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JOHN STREET UNITED METHODIST CHURCH:

AN ARCHAEOLOGICAL INVESTIGATION

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JOHN STREET UNITED METHODIST CHURCH

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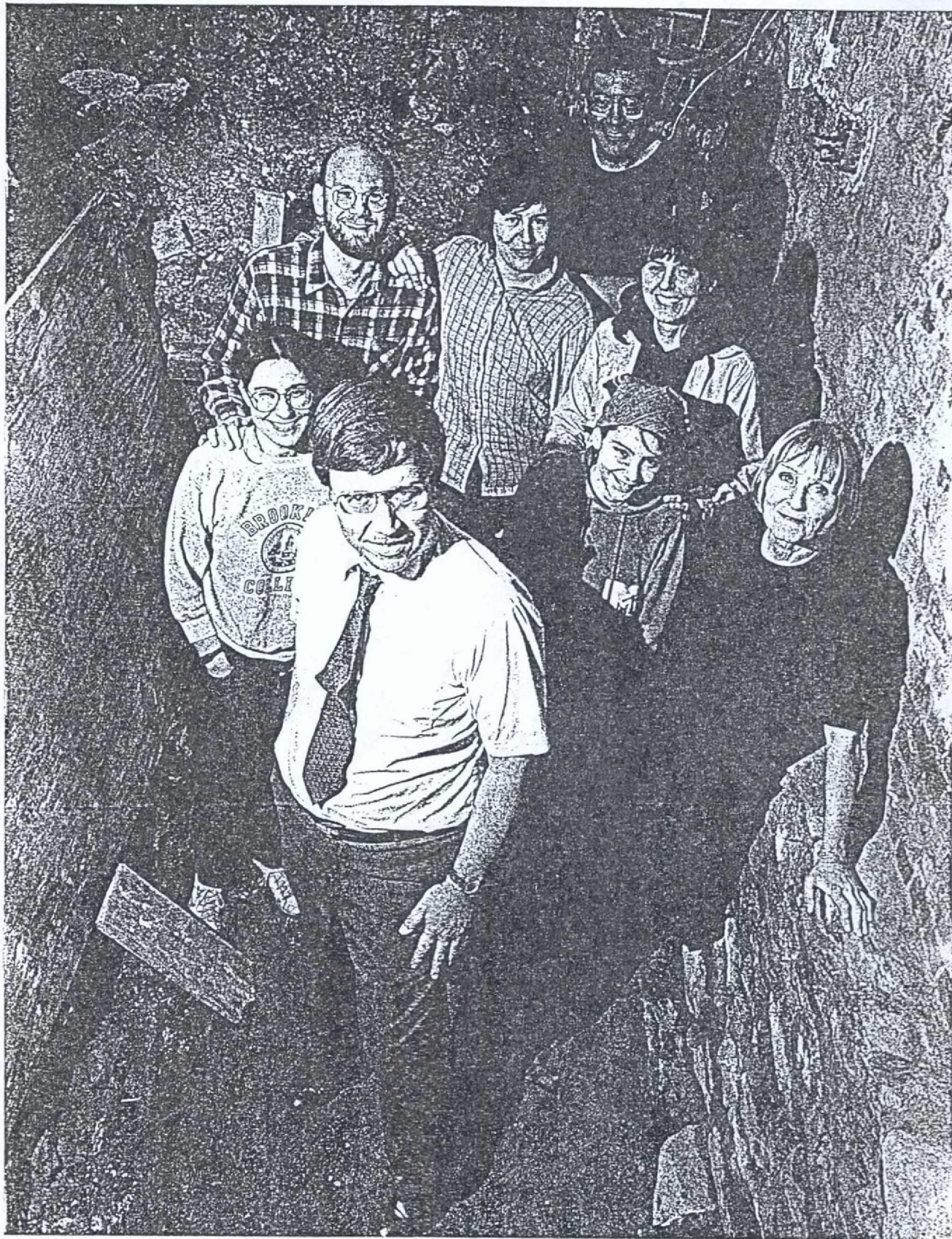


Figure A Reverend Warren L. Danskin (front) with members of the excavation crew (clockwise from top): Paul Kataquatit, Sherene Baugher, Judith Baragli, Louise DeCesare, Carol Pagano, Daniel Pagano, Nancy Stremmel.

CHAPTER ONE: INTRODUCTION

Sherene Baugher
Edward J. Lenik
Judith M. Guston

CHAPTER ONE: INTRODUCTION

This report presents the results of the 1986 archaeological investigation at the Old John Street United Methodist Church in Manhattan which unearthed material associated with the church in the mid-nineteenth century. This was the first religious site to be excavated in New York City. The intensive, three-day fieldwork for this project was conducted during the last weekend in January 1986; this work was undertaken by the City Archaeology Program at the New York City Landmarks Preservation Commission with volunteers from the professional staff of the American Indian Community House in New York City. Laboratory work and report presentation was funded by a grant from the Park Avenue Methodist Church Trust Fund and the John Street United Methodist Church Trust Fund Society and the work was done by the City Archaeology Program.

This report contains background information about the John Street Church site¹ (see Figure 1:1) including the field testing methodology, the results of the excavation, and our interpretations and conclusions.

The Old John Street United Methodist Church is located at 44 John Street in Lower Manhattan (see Figures 1:2 and 1:3). In 1983, the church, a designated New York City landmark, sustained damage to its west wall due to the construction of a new office tower on the site adjoining the Church at 33 Maiden Lane. The trustees of the church received an insurance settlement to cover the restoration costs to the church. In January 1986, construction workers digging in the basement of the church uncovered what

¹ The official name of the church is the "Old John Street United Methodist Church." For brevity the report will refer to the church as the "John Street Church" or "the church."

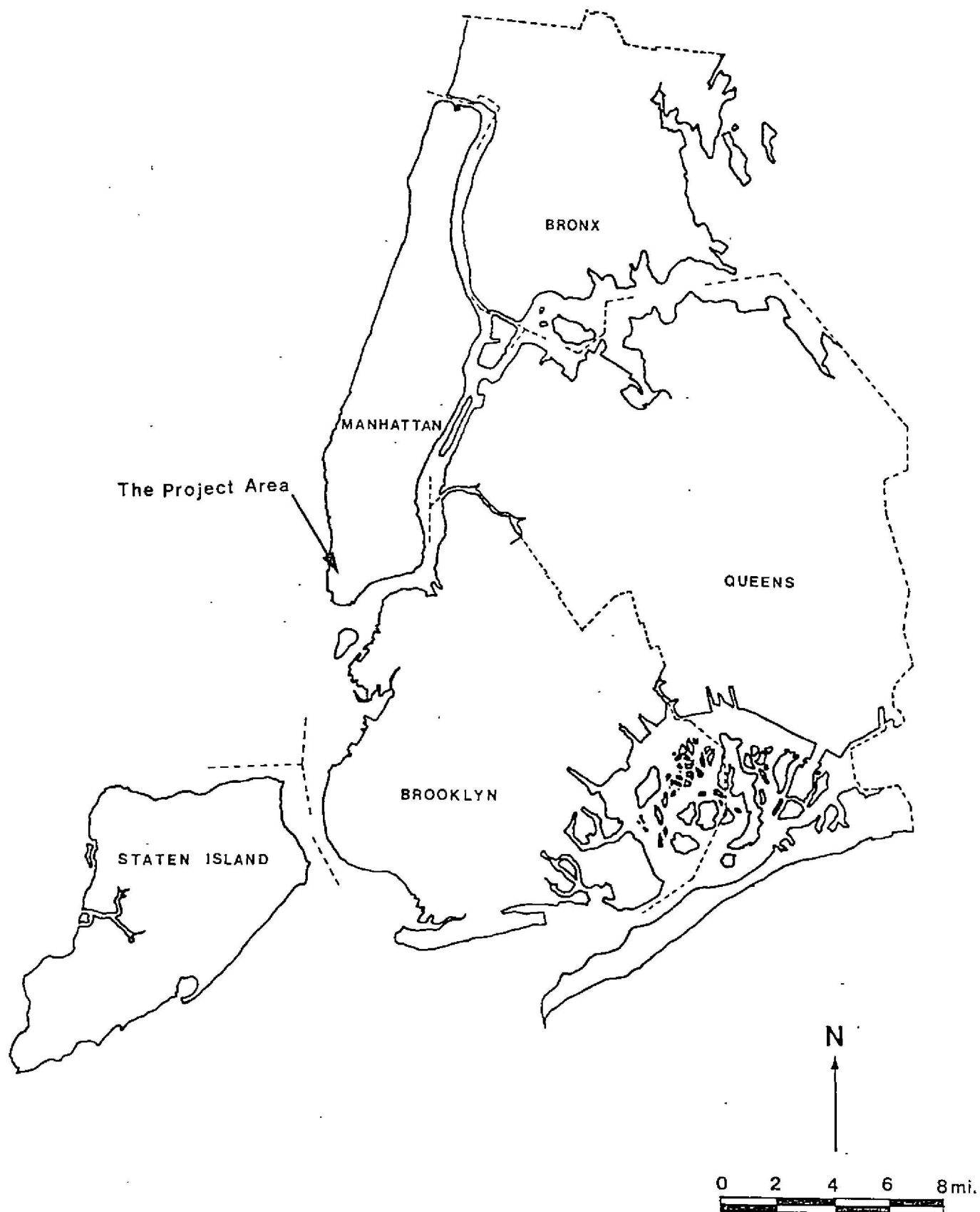


Figure 1:1 Map indicating the location within New York City of the John Street United Methodist Church.

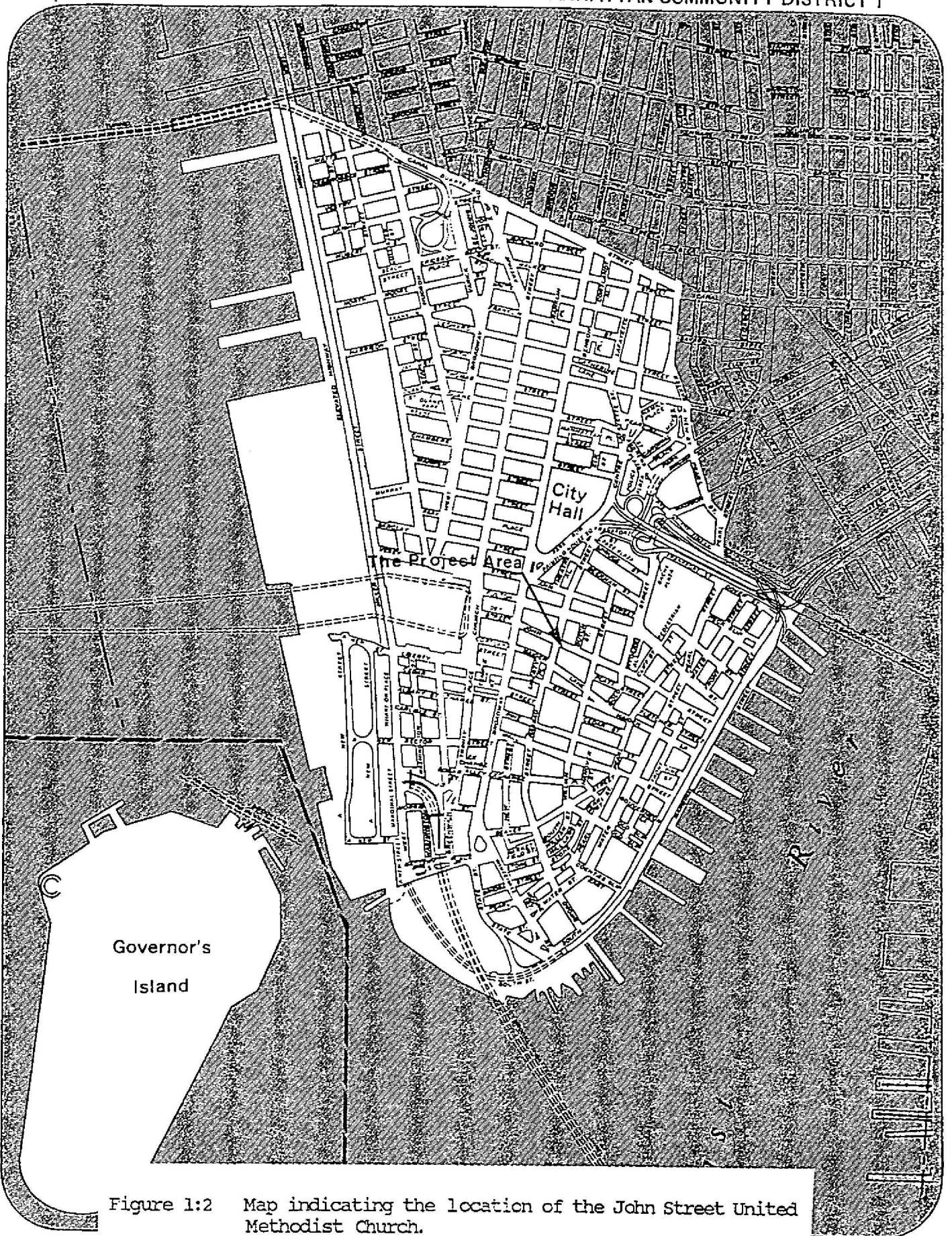


Figure 1:2 Map indicating the location of the John Street United Methodist Church.

