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**FOLEY SQUARE FEDERAL COURTHOUSE
AND OFFICE BUILDING
NEW YORK, NEW YORK**

**ARCHEOLOGICAL AND PHYSICAL
ANTHROPOLOGICAL SUPERVISION
OF THE INSTALLATION OF
CATCH BASINS AND A UTILITY LINE
AT THE AFRICAN BURIAL GROUND
290 BROADWAY, LOWER MANHATTAN,
NEW YORK**

John Milner Associates - 290 Broadway
(African Burial Ground)

**GENERAL SERVICES ADMINISTRATION
REGION 2**

448

**FOLEY SQUARE FEDERAL COURTHOUSE
AND OFFICE BUILDING
NEW YORK, NEW YORK**

**ARCHEOLOGICAL AND PHYSICAL
ANTHROPOLOGICAL SUPERVISION
OF THE INSTALLATION OF
CATCH BASINS AND A UTILITY LINE
AT THE AFRICAN BURIAL GROUND
290 BROADWAY, LOWER MANHATTAN,
NEW YORK**

PREPARED FOR

**EDWARDS AND KELCEY ENGINEERS, INC.
70 SOUTH ORANGE AVENUE
LIVINGSTON, NJ 07039**

AND

**GENERAL SERVICES ADMINISTRATION
REGION 2
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NY 10278**

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NEW YORK, NY 10048**

DECEMBER 1994

ABSTRACT

John Milner Associates, Inc., together with its subconsultant Michael Parrington, provided archeological supervision of the installation of catch basins and a utility line at 290 Broadway, Lower Manhattan, New York, over intermittent periods between May 19, 1994, and June 12, 1994. During the entire excavation period Dr. Sherrill D. Wilson, Director of the Office of Public Education and Interpretation (OPEI), and/or members of the OPEI staff were on the site for the purpose of answering questions and providing information to interested parties. During this period four (4) bone fragments were recovered from screened material at Duane/Elk Street, and five (5) bone fragments were recovered from screened material at Reade Street. Of this total, four (4) fragments were determined to be faunal and five (5) fragments were indeterminate in origin. No fragments identified as human were recovered. A number of artifacts, including eighteenth, nineteenth, and twentieth century glass and ceramics, were recovered during the screening process. All of the excavated soil screened by the archeological and physical anthropological team was from disturbed contexts, and no intact burials or significant cultural resources were identified during the supervision of the work.

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1.0 PROJECT BACKGROUND

1.1 Introduction

This report provides a summary of archeological and physical anthropological supervision of the installation of catch basins and an electric utility line at the site of the new federal office building at 290 Broadway, Lower Manhattan, New York (Figure 1), a General Services Administration (GSA)-sponsored project. This work comprises three new catch basins at the intersection of Duane and Elk Streets, which forms the northeast corner of the block, and a new electric line at the western end of Reade Street, which forms the southern boundary of the block. The western side of the 290 Broadway block is bounded by Broadway.

Catch basins are subterranean chambers installed below roadway surfaces during construction. They are connected to roadway drainage systems and water from rainfall is washed into them along with any detritus that has accumulated on the road surface. They act as sumps which can be periodically emptied of roadway detritus, thereby preventing detritus from emptying into the sewer system.

Supervision of the catch basin and electric line work took place on an intermittent basis between May 19, 1994 and June 12, 1994. This work was the final component in the supervision of the installation of various utilities at the 290 Broadway site, which commenced on December 11, 1993. The earlier work, which included the installation of electric, telephone, and steam lines, and a secure communications link between 26 Federal Plaza and 290 Broadway, is the subject of two previous reports (John Milner Associates 1993; Parrington et al. 1994), the former representing an interim version of the latter.

The two components of supervisory work described in this report were necessitated by requirements to furnish the new federal office building with appropriate utilities and drainage facilities, each of which required underground installation. Because the installation of the utility line and catch basins required the excavation of fill deposits overlying a portion of the African Burial Ground and Commons Historic District (Figure 1), archeological and physical anthropological supervision of all excavation was determined

appropriate by GSA, in consultation with the New York City Landmarks Preservation Commission (LPC). All archeological and physical anthropological supervision was accomplished in accordance with procedures outlined in a New York City Landmarks Preservation Commission report dated September 24, 1993, (Appendix A), as supplemented by additional provisions contained in a project protocol, developed by John Milner Associates, Inc. (JMA), and attached as Appendix B.

All supervision work was conducted by an archeological and physical anthropological team from JMA. This team of up to six field technicians was under the direction of Mr. Michael Parrington, subconsultant to JMA. In addition, physical anthropological services were provided by Mr. Thomas A. J. Crist and Mr. Arthur Washburn of JMA. Mr. Parrington and Mr. Crist are both certified by the Society of Professional Archeologists (SOPA) in field research and historical archeology. Mr. Robert Collegio, GSA project engineer for Foley Square, and Mr. Bill White and Mr. Michael Pinelli, Tishman Construction Company, ably coordinated support services.

Staff members of the Office of Public Education and Interpretation for the African Burial Ground (OPEI) were on-site on a daily basis. A site trailer was established as a field office of OPEI, and was fully equipped with a telephone, laptop computer, and necessary files. Dr. Sherrill D. Wilson, director of OPEI, or her designate was provided with regular updates by the principal archeologist on the progress of the work and the material being recovered. These reports served the purpose of keeping Dr. Wilson fully informed in her role as observer and provider of information and interpretation to the public. In addition, OPEI staff members were available during office hours to take calls at the main OPEI office at 6 World Trade Center.

1.2 Archeological and Physical Anthropological Procedures

Two large metal canisters, each capable of holding 20 cubic yards of earth, were installed by the GSA on Duane Street. Each was roofed over with an enclosed wooden superstructure covered with translucent plastic sheeting designed to provide protection and security from the elements, not only for the scientific field team, but also for the earth removed from the utility trench and catch basins. A wooden platform was

built between the two metal canisters to accommodate the screening of fill material removed from the utility trench and catch basin locations. This platform was also roofed over in a similar fashion, although not enclosed. As fill material was removed by the construction laborers, it was wheeled to the archeological staging area where it was off-loaded into one of the metal canisters. Fill material from the utility trench on Reade Street was transferred to the screening area in the front bucket of a backhoe. The fill material was then transferred by shovel and bucket to screens fitted with one-quarter-inch mesh hardware cloth. The material was then screened by the archeologists in standard archeological fashion, and all significant material retained. This material included, first and foremost, any and all bone found in the screens, as well as artifacts. For the most part, the latter included the typical glass and ceramic sherds found in such urban fills, as well as building materials and other assorted cultural material. All bone fragments were examined in the field by at least one of the physical anthropologists, and visually identified to the extent possible (Appendix C).

The primary objective of the physical anthropological examination of the skeletal fragments recovered from the utility and catch basin work was to determine if any of the osteological materials represented human remains. This determination was made in the field at the time of recovery. Each fragment was dry-brushed as necessary, examined macroscopically, and with a magnifying lens as appropriate, and then assigned to one of three general categories: human, faunal, or indeterminate. Each fragment was then wrapped in acid-free paper and fastened with acid-free tape. The street from which the fragment was recovered, the date, the inventory number for the fragment, and its category were then written on the tape with a permanent marker.

