1987:personal communication), and yet another in Glen Falls, New York (Ft. Edward) which was exposed during highway excavations (Grossman 1987:personal communication). In all cases, remote sensing was either successful, or, with hindsight, considered the best method for plotting burials and defining cemetery boundaries. In addition the project site conditions, which comprise a cleared terrain and, if they are similar to soils in the Canarsie Cemetery one block west, loamy, non-clay soils (Ranella 1987:personal communication), are potentially excellent for using remote sensing techniques. These are geophysical procedures that depend on ground anomalies--in this case caused by the digging of burial shafts--as well as the metal in coffins and coffin fittings for information.

Based on these factors, the two-part field program, outlined below, is recommended. It includes gridding, testing through remote sensing, and testing manually for confirmation of results on the portion of the project site that appears least disturbed (the eastern part, designated Area A) as a first phase; this would also include testing a small portion of the more disturbed area to the west (Area B) to determine the effectiveness of using remote sensing on this part of the site (see Figure 3 for approximate boundaries of Areas A and B). If proved feasible, the second phase would also entail plotting of Area B through remote sensing. Since this part of the site is obviously more disturbed than the eastern portion, it may entail using one or more remote sensing techniques which will be available throughout this phase of the testing program. It should also be noted if remote sensing proves ineffectual on this portion of the site, shovel or machine scraping, or both, may be called for. Should this be the case, since this area may contain badly disturbed burials, a faunal consultant whose expertise is human remains would have to be available to identify the number of individuals involved. The recommended program and its contingency should remote sensing prove inadequate, are designated Programs 1 and 2 respectively.

Remote sensing not only offers a means of identifying graves, it also plots the location of these graves on the site. Using the method briefly outlined here, and presented in more detail below, it is expected that the presence or absence of burials will be determined expeditiously and that their locations on the site will be quickly plotted. A report incorporating these findings, including a location map, will be prepared.

FIELD METHOD

Because site conditions vary, the recommended testing program employing geophysical remote sensing techniques (Program 1) entails a two-part investigation. In phase one the eastern portion (Area A, Figure 3), which appears less modified or disturbed than the western part (Area B), will be tested first. Bruce W. Bevan, Ph.D., a geophysical consultant who has agreed to undertake the remote sensing test program, expects that radar will be the most expeditious method. However, depending on subsurface conditions which are at present unknown, other methods such as resistivity or a terrain conductivity meter may prove more effective. The equipment for these and other remote sensing techniques will be provided by Dr. Bevan and will be available throughout his field work.

To expedite field testing, a north-south grid comprising numbered lines placed at 5-ft. intervals will be established by field personnel prior to beginning the testing program. This grid system assumes that graves were mainly oriented east to west[1] and these test lines would therefore cross rather than parallel burials, reducing the chance of missing them. Given the site's configuration, in addition to ensuring that graves will be crossed rather than paralleled, this grid system provides fewer, longer survey lines, an advantage in this kind of testing. However, should a different orientation become apparent during testing, a new grid system will be established.

In the course of plotting Area A through remote sensing, field personnel will shovel scrape one or two areas determined to be grave