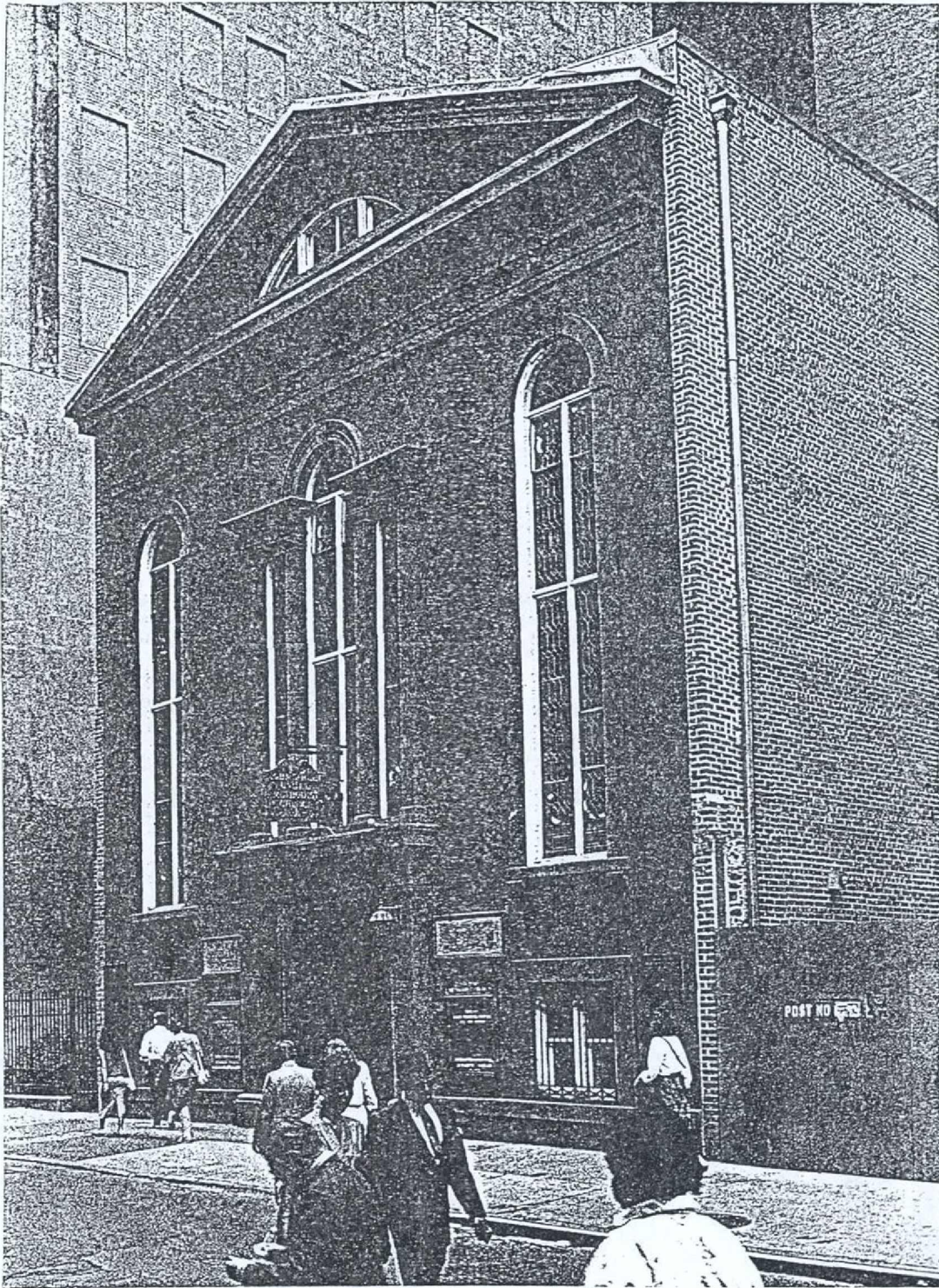


Figure 1:3 View of the John Street United Methodist Church, 1987.
Photograph by Carl Forster.

appeared to be human bones. Rev. Warren L. Danskin, pastor of the church, contacted Dr. Sherene Baugher, Director of the City Archaeology Program to evaluate the find. The bones were human but additional information was needed. The bones were taken to the Hunter College Bioarchaeological Laboratory. Dr. Thomas McGovern, Director of the Laboratory, evaluated the bones and identified them as adult human remains. He added that the bones had been in the ground for at least one hundred years and perhaps much longer.

The project area may have been the site of either European American or Native American burials and it was possible that additional human burials were located in the area slated for construction. The planned new construction to install utility lines and a new floor for the kitchen would disturb five to six feet of ground below the existing basement floor. Therefore, the kitchen site, unless excavated, would be destroyed by the construction. There was only one undisturbed section of the kitchen remaining, and it was this area that was tested by the City Archaeology staff (see Figure 1:4). The area of the basement (in the museum room) containing the human bones had been destroyed already by the construction work before the archaeologists were contacted. Since no further construction was planned for the museum room, no archaeological work was undertaken in this area.

The proposed construction site was archaeologically sensitive because of its potential for containing human remains. The Director of the American Indian Community house, Michael Bush, was contacted to discuss and help plan archaeological work at the site. Rev. Danskin, Mr. Bush, and Dr. Sherene Baugher agreed that the main concern of all parties involved was the proper treatment of the human remains. After discussing with members of the Hunter College Bioarchaeological Lab realistic and reasonable time

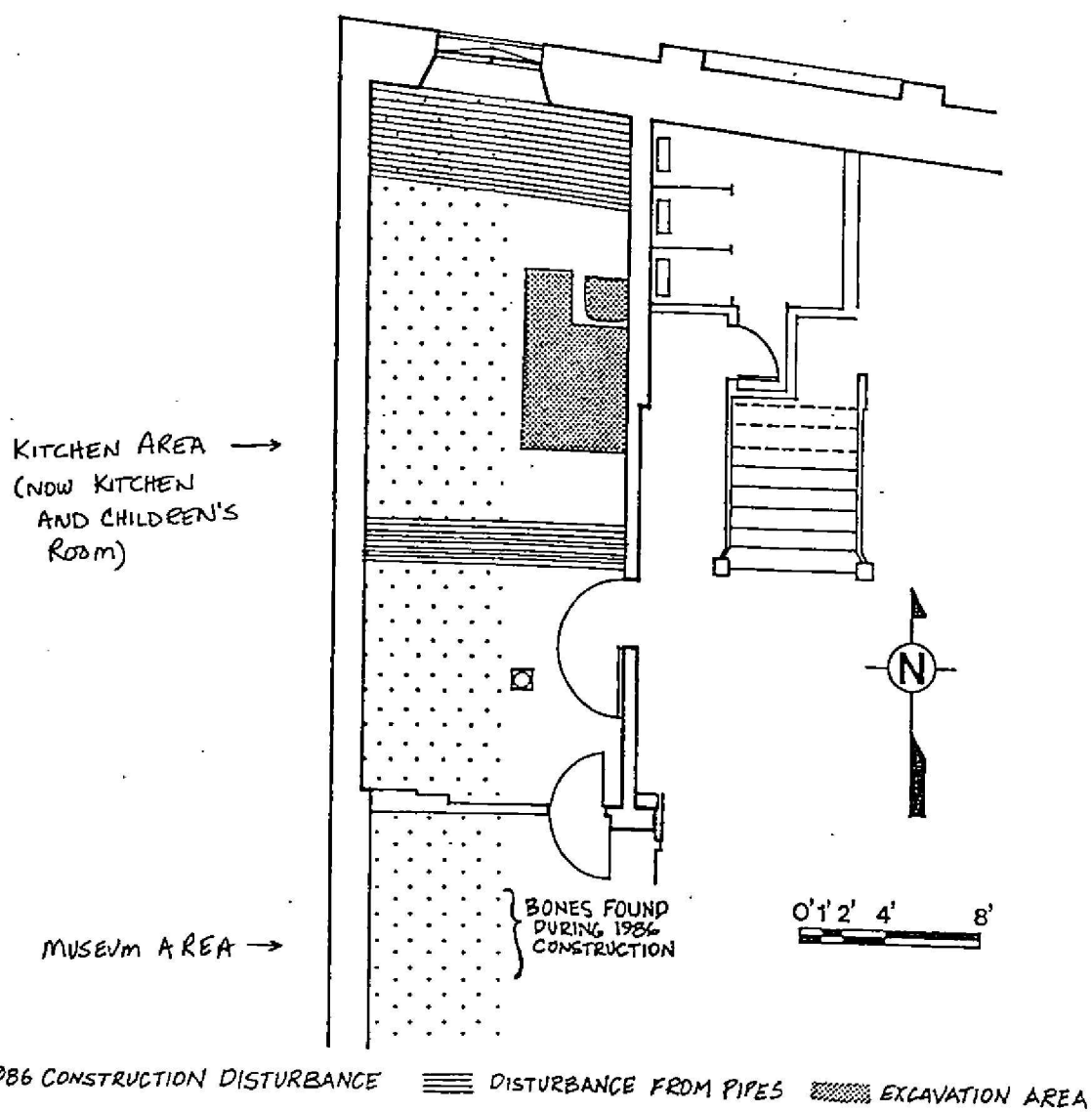


Figure 1:4 Drawing showing area of disturbance and excavation in the small, undisturbed area. Drafted by Louise DeCesare and Eric Rich.

frames for the scientific study of the human remains, it was agreed that the bones and/or bodies would be reburied on the John Street church property within a year of excavation. On November 22, 1986 the bones were reburied beneath the southeast corner of the basement of the church in a joint American Indian and Methodist religious ceremony.

The staff and volunteers from the City Archaeology Program, with volunteers from the professional staff of the American Indian Community House, including the Director, Michael Bush, undertook the excavation of the site. This was the first excavation in New York City where American Indians worked side by side with archaeologists.²

Throughout the project, the ethical and religious concerns of the American Indian and Methodist communities were of prime importance. All concerned parties wanted to protect and preserve the human remains, to treat them with dignity, and to assure a proper reburial. It was agreed that the archaeological work would begin on Friday, January 14, continue through the weekend, and end on the evening of Sunday, January 16, 1986 because construction on this site was to resume on Monday, January 17. The result of the intensive weekend excavation would determine if burials existed in the project area and, if so, how much additional time would be needed to exhume the bodies.

The archaeological excavation did not uncover any human burials. Because of the fragmentary condition of the human bones unearthed by the construction workers, the analyst from the Hunter College Bioarchaeological Lab could not determine if the bones were from one individual or from six

² Over the last ten years there has been a growing antagonism between archaeologists and American Indians over the issue of reburial of human remains. For the most part, the American Indians have not been included in decisions regarding the treatment of Indian remains.

separate individuals (see Appendix B). Furthermore, there was not enough evidence to determine the sex, race (white or Indian), or the exact age of the individual(s) at the time of death. Some of the bones contained old shovel cut marks indicating that the bones had been either reinterred or accidentally moved at least once prior to their being unearthed by construction workers in 1986.

While the intensive investigation did not uncover any burials, it did unearth mid-nineteenth century objects associated with the John Street Church. The artifacts were found in stratified deposits in an area occupied by the second and third churches. The excavation uncovered a total of 598 artifacts, including ceramics, glass, smoking pipes, and metal material. In addition 1433 faunal remains were unearthed. The artifact assemblage was primarily a kitchen deposit including food preparation and service vessels, and faunal remains from former meals.

The artifacts provided information about some of the social activities at the church including the dietary patterns of its members. The artifactual deposits could be linked with the known use of the site through church records. The artifacts provide insights into Methodist church socials in the mid-nineteenth century.

The artifacts, copies of the report, field notes, and catalogue sheets will be housed in the Old John Street United Methodist Church. This information can be used for educational and interpretive programs in the church's Wesley Chapel Museum.

CHAPTER TWO: THE HISTORY OF THE JOHN STREET CHURCH SITE

Judith M. Guston
Diane Dallal
Edward J. Lenik

CHAPTER TWO: THE HISTORY OF THE JOHN STREET CHURCH SITE

This chapter traces the history of the land on which the John Street Church stands. It will outline both ownership and use of this property over time (e.g., building, demolition, construction projects, cemetery use) to the extent that records are available, from the earliest documented ownership to the time of the archaeological excavation in 1986. The chapter is divided into the following time periods: the site prior to 1640; the history of the site, 1640-1768; the history of the Methodists in New York and the building of the first church (Wesley Chapel), 1768-1817; the second church, 1817-1841; and the third church, 1841-present.