When possible, the specific origin of each fragment in the human or nonhuman skeleton was identified. In cases where the fragment did not include any distinctive morphological characteristics, it was classified in more general terms as to the type of bone it represented. An example is the classification of a tubular-shaped piece of bone as an "unidentified long bone fragment." Had the same segment of bone

exhibited a specific muscle attachment site or articular surface it might have been catalogued as "proximal portion of right radius."

A conservative approach was taken in the determination of the category into which each skeletal fragment was classified. This conservative approach prescribed that the level of confidence in classifying the recovered osteological materials favored placing more potentially nonhuman fragments into the indeterminate category than potentially human fragments. This approach, accordingly, made it considerably more likely that fewer potentially human fragments would be classified as non-human. Initial excavations in December of 1993 (John Milner Associates 1993) employed a five-part classification system that included the categories "probably human" and "probably faunal." However, a three-part system (human, faunal, or indeterminate) was instituted later for the duration of the project in order to simplify the identification process.

Although no human bone was identified, the following protocol comprised standard operating procedure during the duration of the fieldwork. Any bone fragments and teeth clearly of human origin were so classified and then stored separately from bone of the other two classes. Fragments conclusively of non-human origin were treated in a similar fashion. Bone fragments that could not conclusively be classified as either human or non-human were placed into the indeterminate category and also stored separately. The determination of whether a particular fragment was of human or non-human origin was based on morphological descriptions of both categories of bone found in numerous texts of forensic physical anthropology and mammalian osteology, including Gilbert (1973), Stewart (1979), and Ubelaker (1989). No analysis beyond identification of the recovered fragments was conducted.

After each bone fragment was individually wrapped in acid-free paper, it was stored in pH-balanced cartons on-site. At the end of each field day, all bone was removed to the Foley Square Archeological Laboratory at 6 World Trade Center. Artifacts were retained and stored in the on-site trailer for later

removal to 6 World Trade Center. No detailed treatment (such as cleaning) of any bone fragment has been conducted.

2.0 DUANE/ELK STREET CATCH BASINS

2.1 Introduction

The project area for the catch basins consisted of three locations at the intersection of Duane and Elk Streets where rectangular pits and associated drainage trenches were slated for excavation (Figure 2). These drainage improvements were necessary in order to bring the present subsurface drainage systems up to code. Each catch basin was slated to be 8 feet by 8 feet in size, with a depth of 10 to 12 feet. Additionally, up to 45 feet of drainage trench 4 to 7 feet deep and 3 feet wide was to be excavated to link the new catch basins with the existing sewer system.

The actual dimensions of the catch basins as excavated, however, varied from the specifications given above. Catch Basin 1 (CB1) measured 8 feet north-south by 10 feet east-west, and was up to 11 feet deep. Catch Basin 2 (CB2) measured 10.5 feet north-south by 8.5 feet east-west, and was up to 6 feet deep. Catch Basin 3 (CB3) had overall dimensions of 8 feet north-south by 10 feet east-west, and was excavated to a maximum depth of 6 feet. The specifications for the drainage trenches differed also, with only about 20 feet of trench excavated. Supervisory work on the catch basins commenced on May 19, 1994, and was completed on June 1, 1994. Screening of fill from the catch basin site was completed on the weekend of June 11-12, 1994.

2.2 Project Area Potential

The LPC report on the proposed utility work at 290 Broadway (Appendix A) noted that the catch basin locations were outside (north) of the boundary of the African Burial Ground, and concluded that it was unlikely that intact human burials would be located there. It was believed, however, that there was a high potential for uncovering evidence of historic pottery production in this area. This premise was based on archeological evidence, including pottery wasters, recovered during archeological testing and data recovery conducted on the 290 Broadway block in 1991 and 1992 (Howard University and John Milner Associates 1993: 21-23). This archeological research also demonstrates that intact burials in the area closest to Elk Street were 21 to 27 feet below grade level.

These data indicated that it was unlikely that intact burials would be encountered within the proposed design depths of 10 to 12 feet for the catch basins. The fill material overlying the burial surface might, however, contain unstratified remains from the pottery industry. Artifacts such as kiln furniture and pottery wasters have analytical value even if they are from unstratified contexts. The analysis of such artifacts can provide information on the types of kilns in use in the Elk Street area, and on the range of products manufactured in such kilns.

Other materials anticipated from the fill deposits included human bone redeposited during earlier processes of urbanization. Although it was strongly believed that any such material should be recovered for identification and eventual repatriation, it was also believed that the material was unlikely to have any analytical value. Other types of anticipated material from fill deposits included ceramics, glass, metal, and plastics ranging in date from the eighteenth to the twentieth century. These types of artifacts from urban fill deposits are also unlikely to have any analytical value.

2.3 Excavation Procedures and Stratigraphy

The contractor responsible for the catch basin work was the firm of La Strada, Inc., who initially commenced work on CB1, located at the southwest corner of the Elk/Duane Street intersection (Figure 2). After removal of asphalt and concrete roadbed material, excavation proceeded in disturbed fill until an active electrical utility line was encountered at a depth of 3.5 feet. The location of the catch basin was then moved to the west to avoid the electric line. At the new location, which was under the existing sidewalk, the top of a substantial two-foot thick masonry wall aligned north-south was uncovered. The east face of this wall was parallel with the edge of the sidewalk, and the top of the wall was 2.2 feet below grade. The construction laborers continued to excavate to the west of the wall in a fill of brown sandy loam containing brickbats, concrete fragments, electric conduit and cable, and modern plastic trash. The Munsell colors for the fill ranged from 7.5 YR 4/4 to 7.5 YR 5/6. At a depth of 10 feet below grade a concrete floor surface was uncovered. This was removed, and the excavation continued to a depth of 11 feet. The west face of the masonry wall was plastered, indicating it was an internal face. In the north section of the excavation a brick

buttress was observed against the west face of the wall. After the catch basin pit was excavated to its design depth of 11 feet, the masonry wall was removed with an air hammer.

The laborers then began work on CB2, located on the south side of Duane Street, concurrently with CB1 (Figure 2). After removal of blacktop and concrete roadbed material, disturbed fill material and a portion of the concrete retaining wall poured around the perimeter of the former pavilion site of 290 Broadway in 1992 was uncovered. Also uncovered in disturbed fill under the roadbed was an active utility line at a depth of 4.3 feet. This discovery necessitated relocating the catch basin site to the south, under the existing sidewalk.

At this location the entire CB2 catch basin pit was excavated in recent backfill dating from when the 290 Broadway site bulk excavation took place in 1991. The top of the sheeting placed around the perimeter of the former pavilion site of 290 Broadway was uncovered at a depth of 1.9 feet below grade, and more of the concrete retaining wall was exposed at a depth of 2.3 feet below grade. After some discussion on whether it was advisable to remove the retaining wall and the sheeting at the catch basin site, it was eventually concluded that this would be in order. Accordingly, the reinforced concrete in the retaining wall was removed hammer and a cutting torch. The wooden sheeting was dismantled with a power saw, and the soldier beams which supported the sheeting were also removed with a cutting torch. The fill between the sheeting and the retaining wall, and to the south of the retaining wall, was removed by hand to a depth of 6 feet. This fill material, which was placed in position in 1992 when the former pavilion site of 290 Broadway was backfilled, consists of a uniformly dark brown sandy loam with a Munsell designation of 7.5 YR 3/2.