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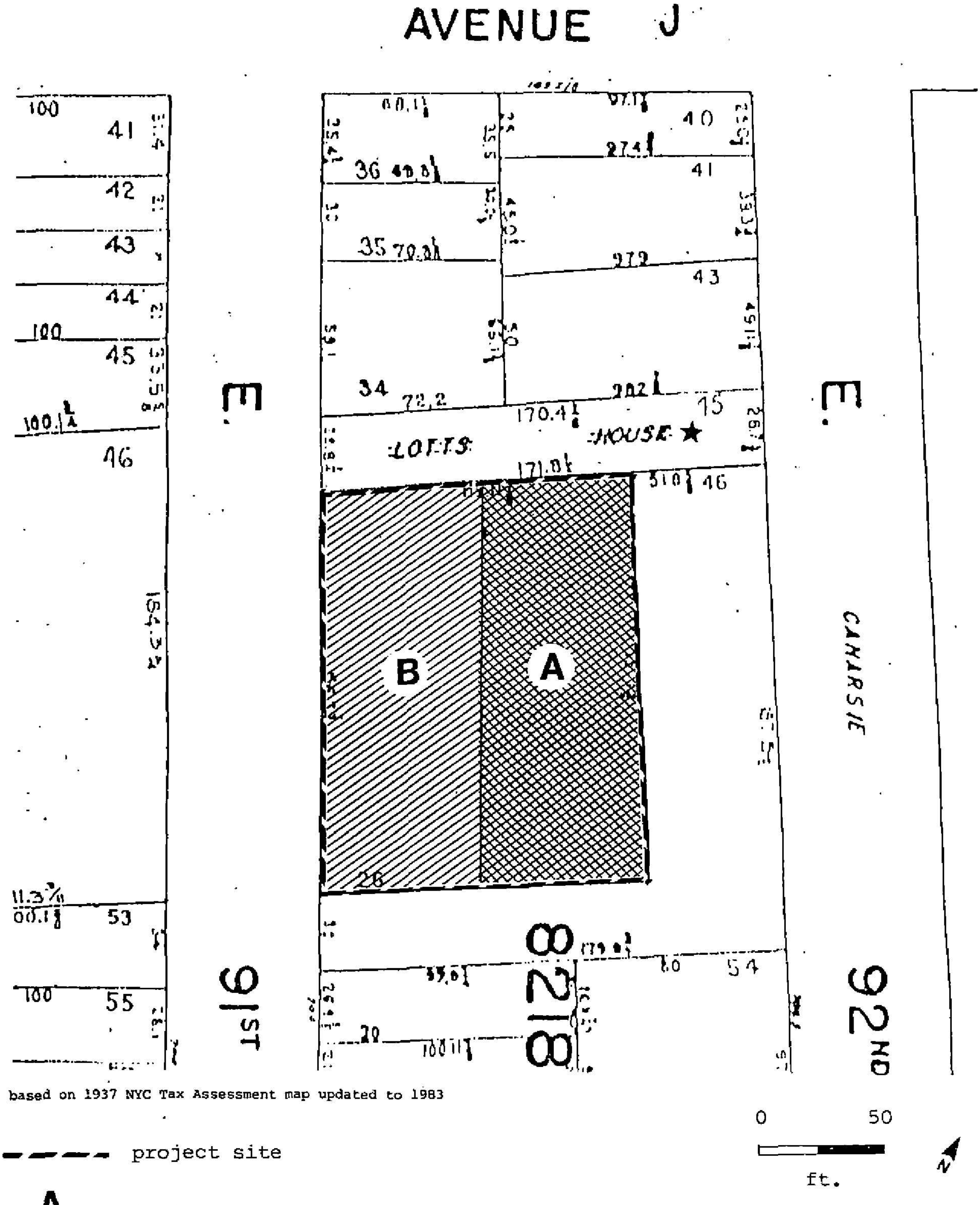
1 This assumption is based on the literature (e.g., Parrington and Wideman 1986:Figure 4) and was confirmed in part by Edith Wilson, a life-long Canarsie resident who, in her mid-80s, still remembers that gravestones mainly faced away from the church (eastward) although some near what is now E. 91st Street faced Church Lane (Wilson 1987: personal communication).



based on 1937 NYC Tax Assessment map updated to 1983

▬ ▬ ▬ project site

A test area

★ Church Lane

sites as well as surrounding areas to verify interpretations. Once these have been verified, the remote sensing program will be expanded to include a small section of Area B to determine whether this method is applicable to this part of the site. The exact location of the test will be determined in the field. If feasible, a second phase of remote sensing will be undertaken in Area B. However, it is possible that some fill removal may be necessary to expedite survey in this area. It is anticipated that two 8-hour field days will be needed to complete exploration of both Areas A and B through remote sensing (if soil removal is required, it can be done prior to the second day of testing. Dr. Bevan will provide an on-site assessment and then plot the results in his laboratory where he will prepare a report.