The Site Prior to 1640

In order to assist in the evaluation of the findings at the John Street Church site, we have examined early maps of Manhattan and have attempted to reconstruct the topography and physiography of the area prior to its settlement. The Townsend MacCoun Map of The Island of Manhattan, drawn in 1909, depicts the landscape as it appeared in 1609 including elevations, streams, marshes, and the original shoreline (see Figure 2:1). This map is based on early colonial surveys plus the survey of 1861 by E.L. Viele.

The MacCoun Map (1909a) shows a stream coursing from west to east along present-day Maiden Lane and emptying into the East River. Another stream is shown flowing from north to south near present-day William Street and joins the aforementioned stream near the present southwest corner of Maiden Lane and William Street (see Figure 2:1). The area of present-day John Street is depicted as an elevated terrace at the juncture of these two streams. A marsh is present a short distance to the north-northeast of the

John Street Church site and the East River is nearby as well. On another compilation map, MacCoun (1909b) shows "Golden Hill" which is located immediately to the east of the church site (see Figure 2:2).

Based on our previous archaeological research in New York City, we have determined that landscape topography and surface water are primary environmental characteristics used to locate Native American sites. In general, Native American sites have a high probability of occurring on flat, well-drained land in close proximity to water (see, for example, Lenik 1990). Native American sites in New York City have been found on river and stream banks, adjacent to ponds and marshes, and on terraces. The pre-urban landscape of the John Street Church site is identical to the Native American settlement pattern found elsewhere in New York City. Therefore, we conclude that there is a high probability that Native American occupation may have occurred in the vicinity of the present-day John Street Church.

The History of the Site 1640-1768

In the mid-seventeenth century, when New York City was Dutch-owned New Amsterdam, the land on which the John Street Church now stands was part of the plantation owned by Dutch Colonial Secretary Cornelius van Tienhoven. He had received the land bounded (in modern terms) by Broadway on the west, the East River on the east, Ann Street on the north, and Maiden Lane on the south (Stokes 1915-1928 vol. IV: 102)¹ as a grant from Willem Kieft, Director of the New Netherland Colony, in 1644. The Castello

¹ Wherever Stokes is cited in place of documents detailing conveyances, Stokes has made reference to specific documents, but they are not available as cited in either the New York City Surrogate Court House or the New-York Historical Society.



Figure 2:2 Manhattan Island at the Close of the Revolution Showing the American City with Its Landmarks and the Revolutionary Fortifications on the Island, by Townsend MacCoun, 1909, depicting 1783.

Plan (see Figure 2:3) indicates that the land contained no structures as of 1660. Structure number nine (9) in the northernmost section of the key to this plan (see Figure 2:4) is just south of modern Maiden Lane (Stokes 1915-1928 vol. II: 341), so the John Street Church site would have been just north and west of this structure, as shown, and would have been in the middle of what appears to be a field.

Upon Tienhoven's death in 1667, the land was confirmed by colonial Governor Nicolls to Tienhoven's heirs and creditors (document cited in Stokes 1915-1928 vol. I: 237 and vol. IV: 256). The executors of Tienhoven's widow's estate, Peter Stoutenburg and Jan Vinge, then conveyed what remained of the property to Jan (John) Smedes, a carman, in 1671 (Collections of the New-York Historical Society 1914: 9-10). This deed described the land as "a Certaine farm or Bowry...together with a dwelling house, Barne, orchard, Cornfield & pasture ground." The deed is the earliest description of the use of this land, but the exact location of these buildings is not known.

Smedes, in two separate deeds--1673 (Collections of the New-York Historical Society 1914: 10-11) and 1675 (document cited in Stokes 1915-28 vol. I: 237)--transferred his land to four shoemakers and leather tanners, Conraet Ten Eyck, Caarsen Leursen, Jacob Abramse, and Jan Herberding. One shoemaker is identified elsewhere as Charles Lodwick, but the others remain the same people--Carsten (Caarsen or Charles) Leersen, Abraham Santford (Santvoort or Standford), and John Harpendink (Harpending)--with frequent variations in spelling (Seaman 1892: 27; Stokes, vol. I: 237. plate 24A). The land then became known as "Shoemakers' Field" or "Shoemakers' Pasture." The name suggests that there might have been a leather industry within this large parcel of land. Tanning vats are mentioned in a deed dated 1696 (Liber Deeds XXVIII: 136), but their exact location is not known. Although

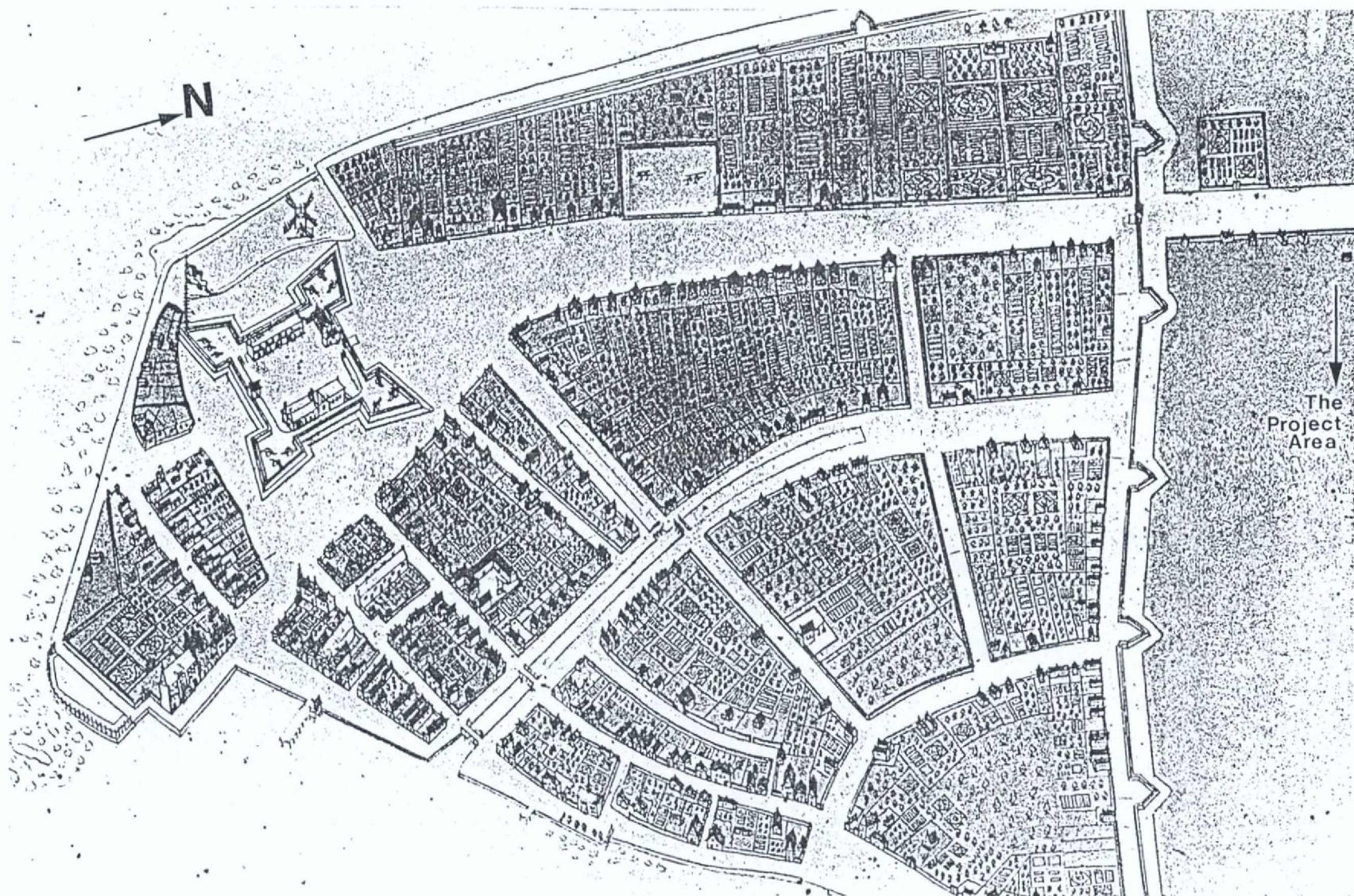


Figure 2:3 Afbeeldinge van de Stadt Amsterdam in Nieuw Neederlandt (The Castello Plan), copied by unknown draftsman from an original drawing by Jacques Cortelyou, probably 1665-70, depicting summer of 1660 (Stokes, vol. II, c. plate 82).

KEY TO CASTELLO PLAN

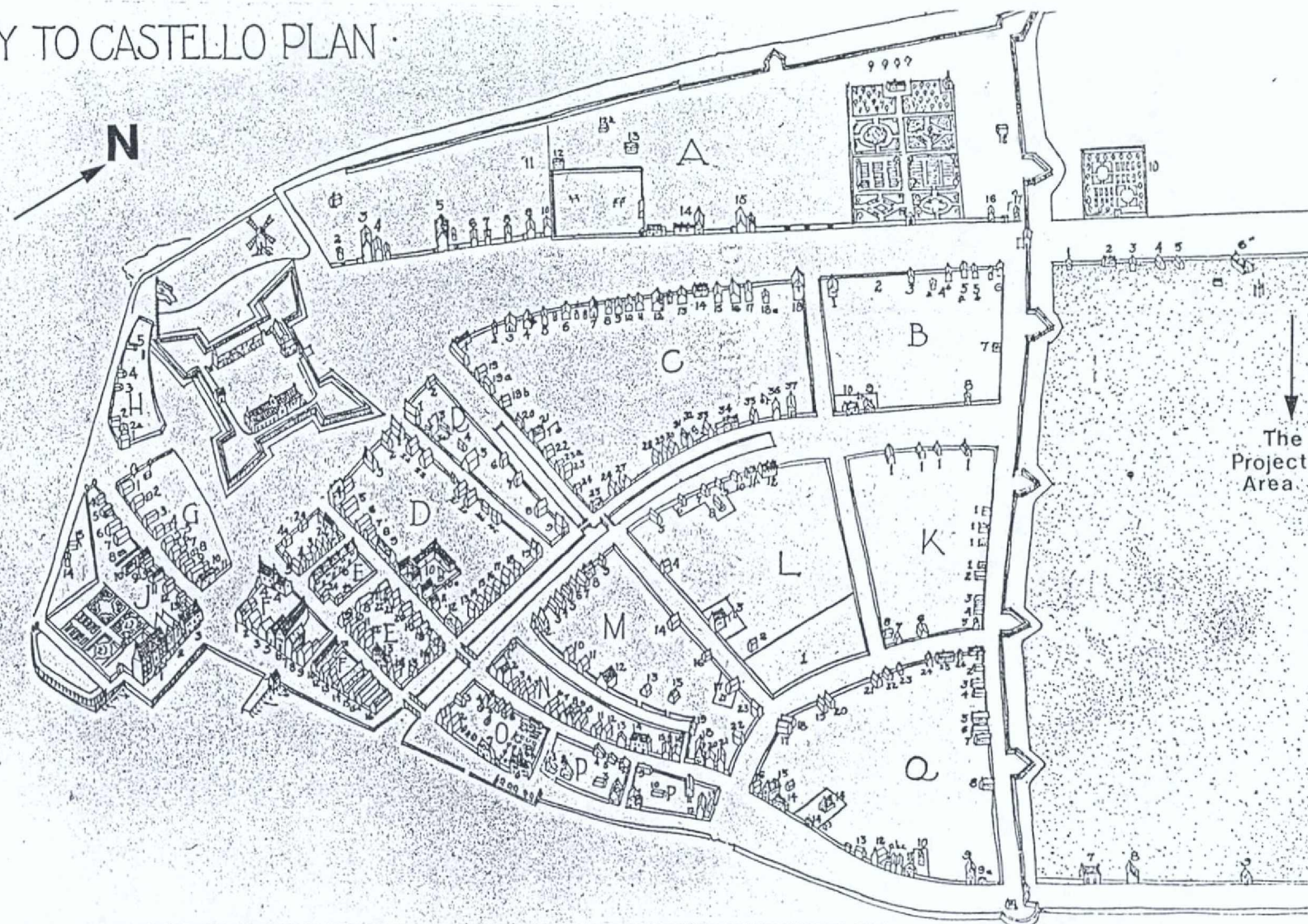


Figure 2:4 Key to The Castello Plan (Figure 2:3). (Stokes, vol. II, C plate 82e).

tanning was no longer permitted within the city as of November 1, 1676, the shoemakers' land remained outside of the city limits at that time (Stokes 1915-28 vol. IV: 310).