After completing CB2 the laborers commenced excavating a trench to the existing catch basin site at the southwest corner of the intersection of Duane and Elk Streets (Figure 2). This trench was 10.5 feet long, up to 2.3 feet wide, and up to 5.2 feet deep. The fill of this trench was dark brown sandy loam, Munsell color 7.5 YR 3/2, and was not screened due to its obviously recent date as indicated by the presence of modern

trash and plastic. In addition to excavating this trench, the laborers removed the cover of the existing catch basin, and also removed the brick foundation for the cover. In removing the brick foundation, the poured concrete top of the existing catch basin was exposed at a depth of 1.5 feet. The existing catch basin was then emptied of modern trash and fill until the bottom of the feature was reached at 10.3 feet below grade. The foundation for the cover was then rebuilt, and the cover replaced.

While completing CB2 the laborers also began work on CB3, located at the southeast corner of the intersection of Duane and Elk Streets (Figure 2). The laborers began by removing blacktop and concrete roadbed material on the west side of CB3. At a depth of 1.8 feet below grade an active electric line was encountered. At this point the catch basin was relocated to the east in order to avoid the electric line. This placed the catch basin site on the sidewalk at the east side of Elk Street between two active fire hydrants. As excavation continued in this location it became clear that the area was highly disturbed from the installation of the fire hydrants. Further disturbance was noted in the eastern half of the catch basin pit. This disturbance proved to be from an active steam line which was aligned north-south in the eastern half of the pit at a depth of 4 feet below grade. Excavation continued to a depth of 5 feet at which point all fill was retained for screening. The fill occurring between 5 feet and the 6-foot design depth of the catch basin was as disturbed as the soil above, and the Munsell color (10 YR 4/6) of the sandy loam fill with brickbats and cobbles was consistent throughout.

After completing the catch basin excavations the laborers excavated a short trench to link the catch basin site with the existing sewer. This trench projected from the northwest corner of CB3 to the existing sewer in Elk Street. The trench was approximately 6 feet long, 2.5 feet wide, and up to 5.2 feet deep. Below a 0.5-foot thick layer of blacktop, and a 1-foot thick layer of concrete roadbed, a dark brown sandy loam with a Munsell color of 7.5 YR 3/2 occurred. This fill material was not screened, as it was clearly of recent origin.

2.4 Discussion

All three catch basins were originally slated to be placed in the roadbed at the intersection of Duane and Elk Streets. Because of the presence of existing active utility lines at each of the three original locations, however, it was necessary to move each catch basin back from the street and into the sidewalks of Duane and Elk Streets. These revised locations proved to be more disturbed than the original locations.

When the laborers excavated CB1, a substantial masonry wall was uncovered. This wall is clearly associated with 60 Duane Street, a five-story building constructed in 1866-67 for David Wagstaff, a New York merchant (Ingle et al. 1990: Appendix). The wall was approximately 10 feet east of the building line on the west side of Elk Street and is clearly not the main wall of the building, which was demolished in 1991 in preparation for the construction of the former pavilion site at 290 Broadway. The wall feature seems likely to be associated with a vault under the pavement of Elk Street and connected to 60 Duane Street. Such vaults were used for coal delivery in the area and are mentioned frequently in the historical record (Ingle et al. 1990).

The fill contained in the vault was clearly of recent origin, dating from the 1991 demolition of 60 Duane Street. Accordingly, no samples of fill were collected from this context and no screening of fill material was conducted. Visual observation of the fill removed from the backfilled vault showed no evidence of human remains or any type of significant artifact.

When the laborers excavated CB2 it quickly became clear that the pit for the catch basin was located in an area previously excavated in 1991 and backfilled in 1992. Since the fill came from off-site, there was clearly no possibility of finding site-related material. Accordingly, no fill samples were collected for screening and no significant materials were noted in the fill as it was removed.

The heavily disturbed recent nature of the fill in CB3 was clearly evident when the catch basin was excavated. However, a sample was collected from the deepest portion of the catch basin pit for screening.

Screening of the sample from CB3, which was approximately two cubic yards in volume, produced little. Four small bone fragments were recovered during the screening (Appendix C). These included two faunal fragments and two indeterminate fragments. No identifiable human bone was recovered from the screened fill. Other material recovered during the screening included small ceramic, glass, and metal fragments, and modern plastic trash.

3.0 READE STREET ELECTRICAL SERVICE

3.1 Introduction

In early June, 1994, a decision was made to install an additional electrical line in Reade Street. In order to expedite the supervision of this work, and screen the fill material from the utility trench in a timely fashion, the existing team working on the catch basins was put back into the field. In conducting this work, the existing protocol used earlier in the year for Reade and Duane Street utilities was again adopted (Parrington et al. 1994: Appendix B). In addition to screening fill from the work on Reade Street, stockpiled material from the catch basin installations on Duane/Elk Street was also screened at this time.

The project area for the electrical line installation extended from an existing manhole at the northeast corner of the intersection of Broadway and Reade Street to an existing manhole approximately 160 feet east on the south side of Reade Street (Figure 3). In addition to the utility trench, three test pits were excavated in order to establish a clear line for the trench. The excavation for the electrical line was conducted by a Consolidated Edison (ConEd) contractor's construction team of laborers under the supervision of JMA's staff. Supervisory work commenced on June 11, 1994, and was completed on June 12, 1994.

3.2 Project Area Potential

Previous supervision of utility line work by JMA, and knowledge of the stratigraphy of the African Burial Ground, have shown that intact burials in Reade Street would most likely occur at a depth of 12 or more feet below grade. The 12 feet of fill which seals potentially intact burials is presumably derived from material used to level the area in the nineteenth century, and from fill brought in to backfill utility line excavations. Clearly, this 12 feet of highly disturbed fill material may contain bone and artifacts from strata disturbed and redeposited during the last two centuries of urbanization in Lower Manhattan.

3.3 Excavation Procedures and Stratigraphy

The ConEd laborers commenced work by excavating three test pits in the bed of Reade Street (Figure 3). Test Pit A measured 4.5 feet north-south by 2.0 feet east-west, and was up to 2.4 feet deep. Test Pit B also measured 4.5 feet north-south by 2.0 feet east-west, and was up to 1.8 feet deep. Test Pit C measured 7.5 feet north-south by 2.0 feet eastwest, and was up to 2.1 feet deep. All three test pits revealed a similar stratigraphy consisting of up to 0.6 feet of asphalt overlying up to 0.6 feet of concrete, that in turn overlay sandy gravel fill with a Munsell color of 7.5 YR 4/2. Similar stratigraphy was noted in the utility trench subsequently excavated by the laborers to connect the three test pits. This trench had an average width of 1.7 feet and an average depth of 1.8 feet. At each end of the trench where it intersected with existing manholes the trench was wider and deeper. At the west end of the line the trench was 4.0 feet wide and 5.3 feet deep. At the east end of the line the trench was 4.0 feet wide and 5.1 feet deep. Excavated fill from the utility trench and the test pits was transported in the front bucket of a backhoe to the screening station on Duane Street. All excavated fill from the electric line work was screened.

3.4 Discussion

Five bone fragments were recovered during the screening process on Reade Street. These were given inventory numbers beginning with 501 in order to avoid any confusion with material recovered during the earlier supervisory work on Reade Street. Of the five fragments, two were faunal and three were indeterminate. In addition to the bone fragments, eighteenth, nineteenth, and twentieth century ceramics, glass, and metal artifacts were recovered. The collection also included modern plastic and trash, testifying to the disturbed nature of the deposits.