A contingency plan (Program 2) is recommended as a backup should remote sensing fail to provide adequate information. If it is determined that remote sensing is not applicable, field personnel would monitor backhoe or gradall stripping; this would be augmented by shovel scraping to locate burial shafts which will then be plotted. It should be noted that in addition to creating upheaval that may be offensive, this kind of survey may provide less comprehensive information than the recommended geophysical techniques. For example, if fill is diffentially present, deeper burials may not be located through scraping. In addition, this kind of investigation increases the cost of testing (see Cost Esitmates).

As noted above, should the western (or for that matter the eastern) portion of the site contain disturbed burials, a faunal consultand will be needed to identify the number of individuals present. Gary J. Sawyer, a curator in the Department of Anthropology at the

American Museum of Natural History, has agreed to consult on this aspect of the survey.

The findings from all aspects of the testing program will be presented in a report that includes a map locating burials and illustrates the methods and findings of the survey through photographic documentation and graphics.

PERSONNEL

Personnel for Task B includes the principal investigator, the geophysical consultant, a field crew comprising 4 to 6 archaeologists (the number depending on whether shovel scraping is needed throughout the site), a faunal expert who deals with human bones, a graphics person, and a production assistant. Estimated time and cost rates will be found on pages 11 and 12 as will equipment and expense estimates. Resumes for Drs. Geismar and Bevan are attached; Gary J. Sawyer will provide his upon request.

REINTERMENT

It has been estimated that the cost of reinterment is approximately $500 per burial (Mastandrea 1987:personal communication). In addition, permits may be needed for each burial (New York City Health Code Article 205, Section 205.33). However, an attempt to determine procedures has been somewhat inconclusive. Although only the sketchiest estimates can be made at this writing, if 45 burials are uncovered, minimally $22,500.00 will have to be spent on reburials.

COST ESTIMATE

This estimate is divided into two sections, the first (Program 1) uses remote sensing as the major testing method (shovel scraping would be a minor part of this investigation), and the second (Program 2) would be initiated should remote sensing prove inadequate. In this case, only one day of remote sensing would be undertaken and then machine and shovel scraping would become the field method.

Program 1 (8 Field Days)

Principal Investigator		
Field work (field preparation, remote sensing, field investigations)	64 hrs. @ $32.20 per hr.	$2,080.00
Report Preparation (writing, production)	80 hrs. @ 32.20	2,576.00
Contingency time	16 hrs. @ 32.20	899.20
Geophysical Consultant		
Entire Package (2 field days, 3 1/2 days for interpretation, equipment, expenses)		3,000.00
Field Crew (2-3 crew members)		
(preparation, shovel scraping and clearing)	184 hrs. @ 12.00	2,208.00
Contingency	64 hrs. @ 12.00	786.00
Insurance		2,159.00
Graphics	16 hrs. @ 23.00	368.00
Faunal Consultant	40*hrs. @ 25.00	1,000.00*
Production Assist.	40 hrs. @ 12.00	480.00
Expenses (equipment, travel, report production, misc.)		1,000.00
	Estimated total, Program 1	$16,556.20

Program 2 (12 Field Days)

Principal Investigator		
Field work (field preparation, remote sensing, field investigations including mapping and monitoring)	96 hrs. @ $32.20 per hr.	$3,091.20
Report Preparation (writing, production)	80 hrs. @ 32.20	2,576.00
Contingency time	16 hrs. @ 32.20	899.20
Geophysical Consultant		
Entire Package (1 field day, interpretation, equipment, expenses)		1,500.00
Field Crew (2-4 crew members)		
(preparation, shovel scraping and clearing, mapping)	368**hrs. @ 12.00	4,416.00**
Contingency	64 hrs. @ 12.00	786.00
Insurance		2,159.00
Graphics	24 hrs. @ 23.00	552.00
Faunal Consultant	40*hrs. @ 25.00	1,000.00*
Production Assist.	40 hrs. @ 12.00	480.00
Expenses (equipment, travel, report production, misc.)		1,200.00
	Estimated total, Program 2	$18,659.40

Note: this does not include the cost of heavy equipment (bulldozer, gradall, or backhoe) or an operator nor the removal of spoil from the site. As noted in the text, it is possible that even in Program 1, where remote sensing is the major method employed in testing, heavy equipment may be needed to remove fill from the western portion of the site to expedite testing. Of course, less intensive use of this equipment will be made in Program 1 than Program 2.