The land was, according to the 1673 deed, originally divided equally among the four shoemakers; however, the owner of an adjacent parcel of land, Heiltje Clopper, the widow of Cornelius Clopper, added her land to theirs and, in 1696, the five of them began a commercial enterprise: they had the land divided into 164 standard lots available for rental and building (Stokes 1915-28 vol. I: 237; Minutes of the Common Council of New York City, August 27, 1695). Each of the five owned a share of these lots (Liber Deeds XXVIII: 128-46). Figure 2:5 is a map of the land as it was divided in 1696. The notes on this map state that Abraham Stanford owned lot 112 and Heiltje Clopper owned 113 which together would comprise the original John Street Church site. The deed itself, however, states that Charles Lodwick, and not Heiltje Clopper, owned lot 113. Stokes indicates the existence of an unnamed second map of this land (other than that shown in Figure 2:5) but refers to it as the map in Liber XXVIII-- a map attached to the deed itself--which appears to be the same map (see Figure 2:5) to which he first referred. It is possible that the notes on this map (see Figure 2:5) were incorrectly transcribed from the deed, thus accounting for the difference in owner. By the time of this deed (1696) the street on which the site is located had been named "John Street." The map does not indicate land use of any of the lots, but we do know that some unspecified lots were used for tanning (see above).

By 1730 (see Figure 2:6) a small structure appears to have been built on the site. There is no description of this building, nor any indication of its function. By 1735 (see Figure 2:7) this structure's existence is

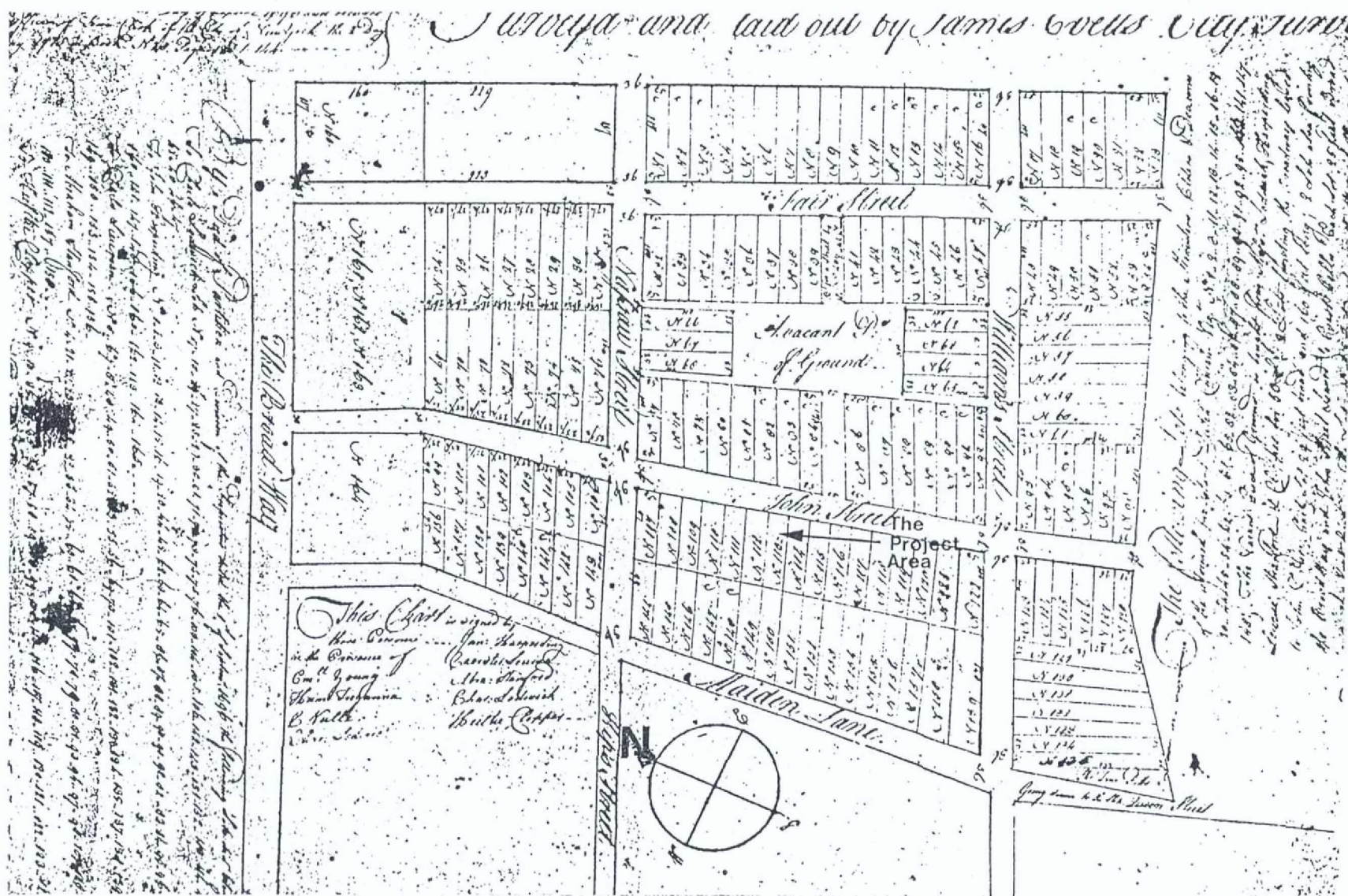


Figure 2:5 A Map or Chart of a certain Tract of Land Commonly Call'd the Shoemakers Land (Etc.), by James Evetts, City Surveyor, no date, depicting September 14, 1696 (Stokes, 1915-28, vol. I, pl. 24).

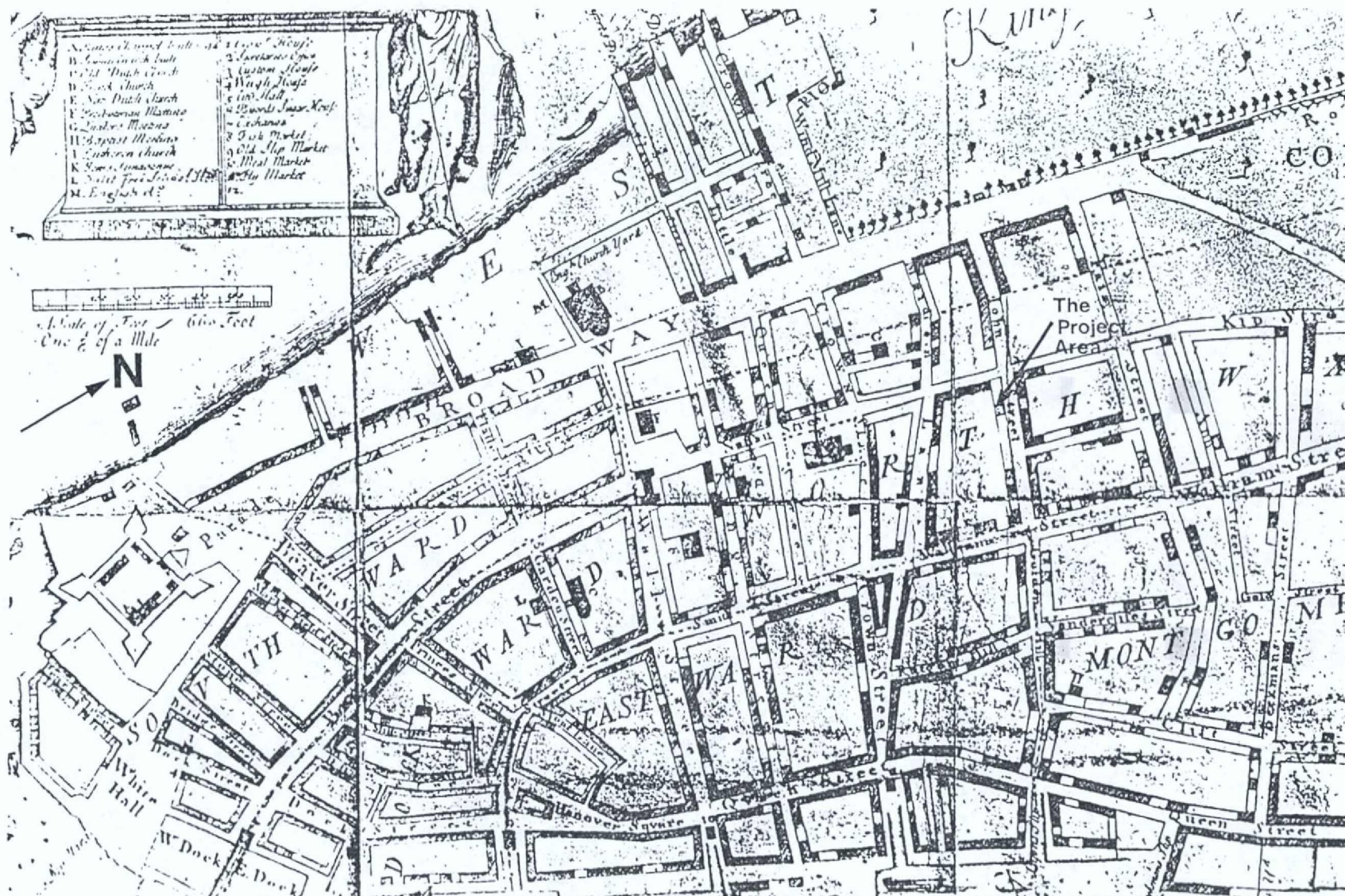


Figure 2:6 A Plan of the City of New York from an Actual Survey made by James Lyne (The Bradford Map or the Lyne Survey), cartographer unknown, 1731, depicting 1730 (Stokes, 1915-28, vol. I, pl. 27).

uncertain; the Plan of the City of New York in the Year 1735 may depict the same building, but its placement is slightly different from that in the 1730 Bradford Map. By 1742 (see Figure 2:8) there is a row of small structures fronting John Street, possibly including the original building. As late as 1766-67 (see Figure 2:9), the land appears to contain no major structures, although only a few appear anywhere on the Ratzer Map.

Ten Eyck passed his lots to his heirs (New-York Historical Society, vol. II, p. 170). John Harpending, commonly thought to have given his name to "John Street," willed his lots in 1723 to the Dutch Reformed Church (New-York Historical Society, vol. II, p. 283). Neither abstracts of wills (at the New-York Historical Society) nor records of conveyances by sales or mortgage (at the New York City Surrogate Court House) yield any evidence of the transference(s) of lots 112 and 113 from Lodwick (or Clopper) and Santvoort/Santford to their eventual owner, Anthony Rutgers. The records available (Re-Indexed Conveyances Prior to 1917, vol. 8) date the original division of the larger property to 1715, nineteen years later than the 1696 deed (on file in the same office) that describes this conveyance, and, in addition, they allot one of the two John Street site lots to two different owners. These owners, however, are Lodwick and Santvoort (Sautvoort here), the same owners named in the 1696 deed. After the supposed 1715 partition, the records completely omit the two lots that make up the John Street site. They do, however, list many nearby lots as having been purchased by Anthony Rutgers between 1726 and 1742, which may suggest that he purchased the two John Street site lots as well.

Anthony Rutgers willed his estate to his wife, Cornelia, in 1746 (New-York Historical Society, vol. IV, p. 91), except for eight lots on Maiden Lane which he passed directly to his grandson (these lots are not specified by number). Cornelia, in turn, passed a parcel of her land to



Figure 2:8 A Plan of the City and Environs of New York (Grim's General Plan), by David Grim, 1813, depicting 1742-4 (Stokes, 1915-28, vol. I, pl. 32a).



Figure 2:9 Plan of the City of New York, In North America
 (The Ratzer Map), by B. Ratzer, 1776, depicting 1766-7
 (Stokes 1915-28, vol. I, pl. 41).

Mary and Henry Barclay, her daughter and son-in-law, in 1760. Mary Rutgers Barclay became the owner of this land upon her husband's death and in 1768 sold lots 112 and 113 (see Figure 2:5) to Philip Embury and others (Deed, 1768, John Street Church). The text of the deed describes the size of these lots and the ownership of all surrounding land.²

In summary, prior to 1768 there is no evidence of any permanent structure on the John Street Church site other than a small building of unknown use constructed fronting the road named John Street. It was probably built between 1660, when the site was in an empty field, and 1730, when this structure appears on the Bradford Map. In the late seventeenth century, a tanning industry may have been present in the general area of the site, but its exact location is not known. It could not have remained in this location for long because the tanning industry was pushed further and further away from the growing city.

Methodists in New York and the Building of Wesley Chapel, 1768-1817

Methodism, a movement within the Church of England led by John Wesley (1703-1791), first came to North America in the 1760s when Irish Methodist laypersons organized local societies in New York and Maryland. Westley

² The two extant deeds currently in the possession of the John Street Church represent the original sale, in 1768, and a subsequent conveyance, in 1770, to a new trustee board of Wesley Chapel for perpetual use of this land for Methodist preaching. One source (Wakeley 1858: 55) claims that the land was first leased and then purchased from Mary Barclay; he accounts for three documents--one lease (1768) and two deeds of sale (1768, 1770). Although other sources address this supposed lease (Lapp 1977; Seaman 1892), they are referring only to Wakeley's statement as their source and state that they have not seen any such document. Wakeley's history is regarded by most modern Methodist historians as highly anecdotal and prone to occasional inaccuracy. It is possible that there may have been a previous lease agreement and the Old Book, the first financial records of the New York Methodist Society, does state once (August 1, 1769) that "ground rent" had been paid.

himself had come to the colonies in 1736 to convert the Yamacraw Indians in Georgia, a mission that he considered a failure and which prompted his return to England. Philip Embury, one of Wesley's Irish converts, and a large group of other Pallatinates, German-descended residents of the area around Limerick, Ireland, immigrated to New York in 1760 aboard the ship "Pery" (also "Perry"). Organized Methodist worship began, according to Methodist tradition, when one of the Pallatinates, Barbara Heck, disrupted a card game, which she viewed as a sign of moral decay, and then, in a righteous furor, demanded that Philip Embury, her cousin and former lay preacher, preach to these new immigrants. He agreed to do so and the first Methodist meeting occurred in 1766 at Embury's home at 10 Augustus Street (see Figure 2:10). When the congregation grew, the Methodists moved their meeting place, first to a rented room on Barracks Street (now under the Brooklyn Bridge entrance) and then to a sail rigging loft at what is currently 120 William Street (Seaman 1892: 25).