Supervision of the utility line excavation revealed no evidence of intact human remains or any other type of significant deposit. The fill deposits removed were clearly disturbed and of no cultural significance. No identifiable human bone fragments were noted, and the total amount of bone of any description recovered was quite small. Clearly, the premise put forward in the discussion in section 3.2 above (i.e., that disturbed fill would be present at least to design depth) was borne out by the results of the supervision and screening.

4.0 CONCLUDING SUMMARY

In all, eight full or partial days were spent in the field during the course of the supervision of the catch basin and electrical line installation. During this period approximately 15 cubic yards of excavated material from the two areas were screened. Nine bone fragments were recovered from the two locations, including four faunal fragments and five indeterminate fragments. All excavated fill deposits having the potential to contain human bone fragments or other items of potential significance were screened, and all recovered bone was wrapped and stored in acid-free paper. The ultimate disposition of the recovered bone fragments and artifacts awaits guidance from the GSA and the LPC.

The archeological and physical anthropological supervision of the utility line work in Reade Street indicates that there is little potential for the presence of intact human remains or other significant resources at depths less than 12 feet below grade. Supervision of the catch basin work at the intersection of Duane and Elk Streets demonstrates that the strata beneath the sidewalk at this location are highly disturbed. No deep excavation in the streetbed took place here, but it is likely (based upon the data recovery conducted in the 290 Broadway Block) that intact deposits are also at least 12 feet deep or more at this location. These interpretations of the depth of potentially significant resources are relevant to the areas examined, but clearly are not necessarily valid for other locations. Most noteworthy, of course, are the intact human burials noted at 2.5 feet below present grade by Epperson (1993) just one block south of Reade Street, on Chambers Street.

In conclusion, it is recommended that, as part of the permit review process, some degree of archeological supervision should accompany any utility line work conducted in the African Burial Ground and Commons Historic District. This might range from screening operations as described above (i.e., in instances where it is believed that construction is unlikely to adversely affect intact burials), controlled archeological testing (e.g., in areas of the African Burial Ground and Commons Historic District, such as on Chambers Street -- not in the 290 Broadway Block project area -- where intact burials are documented as being quite shallow),

to more full-scale data recovery (i.e., in instances where the predicted level of intact burials appears to be coincident with unavoidable impact from construction, utility installation, or utility repair).

5.0 REFERENCES CITED

- Epperson, Terrence E.
1993 Tweed Courthouse Utilities Status Report on Archaeological Investigations. Report on file at Landmarks Preservation Commission, New York.
- Gilbert, B. B.
1973 Mammalian Osteo-Archaeology: North America. Missouri Archeological Society, Columbia, MO.
- Howard University and John Milner Associates 3
Research Design for Archeological, Historical, and Bioanthropological Investigations of the African Burial Ground (Broadway Block), New York, New York. Report prepared for General Services Administration. Howard University, Washington, DC and John Milner Associates, Inc., West Chester, PA.
- Ingle, Marjorie, Jean Howson, and Edward S. Rutsch
1990 A Stage IA Cultural Resource Survey of the Proposed Foley Square Project in the Borough of Manhattan, New York, New York. Report prepared for Edwards and Kelcey Engineers, Inc. Historic Conservation and Interpretation, Inc., Newton, NJ.
- John Milner Associates
1993 Archeological and Physical Anthropological Supervision of the Installation of Consolidated Edison Electrical Conduit along Reade Street at the African Burial Ground, 290 Broadway, Lower Manhattan, New York. Summary Report. Report prepared for Edwards and Kelcey Engineers, Inc. and General Services Administration. John Milner Associates, Inc., New York.
- Parrington, Michael, Daniel G. Roberts, and Thomas A. J. Crist
1994 Archeological and Physical Anthropological Supervision of the Installation of Utilities on Reade Street and Duane Street at the African Burial Ground, 290 Broadway, Lower Manhattan, New York. Report prepared for Edwards and Kelcey Engineers, Inc. and General Services Administration. John Milner Associates, Inc., New York.
- Stewart, T. D.
1979 Essentials of Forensic Anthropology. Charles C. Thomas, Springfield, IL.
- Ubelaker, D. H.
1989 Human Skeletal Remains: Excavation, Analysis, Interpretation. Manuals on Archeology 2. Taraxacum, Washington, DC.