* The time required for a faunal consultant is dependent on the amount and condition of the bone material recovered and the extent of the report; therefore, this estimate is highly speculative.

**These figures are based on a 4-person field crew. It is possible that field conditions would require an expanded crew that could raise the total estimate. For example, 6 rather than 4 crew members would raise the total estimate to $21,059.00 including contingency days.

As noted in the text, reinterment is estimated at $500 per burial; if 45 graves are located, the cost of reinterment would be approximately $22,500.00.

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Grumaer, D. Richard
1986 The use of resistivity survey in the location of human burial remains in New England. Ms. Paper presented at the 1986 annual meeting of the Council on New England Historical Archaeology in Troy, New York.

Mastandrea, Frank
1987 Personal communication. Director of Field Operations. New York City Department of General Services, Division of Real Property, 2 Lafayette Street, New York.

New York City Health Code
current Deaths and disposals of human remains. Article 205.33.

Parrington, Michael
Personal communication. John Milner Associates. Philadelphia.

Parrington, Michael and Janet Wideman
1986 Acculturation in an urban setting. Expedition 28 (1):55-62.

Ranella, Jim
1987 Personal communication. Superintendent, Canarsie Cemetery, Brooklyn, New York.

Roberts, Will
1987 Personal communication. Greenhouse Associates, New York.

Wilson, Edith
1987 Personal communication. Canarsie, New York.

RESUMES: Joan H. Geismar and Bruce W. Bevan

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New York State WBE Certification Number: 13-3006436

EDUCATION

1981	Ph.D. Anthropology, Columbia University
1976	M. Phil. Anthropology, Columbia University
1974	M. A. Anthropology, Columbia University
	B. A. English, Barnard College

EMPLOYMENT (partial list)

1984-1986 Principal Investigator, Site 1, Washington Street Urban Renewal Area (Shearson Lehman/American Express Services Center), New York. Consultant to Louis Berger & Assoc., Inc. Testing west side landfill and the site of an early foundry.

1986 Archaeological Consultant, Gethsemane Cemetery, Little Ferry, New Jersey. County of Bergen, Office of Cultural and Historic Affairs. Mapping of Black cemetery belonging to the county.

1985 Principal Investigator, Muss Waterfront Housing Development Project, Prince's Bay, Staten Island, New York. Consultant to AKRF, Inc. Documentary research and assessment of a development site on Staten Island's southeastern shore.

1985 Principal Investigator, Northtown Phase II, Roosevelt Island, New York. Independent consultant to Roosevelt Island Associates. Documentary research and archaeological evaluation of a nine-acre development site.

1984 Principal Investigator, Community Hospital, New York. Consultant to Konheim & Ketcham. Documentary research and archaeological evaluation of prehistoric and historic resources at Columbia University's Baker Field.

1984-1985 Principal archaeologist, Mayflower Avenue Pump Station and Force Main Route, Oakwood Beach Water Pollution Control Project, Staten Island. Consultant to Materials Investigation, Inc. Documentation and testing for the New York City Environmental Protection Agency. O'Brien & Gere, Project Engineers.

1981, 1982-1984 Principal Investigator, Cooper's Pond Project, Bergenfield, New Jersey. Independent consultant to the County of Bergen Community Development Program, Hackensack. Documentation, testing, and excavation of a mill and mid-19th century chair factory.

1981-1983 Principal Investigator, 175 Water Street Project, New York. Consultant to Soil Systems, Inc. Testing and excavation of a landfill block in lower Manhattan. An early-18th century derelict ship was uncovered.

EMPLOYMENT (continued)

1979	Artifact analyst, Empire Stores Site, Brooklyn. Red Hook Water Pollution Control Project, Underpinning & Foundation Constructors, Inc. Ralph Solecki, Principal Investigator. Analysis of ceramics and glass from a 19th-century warehouse located on fill.