When the congregation grew beyond the capacity of this loft, the Methodists' leaders raised funds to purchase land on John Street on which to construct a permanent meeting house. According to tradition, the architect of Wesley Chapel was Barbara Heck herself, inspired by a "divine" plan (Lapp 1977: 119; Wakeley 1858: 66). There is no other evidence of a building plan or planner. There are, however, numerous entries in the Old Book, the congregation's first record book, for purchases of materials and payment for labor on the part of several members, Philip Embury among them (Old Book, August 17, 1769 and following). It is clear that the chapel was constructed by the Methodists themselves.

The most famous view of the original Wesley Chapel (see Figure 2:11) was painted sometime between 1817 and 1844 by Joseph Beekman Smith, an artist who saw and rendered all three churches built on this property.



Figure 2:10 "First Methodist Meeting in America." Oil painting by J.B. Whittaker, 1884. Wesley Chapel Museum, John Street United Methodist Church.

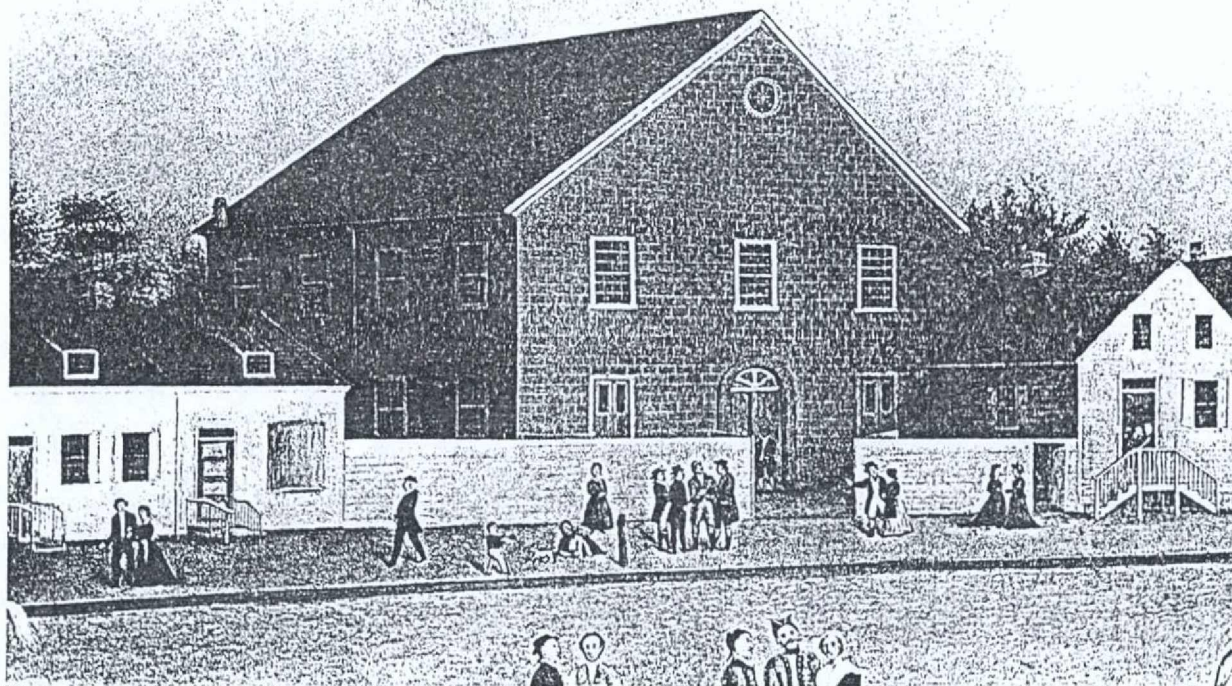
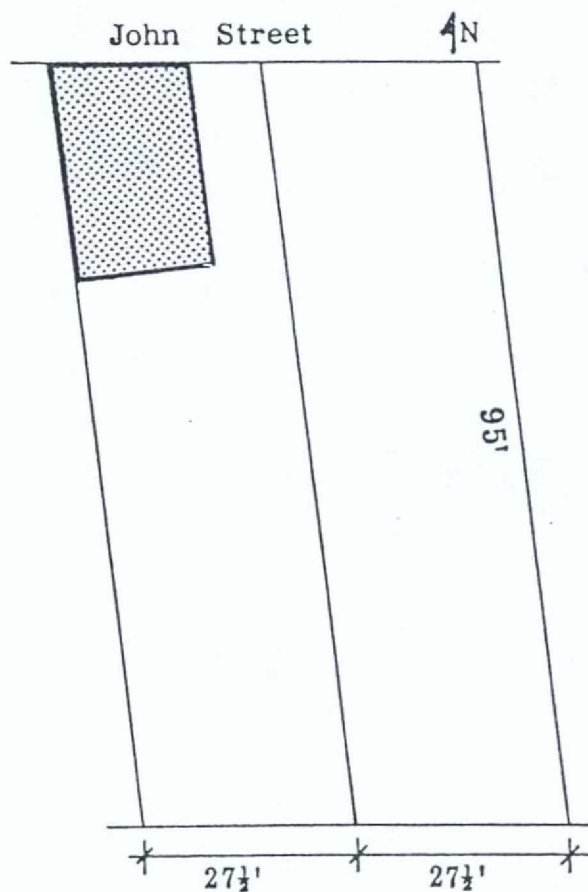


Figure 2:11 "Wesley Chapel on John Street - 1768." Oil painting by Joseph Beekman Smith, c. 1817 - 1844. Wesley Chapel Museum, John Street United Methodist Church.

The structure was sixty feet in length and forty-two feet wide and stood a step above street level; the original ground level was higher than the expected street level and, although the chapel was built a few steps below ground level, it was not low enough to match the street level once the street was graded. The walls were stone covered with blue plaster. The chapel was in use before its actual completion; ladders to the galleries were later replaced by stairs and gallery entrances were added to each side of the main chapel doorway (Wakeley 1858: 108; Seaman 1892: 38-9). There were benches on the main floor and the gallery had no seats. A wood stove immediately in front of the pulpit was the sole source of heat. The building's capacity was around seven hundred people (Seaman 1892: 40).

Numerous repairs were made to the structure including carpentry, masonry, glazing, painting, and the construction of a fence, payments for which are catalogued in the Old Book (1779 and following). Expenses for supplies for the chapel are also listed in these records including the purchase of a griddle and gridiron and spoons (October 30, 1789), which may indicate the presence of a kitchen within the chapel.

Immediately northwest of the chapel was the parsonage, an old Dutch-style house which seems to have been on the property (see Figure 2:12) at the time of the purchase (Lapp 1977: 125). Perhaps it was the structure that appears on the site as of the 1730 Bradford Map (see Figure 2:6). the parsonage housed the preacher, usually an itinerant, for the time he was assigned to the Wesley Chapel, as well as the sexton, or caretaker, of the chapel. The parsonage had a rear door and steps (see Figures 2:13 and 2:14) which led across a brick courtyard to the church (Wakeley 1858: 219; Lapp 1977: 125). The Old Book details furnishings purchased or borrowed for use in the parsonage including creamware plates, wine glasses, burnt china



John Street Property - January 1768
This map indicates the boundaries
of the parcels when purchased from
the Barkley estate.

Figure 2:12 Drafted by Raynor R. Rogers.

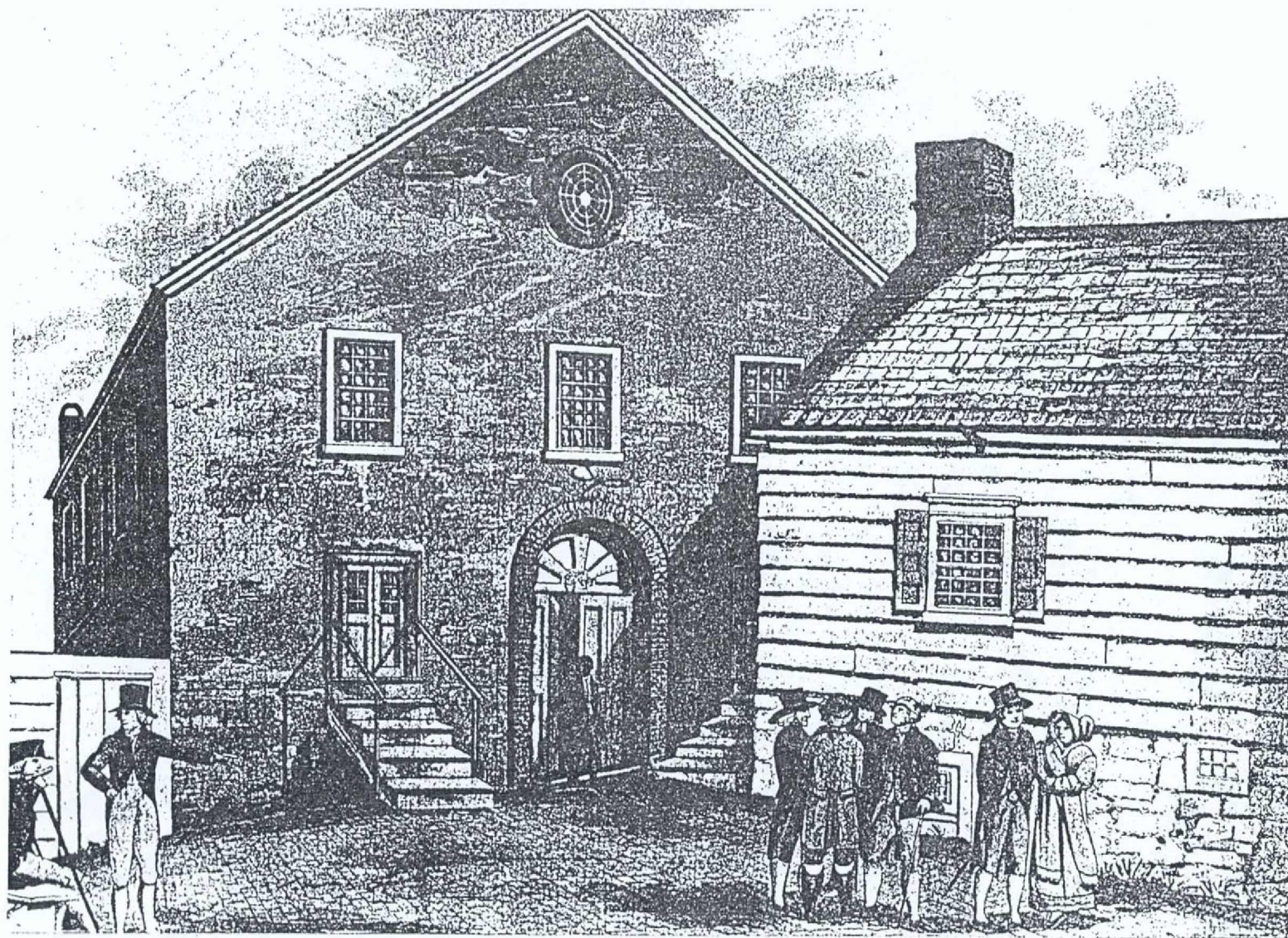


Figure 2:13 "A Correct View of the Old Methodist Church in John Street N. York." Colored aquatint by I. (J.) B. & P.C. Smith, 1824, depicting 1768 (Stokes, 1915-28, vol. I, pl. 43).