FIGURES

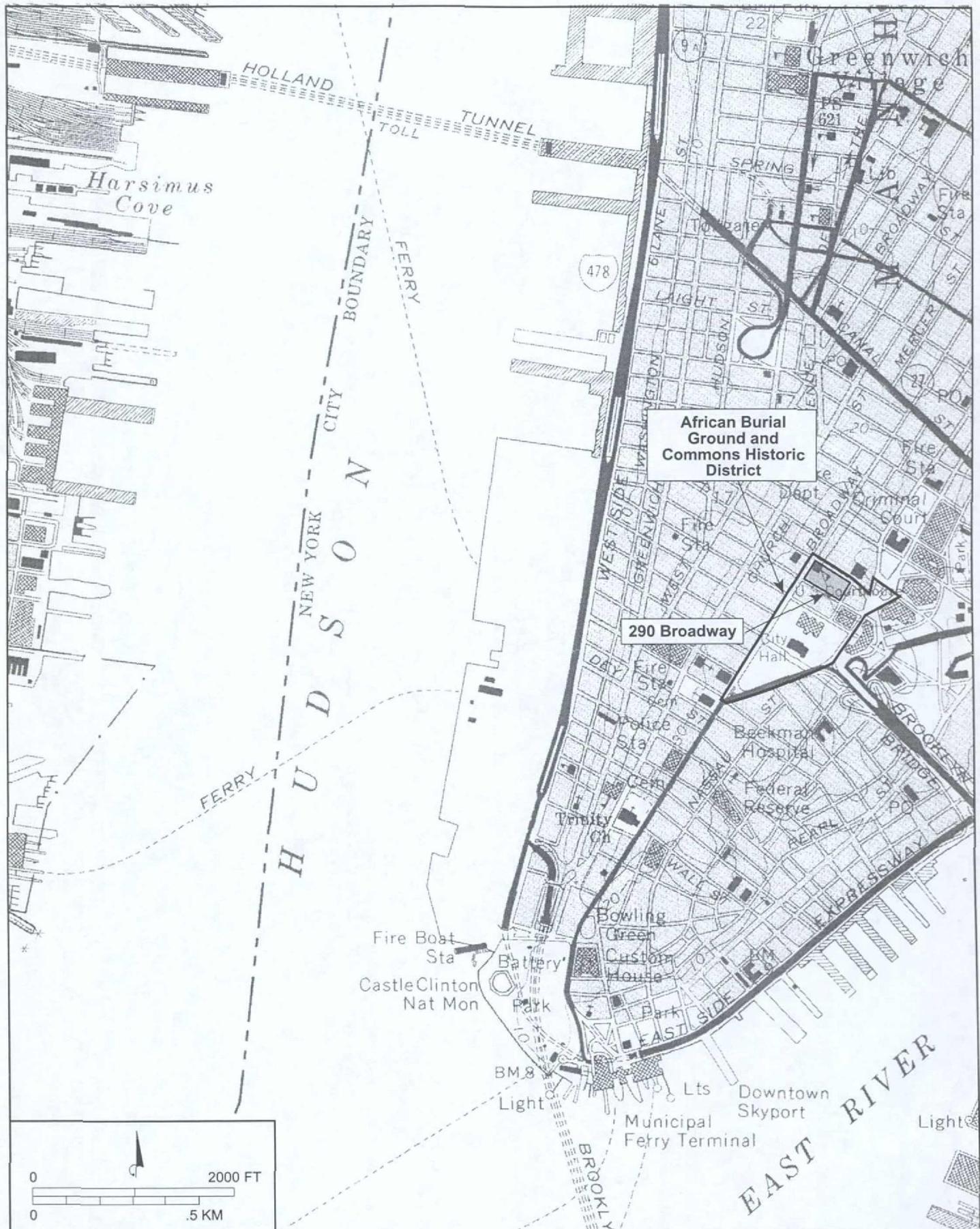


Figure 1. Project Area Location (Detail of Jersey City, N.J.-N.Y.
7.5 Minute Quadrangle; USGS 1967, Photorevised 1981)