HONORS

1982	Certificate of Merit, Municipal Art Society, New York (for excavations at 175 Water Street).
1981	Nomination for the Bancroft Dissertation Award, Columbia University (withdrawn prior to judging because of prior publishing commitment).
1980	Teaching Assistantship, Department of Anthropology, Columbia University.
1978	Research Grant-in-Aid, New Jersey Historical Commission, Trenton.
1974, 1975	ISRP Grant for Research, Columbia University.

PUBLICATIONS

1987	Digging into a Seaport's Past. Archaeology Vol. 40 (1):30-35 (January/February, 1987).
1985	Patterns of Development in the Late-Eighteenth and Nineteenth-Century American Seaport. American Archeology 5 (3).
1982	The Archaeology of Social Disintegration in Skunk Hollow, a Nineteenth-Century Rural Black Community. Academic Press, Inc., New York.
1982	Surface Collection as an Effective Field Method for Analysis of Skunk Hollow, a Rural Nineteenth-Century Community Site. The Florida Journal of Anthropology 7 (1):18-29.
1980	Skunk Hollow: A Preliminary Statement on Archaeological Investigations at a 19th-Century Black Community. In Archaeological Perspectives on Ethnicity in America, Robert L. Schuyler, editor: 60-68. Baywood Publishing Co., Farmingdale.

FIELD EXPERIENCE (partial list)

1977-1979	Project Director, Columbia University Field School, Skunk Hollow Project, Alpine, New Jersey.
1975	Fieldcrew and lab, Early Man Project, Shawnee-Minisink Site, Delaware River Valley, Pennsylvania. Charles McNett, Director.
1973-1981	Survey and excavation, miscellaneous projects, Long Island and New Jersey.

TEACHING

1984 Adjunct Faculty, Marymount Manhattan College, New York.

EDITORIAL WORK

1968 Editorial Consultant, We Wish to Be Looked Upon, Vera Rubin and Marisa Zavallone, 1969, Teacher's College Press, New York.

1957-1959 Editorial Assistant, Random House, Inc., and the Paris Review, New York.

PROFESSIONAL ORGANIZATIONS (partial list) AND OFFICES

Society of Professional Archaeologists (SOPA)
Society for American Archaeology
American Anthropological Association
Suffolk County Archaeological Association
Society for Historic Archaeology
New York State Archaeological Association, Metropolitan Chapter

President	1981, 1982
Vice-President	1980

Professional Archaeologists of New York City (PANYC)

President	1985-1986
Vice-President	1984-1985
Treasurer	1983-1984
Action Committee	1980-1985

MISCELLANEOUS

1983 Contributor to a pilot study for the New York State Plan, New York State Cultural Resources, New York Study Unit (drafted, Summer, 1983).

1980-1986 Delivered invited papers and lectures as well as chairing and organizing various symposia in Philadelphia, Williamsburg, Sacramento, and New York City.

REFERENCES

On request

CURRICULUM VITAE

NAME: Bruce W. Bevan

BORN: January 14, 1943

RESIDENCE: 143 Glen Lake Boulevard, Pitman, New Jersey

EDUCATION: University of Idaho, B.S.(EE) 1965
University of Illinois, M.S.(EE) 1966
University of Pennsylvania, Ph.D.(geology) 1977

EXPERIENCE: Member of Technical Staff, Digital Integrated Circuit Testing Group, Bell Telephone Laboratories, Whippany, N.J., 1966-70
Research Fellow, Museum Applied Science Center for Archaeology, University Museum, University of Pennsylvania, 1970-77
Subcontractor to General Electric Valley Forge Space Center from Fegley Associates, King of Prussia, Pa., 1977-78
Owner of Geosight, a geophysical exploration firm, 1978-

MEMBERSHIP IN SCIENTIFIC ORGANIZATIONS:
Institute for Electrical and Electronics Engineers, 1965-
Archaeological Institute of America, 1968-
Society for American Archaeology, 1968-
American Society of Photogrammetry, 1971-
Society of Exploration Geophysicists, 1979-
Society for Archaeological Sciences, 1980-
European Association of Exploration Geophysicists, 1981-
Society for Historical Archaeology, 1981-
Association for Field Archaeology, 1981-

ARCHAEOLOGICAL FIELD WORK: Survey key: A: Aerial Photography M: Magnetic; R: Resistivity; G: Ground-Penetrating Radar; S: Seismic; X: Radioactivity; E: Electromagnetic