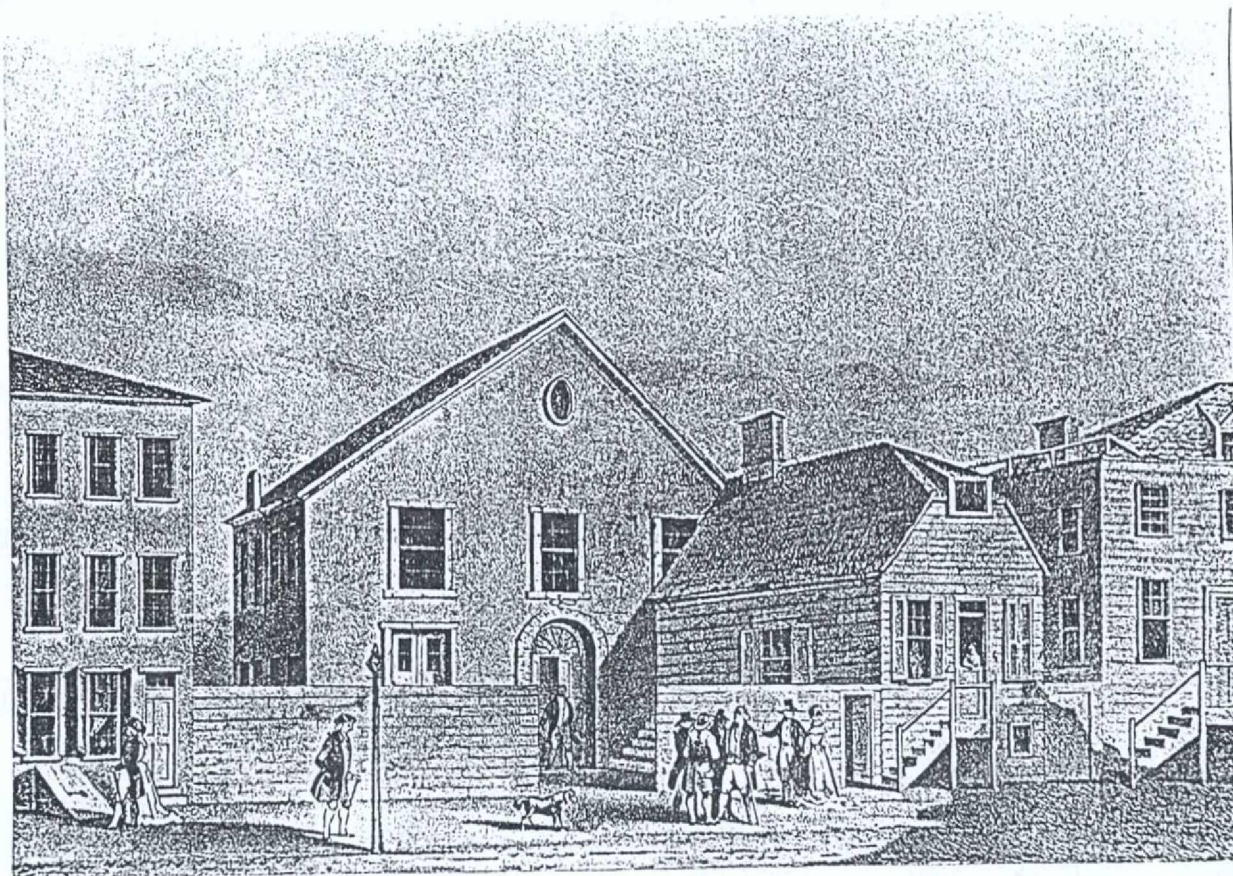


Figure 2:14 "The First Erected in America Founded A.D. 1768."
Lithograph, first panel of triptych by J.B. Smith, 1844.
Wesley Chapel Museum, John Street United Methodist Church.

plates, silver teaspoons, a copper kettle, forks, knives, etc.

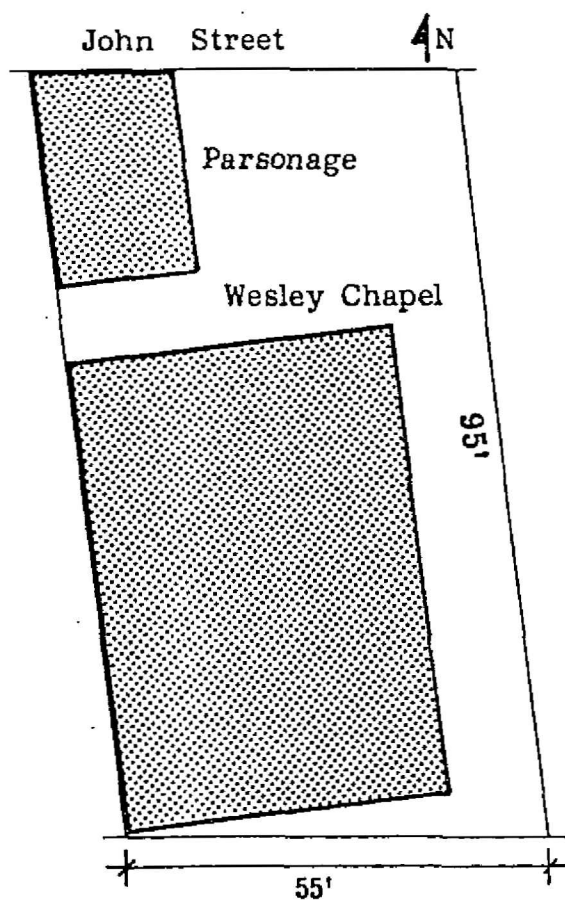
In Wakeley's history he states that "the lot connected with John-street preaching-house was the first place the Methodists used for a burying-ground in New-York, and they had vaults under the church edifice. They did not bury there long." (Wakeley 1858: 451). "The lot connected with John-street preaching house" (Wakeley Chapel) would have been the narrow eastern portion of lot 113 (see Figure 2:15) as it was the only part of the Methodist's land not covered by the chapel. Wakeley is the only source in which a graveyard is mentioned.

Underground vaults, however, are mentioned in a listing of all Methodist burying grounds; no graveyard is listed for the Wesley Chapel but vaults were a regular feature of early Methodist structures (Seaman 1892: 491). By the end of the eighteenth century, Methodists generally stopped placing burial grounds in or near their churches as it was considered improper to "bury dead where living congregate." (Seaman 1892: 181).

The possibility of vaults beneath the Wesley Chapel is highlighted by several anecdotes. William Lupton, one of the original owners of the land and a trustee of the chapel, was supposedly interred in its vaults:

In 1817, when the old church edifice was torn down...they disturbed the dead...Some of their bones were gathered together and buried under one end of the church, and others were removed and interred in burying grounds. Among others, they removed from the vault...the remains of William Lupton... (Wakeley 1858: 330)

The anecdote describes the opening of Lupton's vault, and the reported emanation from the vault of a peculiar groan, characteristic of Lupton while he was alive. Tradition also tells us that Philip Embury, the first preacher of Wesley Chapel and one of its builders, constructed Lupton's coffin for placement in this vault (Lapp 1977: 127). The Old Book records payment to Embury for "Boards & Carpenters Work, for the door of my Vault." (Old Book, first page—date has been destroyed). In this



John Street Property - October 1768
This map indicates how Wesley Chapel,
upon completion, occupied the site.

Figure 2:15 Drafted by Raynor R. Rogers.

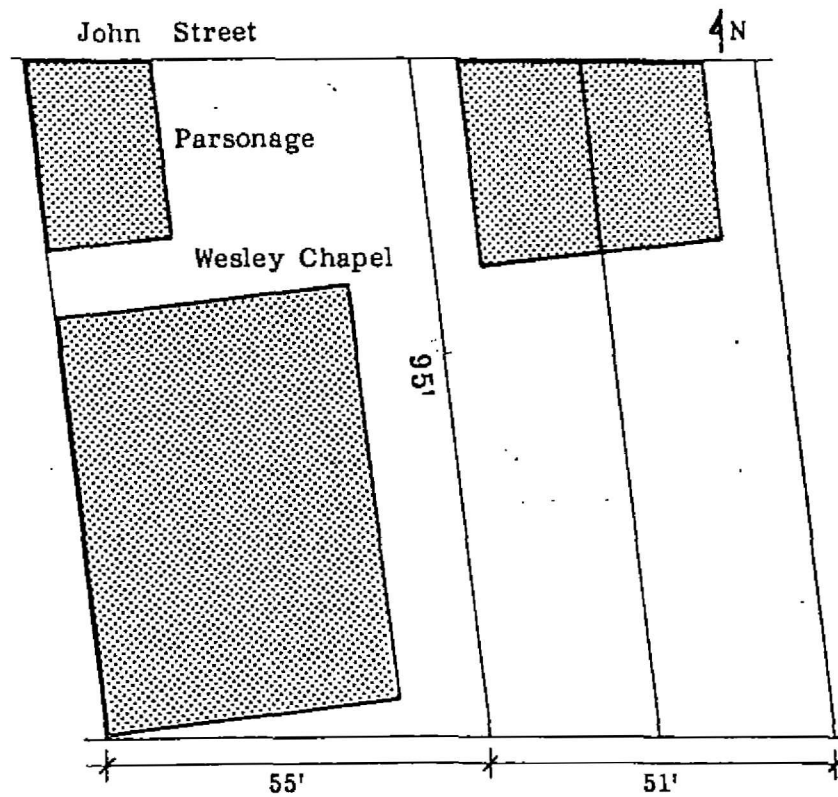
case, "Vault" may mean an underground chamber, or simply a coffin. Another account records the memories of an eyewitness, a woman who had viewed Lupton's coffin in the vault (Seaman 1892: 423), and another tells how Methodists brought the church sexton their family treasures to be held in the vaults for safe keeping during the Revolution (Wakeley 1858: 433). These vaults, if they existed, would have been under the footprint of the original chapel (see Figure 2:12).

The Second Church

In 1786 the trustees purchased the two adjacent lots to the east of their own (see Figure 2:16) from Leonard Lispenard, another Rutgers heir (Liber of Deeds 43: 509-10), and the Reformed Dutch Church, the beneficiary of John Harpendink's will (Liber of Deeds 43: 511-14). There were two residential buildings on these lots which were rented to produce income for the church. The Old Book (May 3, 1786; May 2, 1787; Sept. 24, 1787; October 30, 1787; et passim) contains entries for rent paid on these properties to the congregation.

In 1798 the easternmost twenty-three feet, eight inches of the property were sold (Liber Deeds 53: 371-72) to create the current lot size (see Figure 2:17). Although it is not stated in this document, at least one of the two residences on the property purchased in 1786 would have had to have been demolished in order to divide the land in such a way.

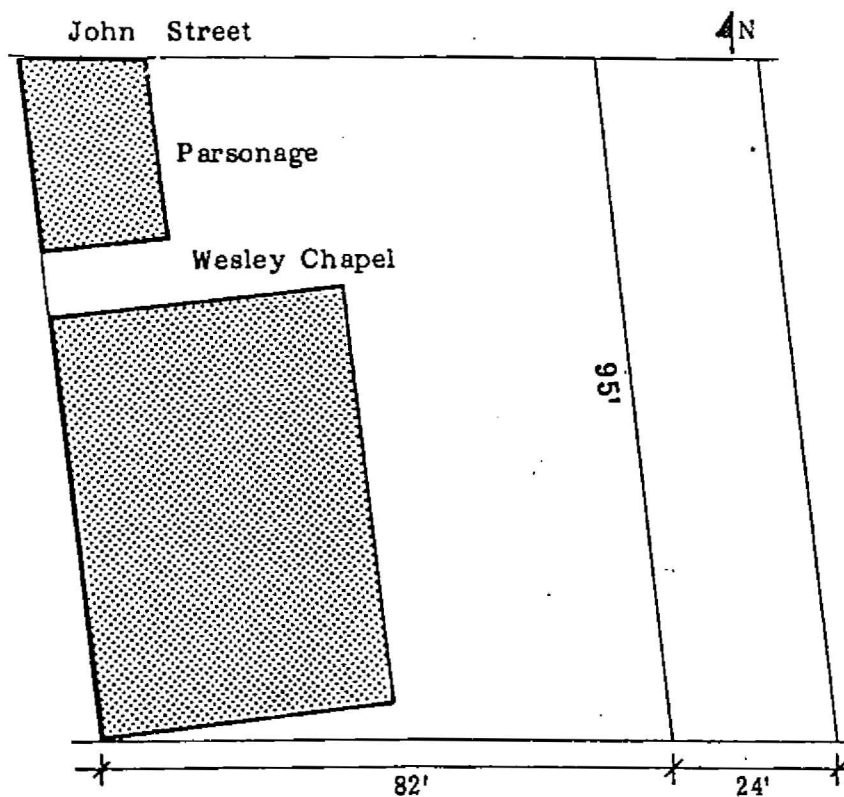
As New York's population grew, the Methodist congregation attracted more and more members. A plan to build a larger meeting house was offered financial support by the pledges of the congregation. The old Wesley Chapel was demolished on May 13, 1817 and the cornerstone for the new John Street Church was laid on May 22 of the same year.



John Street Property - October 1786

This map indicates the boundaries of the property after the purchase of two additional lots to the east from Leonard Lispenard.

Figure 2:16 Drafted by Raynor R. Rogers.



John Street Property - 1798

This map indicates the eastern portion
of the property that was sold.

Figure 2:17 Drafted by Raynor R. Rogers.