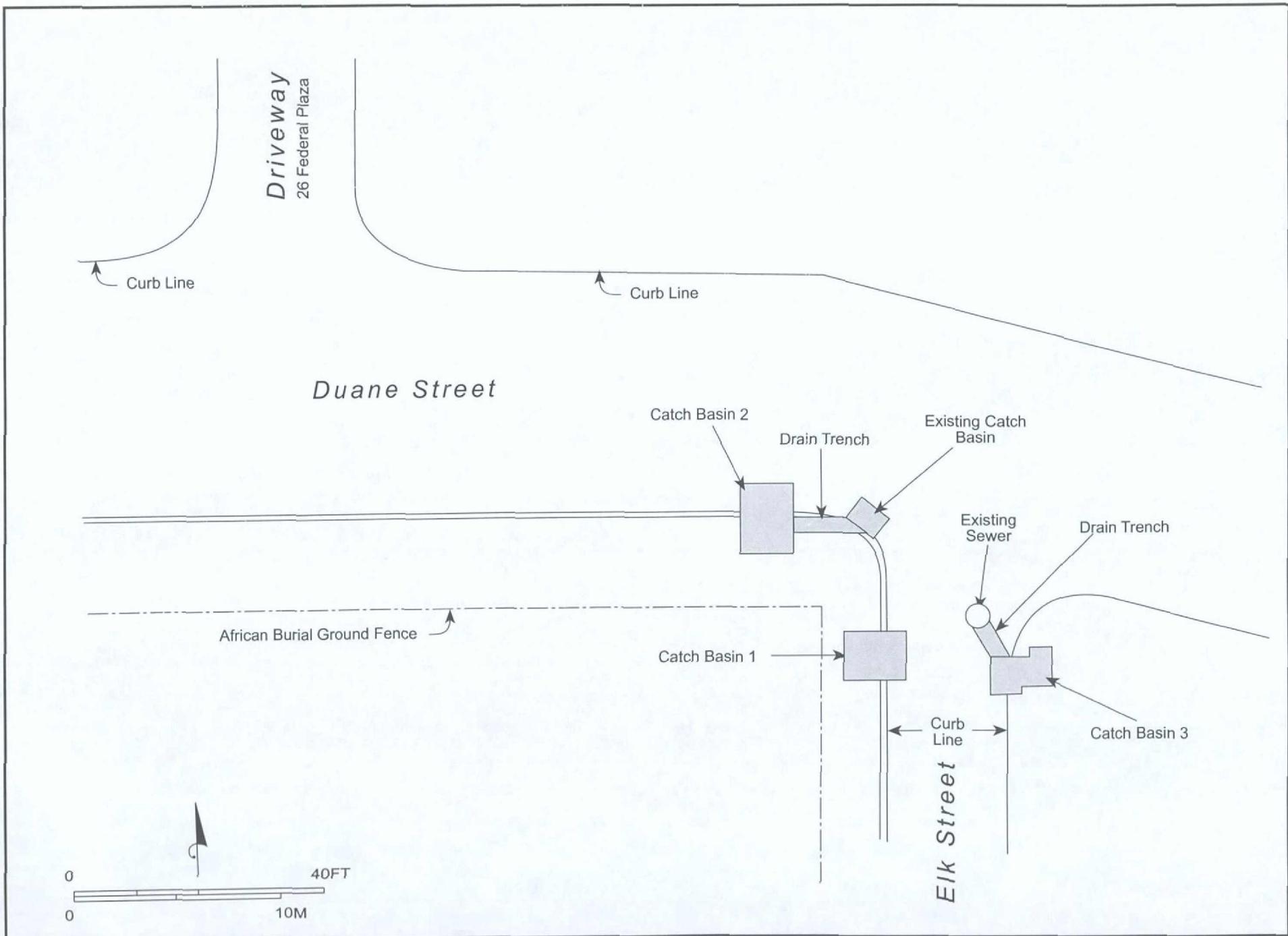


Figure 2. Duane/Elk Street Catch Basin and Drain Trench Locations

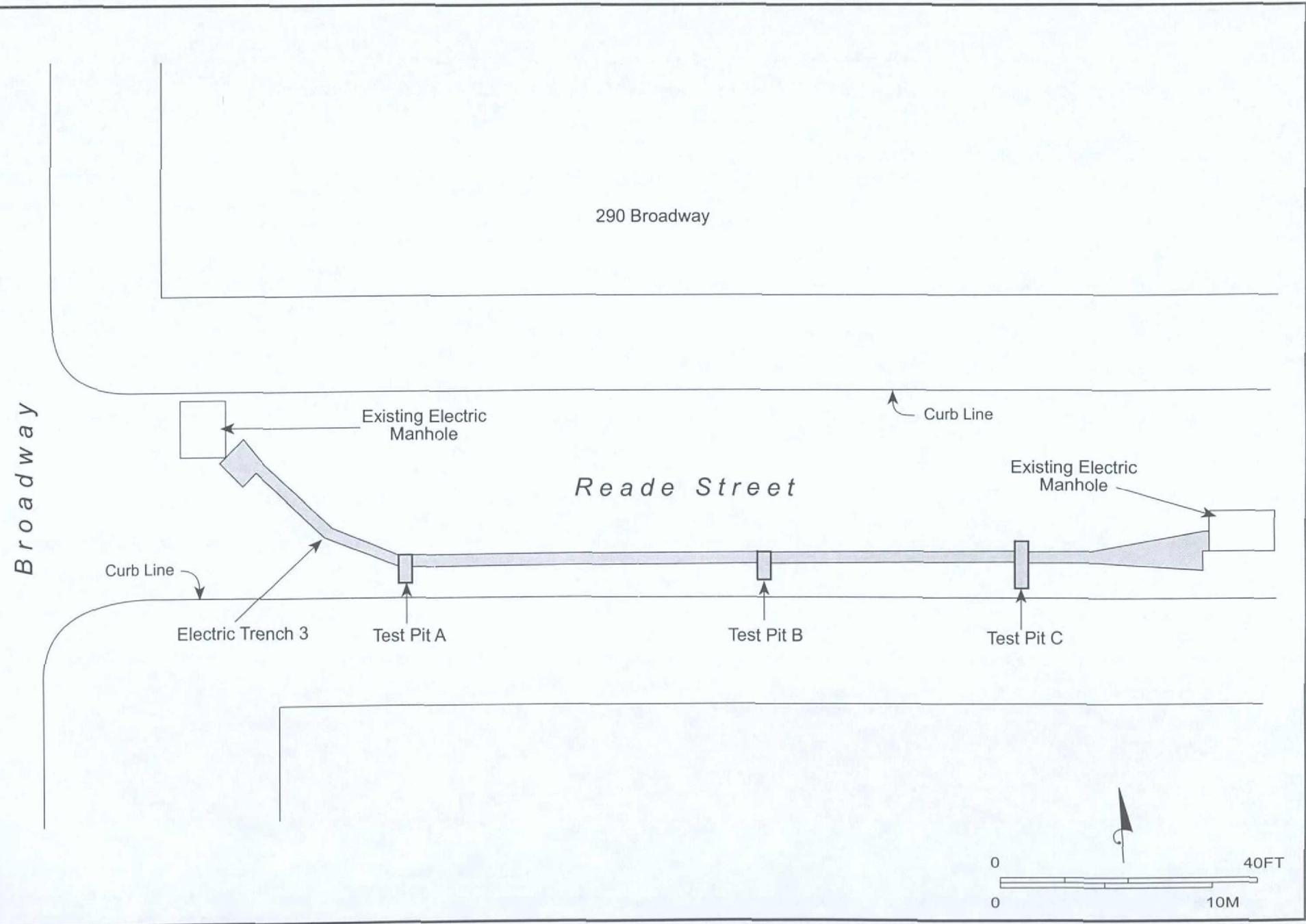


Figure 3. Reade Street Electric Trench Locations

APPENDIX A:

**LANDMARKS PRESERVATION COMMISSION REPORT ON THE
AFRICAN BURIAL GROUND AND THE COMMONS HISTORIC DISTRICT**

APPENDIX A



THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
225 BROADWAY, NEW YORK, NEW YORK 10007 PHONE (212) 533-1100

93 SEP 27 PM 4:09

R E P O R T

09/24/93

290 Broadway

Manhattan

54

1

94-0975

DATE
SR94-0023

ADDRESS
African Burial Ground and the Commons

BOROUGH

BLOCK

LOT

DOCKET NUMBER

REPORT NUMBER

HISTORIC DISTRICT/NAME OF BUILDING

LP NUMBER

SH/AL/T

F-16

LANDMARKS PRESERVATION COMMISSION

REPORT

With respect to Docket No. 94-0975, a proposal for the installation of utilities, sidewalks, landscaping and street paving, and related excavations along Broadway, Reade Street, Elk Street and Duane Street, as they surround the building at 290 Broadway, located within the African Burial Ground and the Commons Historic District, Borough of Manhattan.

SR94-0023

September 24, 1993

To the Mayor, the Council, the Commissioner of the Department of Transportation:

This report is pursuant to Section 25-318 of the Administrative Code of the City of New York, which requires such a report by the Landmarks Preservation Commission on plans for the construction, reconstruction, alteration or demolition of any improvement or proposed improvement which is owned by the City and is or is to be located on a landmark site or in a historic district or which contains an interior landmark.

The proposed work consists of excavating two trenches on Reade Street, 27'LX3'WX2.6'Deep and 80'LX3'WX2.6'Deep respectively, for the installation of electrical conduits (Layout Drawing S91-4448-1M); excavating one 100'LX4.6'WX3'Deep trench on Duane Street for the installation of a security link (GSA Drawing "Proposed Conduits" 9/7/93); excavating one 24'LX6"WX12'Deep trench on Reade Street for the installation of a steam pipe (Steam Mains & service plate file #16 No.529-2 and layout S91-9030); modifying, upgrading and constructing catch basins with excavations varying from 7' to 12' deep depending upon the location (Paving Plans MP91-47, dated 3/4/92, sheets 1/12 thru 12/12, and sheets 1/8 thru 8/8); excavating two trenches on Broadway, 3'LX3'WX4'Deep and 5'LX1'WX2.6'Deep respectively, for the relocation of a lamppost (Plan MP91-47, sheet 2 of 12, dated 3/4/92; Plan MP91-47, Construction details sheet 2 of 8, dated 3/4/92; and utility plan

drawing #2-C-010, dated 6/28/93); excavating two trenches on Duane Street, 3' LX3'WX4'Deep and 15'LX1'WX2.6'Deep respectively, for the relocation of a lamppost (Plan MP91-47, sheet 4 of 12, dated 3/4/92; Plan MP91-47, Construction details sheet 2 of 8, dated 3/4/92; and Utility Plan Dwg. #2-C-010, dated 6/28/93); excavating two 3.5'wide X 3' deep trenches, one on Reade Street and the other on Duane Street for the installation of telephone lines (NYTEL Dwg. #T-290, dated 9/8/93); and installing sidewalks, granite paving, handicap ramps, granite curbing, steel faced curbing, tree pits, subbases and underdrains, Z-block crosswalk pavers, and asphalt street paving, requiring maximum excavating to 6'deep (Builders Paving Plans MP91-47, dated 3/4/92, sheets 1/12 thru 12/12, and sheets 1/8 thru 8/8), as shown in drawings and specifications cited above, received with the application dated September 8, 1993 submitted by the United States General Services Administration as components of the application.

In reviewing this proposal, the Commission notes that the African Burial Ground and The Commons Historic District designation report states that this portion of lower Manhattan has undergone intense public use since the mid-seventeenth century, resulting in the overlay of many significant historic improvements and resources -- both above ground and below -- all of which document the changing nature of the important area long devoted to communal, public, and civic purposes. The designation report also states that, within the district, the African Burial Ground is historically significant in that it is one of the few preserved eighteenth-century African burial grounds in the Americas; and that it reflects the establishment at an early date of the parallel society of Africans in New York City, which had one of the largest urban populations of Africans in the American colonies. The report also cites the significance of structures related to the civic uses of the Commons. The Commission further notes that existing pavements surrounding 290 Broadway are concrete and asphalt.

With regard to the proposal, the Commission finds that the sidewalks and streetbeds to be excavated are composed of modern materials and are not significant features of the African Burial Ground and Commons Historic District and that the proposed work will not require the removal of or damage to any significant above-ground features of the district. The Commission also finds that, in regard to the proposed excavation for a gas line in Duane Street, Robert Collegio of the General Services Administration has stated that there are no plans to run in gas service and thereby no plans at present to excavate the gas line trench specified in the application. If, in the future, plans to install gas service are finalized, the Commission finds that excavation associated with laying pipe for gas lines will require a new application and review process.

In regard to excavation for the relocation of lampposts along Broadway, the Commission finds that any previously existing

archaeological deposits have been destroyed by the installation of the subway tunnel under Broadway; that there is no probability of encountering intact human burials or archaeological deposits; and that no archaeological work is indicated.