1970 - (M) Beverwyck Manor, N.J.; (M) Savich Farm, N.J.
1971 - (M,A,S) Magdalena Basin, Mexico; (M) Aleria, Corsica; (A) Utica, Tunisia; (A) Porto Kheli, Greece
1972 - (M) Magdalena Basin, Mexico; (A) Chaco Canyon, N.M.; (A) Navplion, Greece; (A) Gythion, Greece; (A) Sarafand, Lebanon; (A) Hasanlu, Iran; (R) Brinton Cabin, Pa.
1973 - (M) Chaco Canyon, N.M.; (A) Glendive, Montana; (A) Schaefferstown, Pa.; (M,X,E,R) Valley Forge, Pa.
1974 - (A,X) Valley Forge, Pa.; (A) Lemon Hill, Phila.; (A,M,R) Odessa, Del.; (A,R) Waynesboro, Pa.; (A) West Chester, Pa.; (A) Fort McHenry, Md.; (G) Chaco Canyon, N.M.; (R) Fort Hill, Pa.; (M) Varner, Arkansas
1975 - (A) Fort Hill, Pa.; (M,R) Schaefferstown, Pa.; (A) Coamo, Puerto Rico; (M) Fort de Chartres, Illinois; (G) Chaco Canyon, N.M.; (M,A) Les Vieilles Forges, Canada; (A) Yellow Springs, Pa.; (A) Bartrams Gardens, Phila.; (A,G) Stenton Mansion, Phila.; (A) Elfreth's Alley, Phila.
1976 - (A,M) Quirigua, Guatamala; (M)Governor Printz Park, Pa.; (M) Cahokia Mounds, Illinois; (M) Yellow Springs, Pa.
1977 - (M,G) Valley Forge, Pa.
1978 - (R,G,A,M) Valley Forge, Pa.; (G,R) Landing Lane, N.J.; (M) Repton, England; (M,R) Beqaa, Jordan; (G) Lixus, Morocco

ARCHAEOLOGICAL FIELD WORK: (continued)
C: Consultation

1979 - (G) Quirigua, Guatamala; (R) Ceren, El Salvador; (G) Deer Creek, Oklahoma; (G) Twin Lakes, Colorado; (G) Petersburg Battlefield, Va.; (G) Landing Lane, N.J.; (G) Spring Valley, N.J.; (G) Adams Birthplaces, Mass.; (G,M) Pluckemin, N.J.

1980 - (G) Old Ste. Genevieve, Mo.; (A,M,E) Petersburg Battlefield, Va.; (G,E,R) Deer Creek, Oklahoma; (C) Tombigbee Historic Townsites, Miss.; (E,G) Fort de Chartres, Illinois; (G,M) South Pass City, Wyoming; (G) Original Phoenix Townsite, Ariz.; (G) Las Colinas, Ariz.; (G) Las Canopas, Ariz.; (G) Pueblo Grande, Ariz.; (G) Rolley Site, Ariz.; (M) Fairmount Park, Phila.; (G,E,R) La Ciudad, Ariz.

1981 - (R) Old Ste. Genevieve, Mo.; (E) Bab edh Dhra, Jordan; (E) Baq'ah Valley, Jordan; (M,G) New Windsor Cantonment, N.Y.; (C) Tombigbee Historic Townsites, Miss.; (G,M) Chatham Mansion, Virginia; (G) Dickinson Mansion, Delaware; (G,M) Grant's Cabin Site, Virginia; (G) Hoover Birthplace, Iowa; (G) Effigy Mounds, Iowa

1982 - (G,M) Gannagaro, New York; (G,M) Valley Forge, Pa.; (M) Fairmount Park, Philadelphia; (R,M,G) Blue Earth Valley, Minnesota

1983 - (M,R) Rojdi, India; (G,M) Appomattox Manor, Va.; (G,R,M) Tindall-Pearson Site, N.J.; (M) Gannagaro, New York; (E,G) Iower Broadway, New York; (M) Franklin Mill, Baltimore