Much of the material from the first building was reused in the second church, but the timbers were used to build the Yorkville Methodist meeting house, where the Park Avenue United Methodist Church now stands. The new John Street Church (see Figure 2:18) was 62' x 87' and was constructed of stone covered with light-colored stucco. It had a center door which led to the gallery and side doors which provided access to the ground floor seating--just the opposite of the arrangement of the doors of Wesley Chapel. The pulpit was between the doors at the front of the structure--again, the reverse of the first building--and there was a sloping floor which ascended to the rear. The interior walls were wood and the pulpit was white with the mahogany lectern and altar rail from the first church. The wainscott and pews were green with mahogany trim and the corners of the building were rounded. There were stone niches in each corner. Ventilators were placed in the ceiling and gallery (Wakeley 1858: 205). The basement contained a lecture room and a classroom, but was considered "too much below the street." (Wakeley 1858: 206). Perhaps the water pump installed in the basement (ibid.) was needed to combat the flooding that often occurs in basements that are made too deep.

As mentioned previously, the building of the second church necessitated reburial of the remains interred in the vaults of the church. Some were reburied in the basement of the second church and, thus, were placed somewhere under the footprint of this larger building (see Figure 2:19). Others were said to have been moved to another burial ground, but no burial record of the Methodist churches which existed at the time indicates a reinterment of this nature. (These records are housed at the New York Public Library, Rare Books and Manuscripts Division).

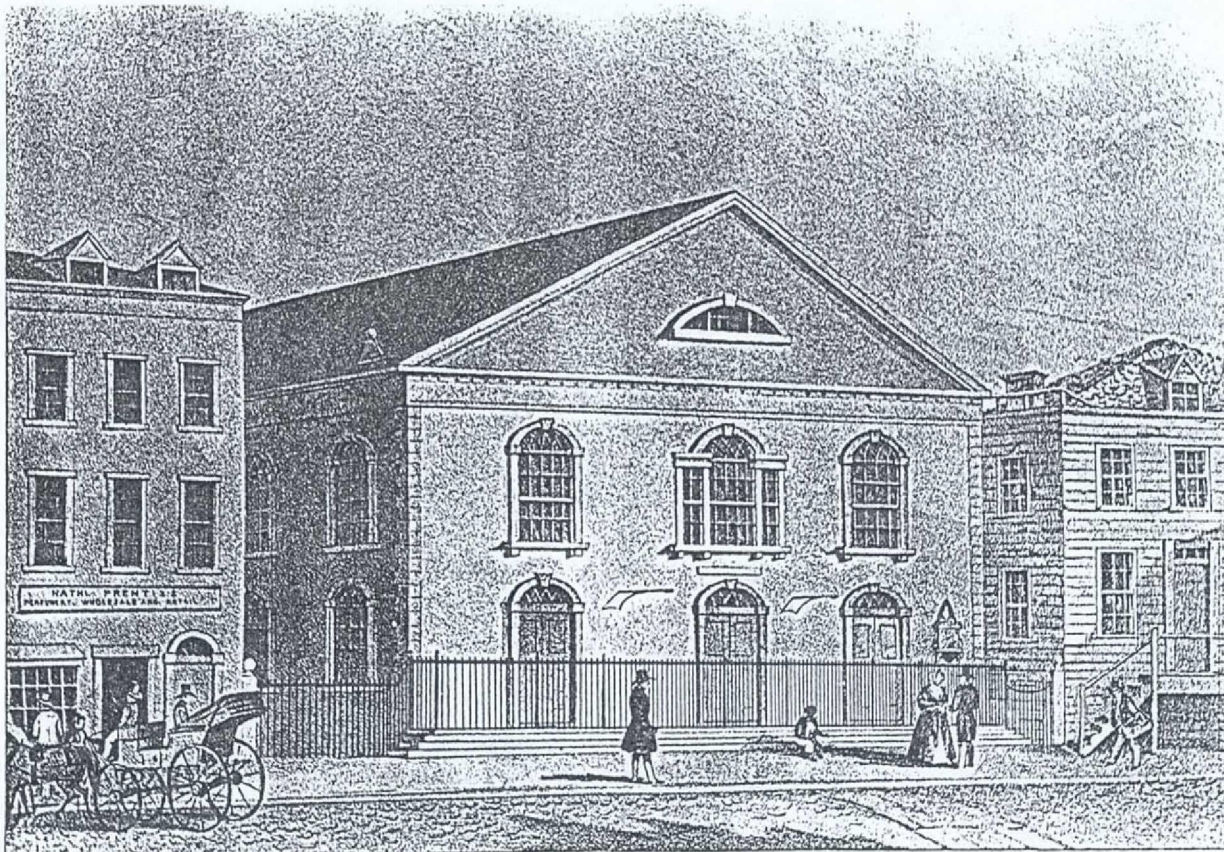
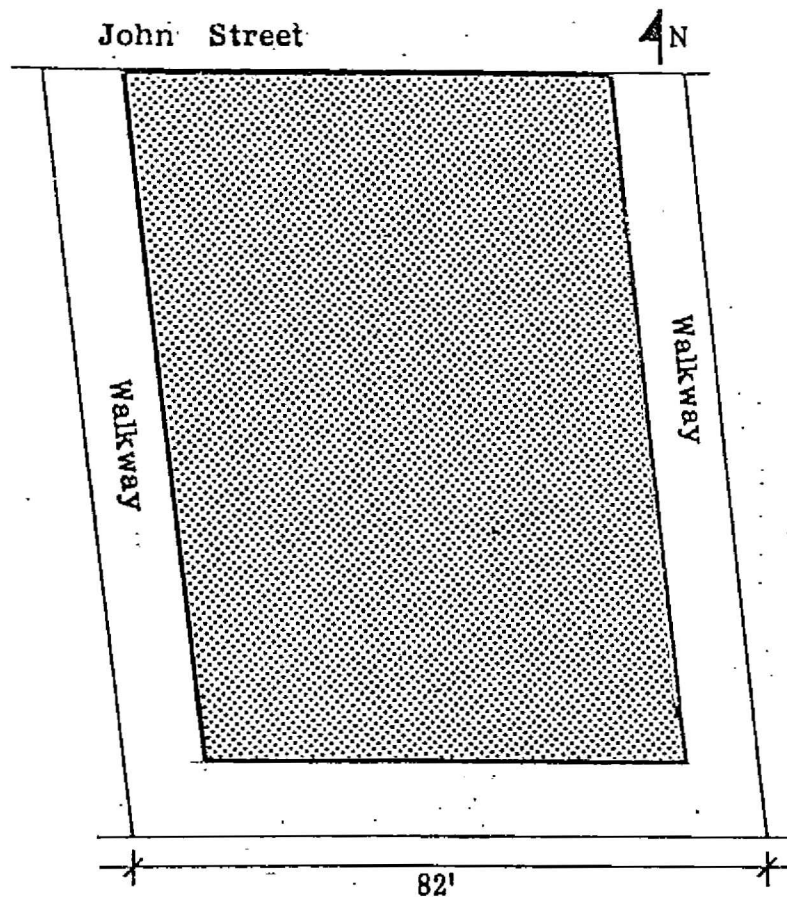


Figure 2:18 "Second Church Rebuilt 1817." Lithograph, second panel of triptych by J.B. Smith, 1844. Wesley Chapel Museum, John Street United Methodist Church.



John Street Property - January 1818

This map indicates how the second building,
upon completion, occupied the site.

Figure 2:19 Drafted by Raynor R. Rogers.

An 1827 map (see Figure 2:20), The Goodrich Plan, depicts the second church building, but places the building to the southwest of the property, whereas the church actually occupied the north central part of the lot, its front door flush with the sidewalk. In 1831 the Common Council debated the notion of widening John Street from Broadway to Pearl Street, which would have necessitated moving or demolishing the second John Street Church. They concluded, however that it would cause such "damage to the buildings" as to negate any benefits which might have been derived from this widening (Minutes of the Common Council, 1784-1831: 620).

Nevertheless, unforeseen events may have contributed to the destruction of the second John Street Church. The Great New York Fire of 1835 (December 16 and 17) destroyed much of Manhattan's business district. Seven hundred buildings were consumed within a seventeen block area south of Wall Street and east of Broadway (Stokes 1915-28 vol. III: 524). Although the John Street Church was spared, the neighborhood was, perhaps, mortally affected by the destruction and subsequent construction activities. The neighborhood of the Church had changed; the congregation debated the merits of moving the church uptown to the residential neighborhoods where much of its membership had moved (Minutes of the Board of Trustees 1838-58: 33).

At the same time, the city again planned to widen John Street and the Board of Trustees had to choose between purchasing land further uptown and building a third church on the same historically and religiously significant property (see Figure 2:21). The Board voted to build a new church and two adjoining 20 x 50 foot, four-story buildings, possibly to generate income as previous properties had (Minutes of the Board of Trustees 1838-58: 45). The final documented view of the second John Street Church appears on the Colton Map (see Figure 2:22), which depicts the area

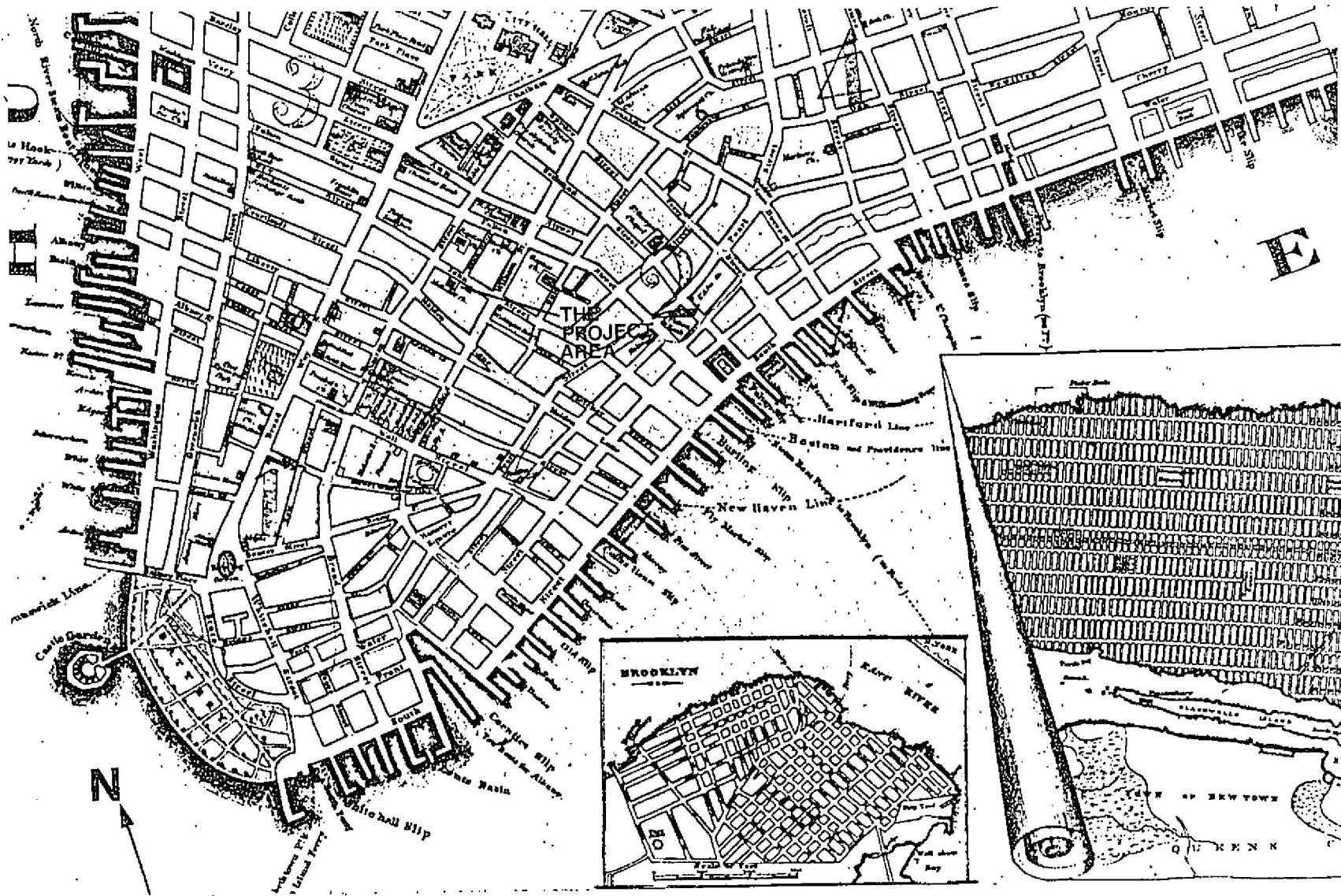
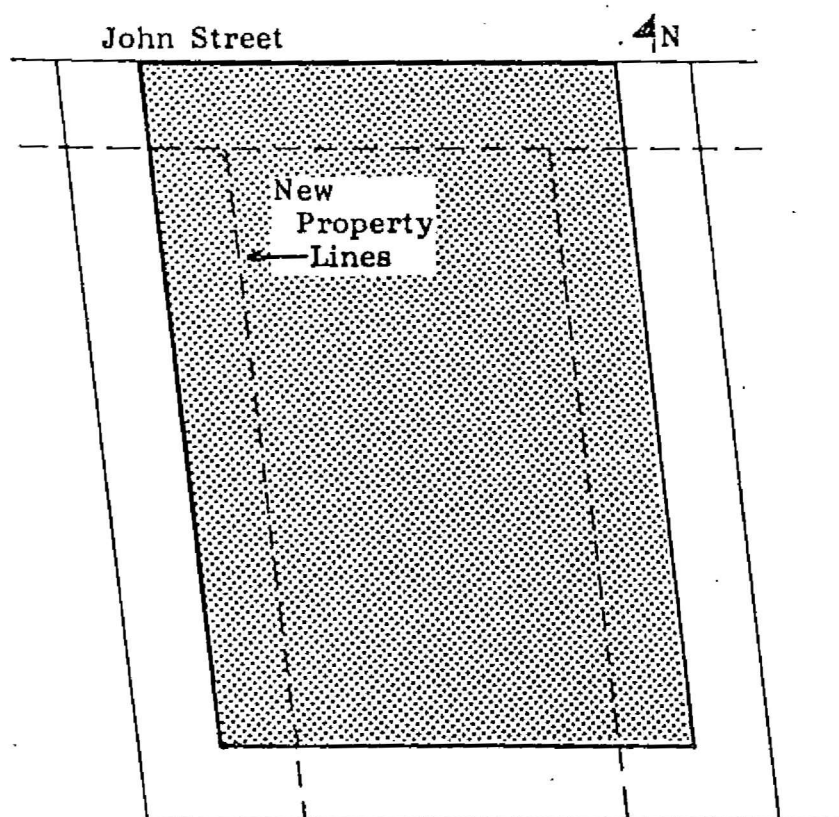


Figure 2:20 A Map of the City of New York (The Goodrich Plan),
 [? by H. Anderson], 1827, updated to depict 1836 (Stokes,
 1915-28, vol. III, pl. 99).