In regard to the excavation of: 1) two trenches in Reade Street for the installation of electrical conduits; 2) one trench in Duane Street for the installation of the security link; 3) two trenches in Duane Street for the relocation of lampposts; and 4) two trenches on Reade and Duane Streets, respectively, for the installation of telephone lines, the Commission finds that the probability of encountering intact human burials or archaeological deposits is minimal; that the proposed depths of these trenches are less than 6 feet; that there are approximately 7-10 feet of fill under the street pavement in these areas; that archaeological material or human remains in disturbed context may be present in these areas. The Commission recommends that archaeological monitoring be conducted under the supervision of a SOPA-certified archaeologist; that a physical anthropologist be available for on-site consultation; that a sample of soil be sifted to recover artifacts and fragmentary human remains; that the provenance of such finds be recorded; that if intact burials are encountered, excavation will cease immediately pending consultation with the Landmarks Preservation Commission; that initial processing of any material recovered be undertaken in the laboratory of the consulting archaeologist; that any human remains be wrapped in standard acid-free tissue, placed in perforated plastic bags and stored temporarily in standard acid-free boxes; and that, for analytical and curatorial purposes, all artifacts and human remains encountered be considered a part of the previously excavated Broadway Block collection.

In regard to the excavation of a 12-foot deep trench for the installation of a steam pipe from Reade Street into 290 Broadway, the Commission finds that this area is within the boundaries of the African Burial Ground; that the base of the trench will extend below the probable fill deposits and twentieth century disturbance associated with installation of utilities; that, in many cases, late nineteenth century basements on this block did not penetrate the fill, thereby protecting archaeological resources beneath these deposits; that human burials recovered during previous archaeological investigation were found at depths ranging from 16-28 feet, below the projected base of the steam pipe trench; that the probability of encountering intact human burials is low because of the depth of the planned trench, but cannot be discounted. The Commission recommends that archaeological monitoring be conducted under the supervision of a SOPA-certified archaeologist; that a physical anthropologist be available for on-site consultation; that all excavated soil be sifted to recover artifacts and fragmentary human remains; that the provenance of such finds be recorded; that if intact burials are encountered, excavation will cease immediately pending consultation with the Landmarks Preservation Commission; that initial processing of any material recovered be undertaken in the laboratory of the consulting archaeologist; that

any human remains be wrapped in standard acid-free tissue, placed in perforated plastic bags and stored temporarily in standard acid-free boxes; and that, for analytical and curatorial purposes, all artifacts and human remains encountered be considered a part of the previously excavated Broadway Block collection.

In regard to the excavation to depths of 8 and 12 feet, respectively, to install three catch basins at Duane and Elk Streets, the Commission finds that this area is immediately outside the line of the Van Borsum patent, considered to be the boundary of the African Burial Ground; that it is not unlikely that human burials occurred outside this boundary; that, in addition, this area supported potteries during the eighteenth and early nineteenth centuries and that evidence of this activity was uncovered during prior archaeological investigation; that this area of Block 154 is considered to have high archaeological potential; that there is a high probability for encountering archaeological material associated with pottery production and moderate probability for encountering intact human burials. In light of these factors, the Commission recommends that excavation by professional archaeologists under the supervision of a SOPA certified archaeologist be conducted; that excavation be done by hand, by controlled stratigraphic methods, with full recording and sifting of all soil to recover artifacts and any fragmentary human remains; that if intact burials are encountered, excavation will cease immediately pending consultation with the Landmarks Preservation Commission; that if twentieth century fill deposits are encountered, the excavation will be conducted by shovel, or, in certain circumstances, machine, with only a small sample screened; that a physical anthropologist will be available for on-site consultation during the excavations; that initial processing of any material recovered be undertaken in the laboratory of the consulting archaeologist; that any human remains be wrapped in standard acid-free tissue, placed in perforated plastic bags and stored temporarily in standard acid-free boxes; that, for analytical and curatorial purposes, all artifacts and human remains encountered be considered a part of the previously excavated Broadway Block collection.

Furthermore, the Commission recommends that proper procedures be undertaken for the treatment and analysis of human remains following excavation, and that these procedures require that the General Services Administration provide for stabilization and storage of all artifacts and human remains in a climate controlled setting with adequate temperature and moisture controls, until such time as their final disposition be determined; that all archaeological material be analyzed under the supervision of a SOPA certified archaeologist; that a full report of the findings of the archaeological excavations and analysis be submitted for the Commission's review; and that the report provide forensic identifications, meeting current professional standards, of any human remains recovered during the excavations.

Based on these findings, and provided that the recommendations outlined above are followed, the Commission determines the proposed work to be appropriate to the historic district.



Laurie Beckelman
Chair

cc: L. Riccio
F. Addeo
B. LaGreca
Art Commission
City Record
Alan Greenberg, USGSA
M. Urban
J. Olshansky
J. Woodoff
G. Santucci
S. Dublin
D. Presa

APPENDIX B:

**PROTOCOL AND SCOPE OF WORK FOR
ARCHEOLOGICAL AND PHYSICAL ANTHROPOLOGICAL SUPERVISION OF THE
INSTALLATION OF CATCH BASINS AT DUANE AND ELK STREETS,
290 BROADWAY,
LOWER MANHATTAN,
NEW YORK**

**PROTOCOL AND SCOPE OF WORK FOR ARCHEOLOGICAL AND
PHYSICAL ANTHROPOLOGICAL SUPERVISION OF THE
INSTALLATION OF CATCH BASINS AT DUANE AND ELK STREETS
290 BROADWAY, LOWER MANHATTAN, NEW YORK**

February 28, 1994

Introduction

This Protocol addresses the archeological and physical anthropological supervision of the installation of catch basins at portions of the African Burial Ground at 290 Broadway, which is located within the African Burial Ground and the Commons Historic District in Lower Manhattan. John Milner Associates (JMA) will provide supervision of this activity as required by the New York City Landmarks Preservation Commission Report of September 24, 1993, and as supplemented by additional provisions contained in this Protocol.

Description of Project Area

The project area addressed by this Protocol consists of the intersection of Duane and Elk Streets in the vicinity of 290 Broadway. Within the streetbed at this location three catch basins and associated drains are to be constructed as described below.

Each catch basin will have dimensions of approximately eight feet by eight feet, and will be approximately ten to twelve feet deep. Each catch basin will have an associated drain which will entail the excavation of a trench fifteen feet long and three feet wide. The depth of these trenches will range from four feet to seven feet, and the total length of the three drainage trenches will be forty-five feet. These specifications are derived from a telephone conversation of February 28, 1994, between Michael Partington (Principal Archeologist) and Robert Collegio (Project Engineer).

Scope of Services

It is understood that archeological and physical anthropological supervision of all catch basin work will be required of JMA. It is also understood that this may require up to eight weekend days in addition to normal working hours. One or more principal archeologists and physical anthropologists will be on site at all times, as appropriate, to supervise and control the excavation of all catch basins. In addition to supervisory staff, JMA will supply an adequate number of field technicians to perform all necessary field functions. JMA, in consultation with GSA, will ensure that appropriate manpower levels are maintained. These levels will reflect any changes in requirements per discipline to be determined as the effort continues.

The GSA contractor will supply a backhoe of the size normally used for this type of work. A normal bucket with teeth may be used to remove roadbed materials of recent date. These materials may include blacktop, concrete, gravel, and belgian block. Once all roadbed material has been removed a modified bucket or, alternatively, hand excavation will be used in order to best accommodate the required archeological supervision. The modified bucket, if utilized, will have a steel plate welded onto the teeth and completely covering them, so that a smooth edge is available to gently scrape away the fill material below the roadbed. Prior to initiation of work, JMA field personnel will meet with field personnel of the GSA contractor to coordinate all aspects of the work.