1984 - (M) Rojdi, India; (G,E) Grace Episcopal Church, Phila.; (G,R) Mashantucket Burying Ground, Conn.; (G) Fort Shantok, Conn.; (G,E,M,R) Fort Griswold, Conn.; (R,G,M) College Hall, Rutgers Univ.; (G) Blacksmith Hill, Delaware; (G) Theodorus Van Wyck House, N.Y.; (G,R) Johnson Hall, N.Y.; (G,R) Ely Service Center, Minn.;(G) Springfield Armory, Mass.; (G,R) Lischio site, R.I.; (G,M,R) Abraham Van Wyck House, N.Y.; (G,R,M) Jackson Shrine, Va.; (G,M) Friendship Hill, Pa.; (G,R) Valley Forge, Pa.

1985 - (G,M,R) Mount Vernon, Virginia; (G) Rose Hill Manor, NY; (G,E,M) Blacksmith Hill, Wilmington; (M,E) Bowdoin Farm, NY; (G,E,R) Bruton Parish Church, Virginia; (G,M,R) Historic Christ Church, Virginia; (G) Touro Cemetery, Rhode Island; (E,G) Newman Street Site, Annapolis; (G,M,R) Ellwood-Lacy House, Virginia; (R) Printzhof, Pennsylvania; (E,G,M) Kettering Shaker Cemetery, Ohio; (G) Benjamin-Banneker site, Maryland; (M,E,G,R) Teso dos Bichos, Brazil

1986 - (M) Fort Mifflin, Phila.; (G,E,M) Rockville Poor Farm, Md.; (G,M,E) Stanton House, NY; (G) Rockville Baptist Cemetery, Md.; (G) Fort Edward, NY; (G,E,M,R) Lamington Cemetery, NJ; (G,E) Hans Herr House, Pa.; (G,M) Plains Cemetery, Md.; (G,M) Sarah Furnace, Pa.; (R) Bruton Parish Church, Va.

PUBLICATIONS: Bruce W. Bevan

<u>Stereo Photography for the Archaeologist</u>, a MASCA report, Univ. of Pennsylvania Museum, 15 May 1973

"An Introduction to Stereo Photography", pp.259-63 in <u>Photography in Archaeological Research</u>, ed. by Elmer Harp, jr., University of New Mexico Press, Albuquerque, 1973

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<u>Post Landsat D Advanced Concept Evaluation</u> (with others), Final Report, NASA Contract NAS 2-9580, General Electric Co., 18 August 1978

"Experiments in Geophysical Exploration", in <u>Patterns of the Past: Geophysical and Aerial Reconnaissance at Valley Forge</u>, ed. by Elizabeth K. Ralph and Michael Parrington, Final Report, NPS Contract CX4000-7-0022, MASCA, University Museum, 31 January 1979

"Radar Mapping of Buried Historical Structures at Phoenix", pp.123-54 in <u>Archaeological Test Excavations, Blocks 1 and 2 of the Original Phoenix Townsite</u>, Lyle M. Stone, Archaeological Research Services, January 1981

"The Geophysical Survey at La Ciudad", pp. 258-305 in <u>Testing at La Ciudad (Group III), West Papago-Inner Loop (I-10)</u>, Ronald K. Yablon, Museum of Northern Arizona, September 1981

<u>Quantitative Magnetic Analysis of Landfills</u>, Geosight Technical Report, 5 January 1983

"Electromagnetics for Mapping Buried Earth Features", <u>Journal of Field Archaeology</u>, vol. 10, no. 1, spring 1983, pp. 47-54

"A Magnetic Survey at Quirigua", <u>Quirigua Reports</u> Paper No. 9, ed. by Robert J. Sharer, University Museum, Philadelphia, 1984

"The Discovery of the Taylor House at the Petersburg National Battlefield" (with David G. Orr and Brooke S. Blades), <u>Historical Archaeology</u>, vol. 18, no. 2, 1984, pp. 64-74

"Environmental Effects on Ground-Penetrating Radar", pp. 201-204 in <u>Expanded Abstracts of the Technical Meeting</u>, Society of Exploration Geophysicists 54th Annual Meeting, Atlanta, December 1984