Under the supervision of the principal archeologist(s) and/or the physical anthropologist(s), the fill material beneath the roadbed will be mechanically or hand excavated in small increments. These increments most likely will range from one to six inches in thickness, depending on the sensitivity of the area being investigated, and the excavation of such increments will be entirely at the discretion and direction of the principal archeologist(s). The excavation will continue in this fashion until the maximum depth required

for the installation of the catch basin or drainage trench is reached, or if, in the opinion of the principal archeologist(s), hand excavation is required or intact human remains and/or a grave shaft are encountered (see following paragraph).

If any soil discontinuities, apparently undisturbed soils, and/or archeological features are observed by the archeological team during the machine or hand scraping, work will immediately be halted to allow closer examination by the principal archeologist(s) and/or physical anthropologist(s). This may include scraping the soil with small hand tools to define the nature of the anomaly, and recording the anomaly, as appropriate, with photographs and scale drawings. No further scraping will take place until the nature of the anomaly has been identified by the principal archeologist(s). If it is determined that the anomaly is an undisturbed soil deposit that may contain grave shafts and/or intact human remains, or an archeological feature, no further scraping will take place, and all subsequent excavation will be conducted using small hand tools. If articulated human bone reasonably believed to be part of an in situ human burial is uncovered during the excavation, all excavation work in that area will immediately cease, and temporary protective measures will immediately be taken. Consultation will then immediately be initiated with GSA. If any soil discontinuity is determined to clearly represent a grave outline (i.e., the outline of a grave shaft above the level of any human remains that it may contain), then excavations will also cease at that point, and the GSA shall be immediately notified. Neither excavation nor further treatment of any kind shall be initiated in the subject area with regard to intact human remains until and unless a written directive is received from the GSA.

During the field work the excavated fill material will be stockpiled on site in large containers for screening. The GSA contractor will be responsible for transporting excavated fill to the containers. Screening will continue throughout the field work period and may be continued afterwards if, in the opinion of the principal archeologist(s), the material screened and recovered to date warrants continued screening. The purpose of this screening will be to insure that all skeletal remains and significant archeological materials (i.e., artifacts), if present, are recovered. Once the fill material has been sufficiently screened, it may be removed off-site at the discretion of the principal archeologist(s).

It should be noted that the fill (i.e., disturbed overburden) known to be present at the site may contain fragmentary human remains. The original provenience of such fragments can never be known but, given their occurrence in overburden overlying the African Burial Ground, it reasonably can be concluded that such remains were originally interred there and subsequently disturbed by nineteenth and twentieth century development in Lower Manhattan. If fragmentary human remains and/or artifacts of the type typically associated with graves are discovered in the overlying fill materials, such remains will be wrapped in acid-free paper and stored in pH-balanced archival cartons. Shortly after their excavation, such remains will be relocated to the 6 World Trade Center laboratory, along with artifacts clearly not associated with any burial proveniences, for temporary storage pending a final determination on disposition.

It should also be noted that animal bone may be present in the fill deposits. In many cases, physical anthropologist(s) on-site will be able to positively identify the bone as human or animal. However, in those cases where the bone is so fragmentary that a positive identification cannot be made, such skeletal remains will be treated as if they were human, but wrapped and boxed separately.

The Office of Public Education and Interpretation (OPEI) for the African Burial Ground and Five Points Archeological Project will provide on-site Public Educators during all working hours to inform interested members of the public about the purpose of the catch basin project and the archeological process/findings. The Director of the OPEI will consult with GSA's public relations department in coordinating with the Federal Steering Committee and press, as appropriate.

Schedule

Barring inclement weather or other unforeseen delays, excavation will commence on Monday, May 16, 1994, and will continue until the work is completed. This protocol assumes that four consecutive weekends will be required for the GSA contractor's excavations when the street will be closed. JMA staff will continue to work during the intervening week days until all stockpiled fill has been screened.

Report

Under this Protocol, a brief management summary of the work will be supplied by JMA to the GSA. In addition, verbal briefings will be provided to the GSA on a daily basis to keep them informed of the process and findings. At a later date, the results of the field and screening operations will be incorporated into a full report covering all of the results of the catch basin supervision and the supervision of the previous utility lines and associated activities at the site. It should be noted, however, that neither the full report nor laboratory processing/analysis required by the Landmarks Preservation Commission Report of September 24, 1993 are included in this Protocol.

Items/Services to be Provided by Others

The following services and items are critical to the proper conduct of the project and shall be provided by the parties indicated below at no cost to JMA:

General Services Administration/GSA Contractor

- An adequate quantity of lighting devices, and associated electrical power, suitable for a high level of illumination of all areas of work under all field conditions and at all times throughout the fieldwork.
- Access to portable toilet facilities.
- Full time (24 hr. per day) and adequate security for all fieldwork areas for the entire duration of the project, including both physical security measures and security personnel. Physical security devices are anticipated to include, but may not be limited to, access gates with locks, protective fencing of all areas necessary for active archeological work, and general lighting.
- Adequate containers for all soil, screening, and fill materials being excavated (including rentals, operators if needed, removal and disposal of such material).
- Temporary waterproof shelters adequate in size, type, and quantity to protect all active work areas and personnel working therein (including delivery, erection, relocation, and dismantling).
- Secure, weatherproofed area (facility) for the temporary storage of boxed archeological material pending relocation of such material to the World Trade Center laboratory.
- Drainage tubes or other appropriate devices as necessary to divert rainwater from the excavation areas or work sites.
- Sheeting and shoring (labor and materials) for excavations related to the catch basins in compliance with all applicable safety standards.
- Portable heaters (with associated electrical power) of adequate quantities, size, and type to maintain satisfactory working conditions in the temporary shelters, and to maintain removed soils in an unfrozen state.
- Adequate electrical power/service to accommodate any and all of the project requirements.

- Tarps, of adequate size and quantity, for protection of excavated soils pending screening.
- Access to a project (on-site) telephone and running water.
- Controlled, adequate, and secured staging, screening, and storage areas within the proximity of active excavation sites.
- Coordination of project activities with local agencies/authorities and utility companies.
- Backhoe(s) (with modified blades) and operator(s). Refer to 2nd paragraph of Scope of Services for further description of required backhoe blade and scraping techniques.
- Protective steel plating for the temporary covering of all open trenches and pits in compliance with all applicable safety standards and/or archeological requirements.
- Obtain all necessary permits.
- Provide/ensure continuous access (i.e. partial street closing) to excavation areas(s) for the duration of the time necessary to complete the archeological field work.

APPENDIX C:
BONE INVENTORY

by:

**Thomas A. J. Crist
Principal Physical Anthropologist**

DUANE/ELK STREET CATCH BASINS

Inventory Number	Description	Category (human/faunal/indeterminate)
1	Unidentified cortical bone fragment	indeterminate
2	Rib fragment	faunal
3	Unidentified cortical bone fragment	indeterminate
4	Rib fragment	faunal

READE STREET ELECTRICAL TRENCH

Inventory Number	Description	Category (human/faunal/indeterminate)
501	Fragment of unsided proximal ulna with semilunar notch	faunal
502	Unidentified cortical bone fragments (2 pieces)	faunal
503	Unidentified cortical bone fragment	indeterminate
504	Unidentified cortical bone fragment	indeterminate
505	Unidentified cortical bone fragment	indeterminate