John Street Property - 1836

This map indicates the new street boundaries and their intrusion on the second building.

Figure 2:21 Drafted by Raynor R. Rogers.



Figure 2:22 Topographical Map of the City and County of New-York, and the Adjacent Country (etc.) (The Colton Map), by [S. Stiles & Co., published by J.H. Colton & Co.], 1841, depicting 1840 (Stokes, 1915-28, vol. III, pl. 124).

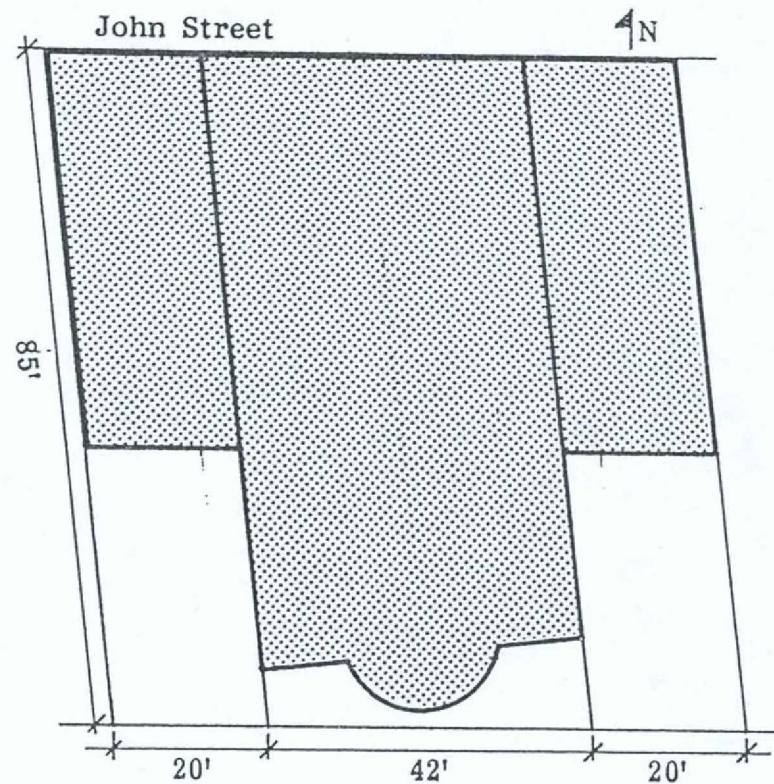
in the year 1840.

The Third Church

The cornerstone of the new church was laid on November 10, 1840 by Rev. Samuel Luckey (Minutes of the Board of Trustees 1838-58: 48). The third church was 30 x 80 feet in size with a gallery around three sides and a basement. Stone from the first and second churches was used in constructing the walls (Dolliver 1936: 71). The church shared east and west party walls with the adjacent structures (Ellzay 1981) (see Figure 2:23). The church "is Grecian Ionic in its style of architecture and the window casings and doors were handmade. The newel posts, banisters and backs of pews... (are made of) San Domingo Mahogany" which were from the second church (Dolliver 1936: 71). A view of the third church was rendered by J.B. Smith in 1844 (see Figure 2:24). The first map to mark the location of the new church was the 1851 Dripps Map (see Figure 2:25).

Minor changes and repairs to the church building were undertaken over the next few years. For example, at the end of 1843, it was voted "to have the gas altered and A Lamp put in front of the church" (Minutes of the Board of Trustees 1838-58: 85).

Soon after the new and third church had been constructed, the old argument about the feasibility of moving the entire church and congregation uptown began anew. The Board appointed a committee to look for a suitable plot of land uptown and sold one of the two buildings adjacent to the church (Minutes of the Board of Trustees 1838-58: 122-24). Property on the corner of 14th Street and Irving Place was purchased, but sold a year later with the debate still unresolved.



John Street Property - October 1841

This map indicates how the third building, and its two adjacent row houses, upon completion, occupied the site.

Figure 2:23 Drafted by Raynor R. Rogers.

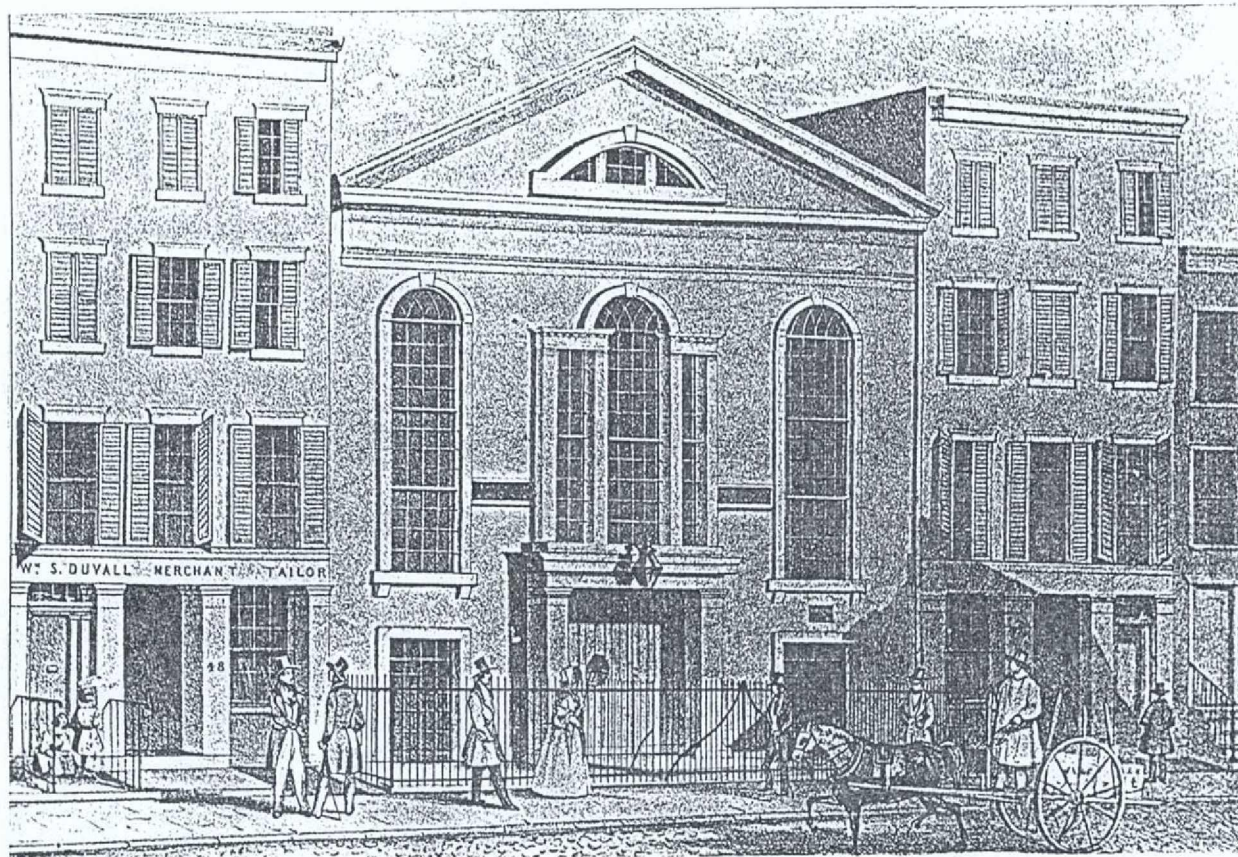


Figure 2:24 "Third Church Rebuilt A.D. 1841." Lithograph, third panel of triptych by J.B. Smith, 1844. Wesley Chapel Museum, John Street United Methodist Church.



Figure 2:25 Map of the City of New-York extending Northward to Fifth St. (The Dripps Map), by John F. Harrison, C.E., 1851, depicting 1850 (Stokes, 1915-28, vol. III, pl. 138).

Construction by the lessor of one and owner of the other of the two adjacent buildings encroached upon the church's property and damaged the underpinnings of the church itself, which were then secured in 1853 (Minutes of the Board of Trustees 1838-58: 165).

Another plan to sell the church and build anew uptown arose in 1855-56 (Minutes of the board of Trustees 1838-58: 188, 212-23). Because of the church's legal entanglements (op. cit.: 216) this plan did not come to fruition, and the continued debate and division over the moving the church caused the members to close the church in June, 1856. The membership was divided between "uptowners" and "downtowners," with the "downtowners" barricading themselves inside the closed church. The "uptowners" hired a local constable and his gang of fifteen deputized men to prevent Sunday services (New York Daily Times, June 26, 1856; Rogers 1984: 36). The police finally drove the attackers from the church and, during a search of the church for damages, found "sundry bottles which had contained schnapps and rot-gut" (The New York Daily Times, June 26, 1856). Although this event is not origin of the liquor bottle(s) found during the recent archaeological excavation, this anecdote serves as an example of one possible scenario for the deposition of an unexpected type of artifact.

The continuing factionalism within the church membership led to further sales and purchases of property uptown in 1857 (Minutes of the Board of Trustees, 1838-58: 227). Meanwhile, the church operated under financial strain, requiring those holding prayer meetings to pay a monthly fee for the use of the building, and a leak in the roof could only be repaired at the expense of a church member (op. cit. 1859-67: n.p.).

On March 24, 1866, Bishop Janes, who had "led a movement that would place the historic John Street property in the care of the General Conference and the State of New York", succeeded in convincing the

legislature of the State of New York to pass an act granting a special charter whereby "the property must permanently remain, and the church edifice be forever kept open in its present location" (Board of Trustees Records, undated loose item; Rogers 1984: 36). Most importantly, the legislature also provided "for the incorporation of the church and the naming of nine corporate trustees" (Rogers 1984: 37). These trustees were to constitute the corporation and all property rights were to be transferred to the corporation which was to be elected by the General Conference for a term of four years and which was "obligated to maintain the church as a methodist place of worship...for all time" (op. cit.: 37-38). In 1866, the Board of Trustees adopted this charter.

On January 9, 1867 the church deed then "passed from the First Methodist Episcopal Church to the First Methodist Episcopal Centennial Church of New York" (Liber 987 pages 596-599; Chamberlain 1963: 3). Despite the new charter, pressure was exerted for the next hundred years to tear down, raise up, alter and/or move the John Street Church.

Meanwhile repairs and renovations were undertaken by the increasingly impoverished church. In 1877, a new tin roof was installed and covered with two coats of paint (Minutes of the Board of Trustees 1869-1947). In 1880 a Pastor's Study was constructed in the Gallery of the Church (op. cit.: 65). In 1882, "the woodwork about the front of the church near the roof" ... was "rotting in some places ... the same was true of the leader pipes and the whole front was weather-worn" (op. cit.: 80). In addition, the owners of the property to the rear of the church, facing Maiden Lane, "in their digging for foundation of a new building, undermined the rear wall of our church. During those same excavations "four skulls (sic) and portions of four skeletons were uncovered. Brother Davis, our

sexton, was instructed to suitably bury all bones uncovered under the church" (op. cit.: 94). It is not clear if the bones alluded to were found on church property or were associated with the construction to the rear. In 1887 Mr. Knapp, the owner of the property fronting Maiden Lane, paid \$400.00 in damages for undermining the rear wall of the John Street church.

Steam heat was installed in 1909. With the advent of "city steam" it was probable that the church was connected to municipal steam pipes below street level, necessitating ground disturbance below the church as well (Rogers, Architect, President of the Board of Trustees, John Street United Methodist Church, personal communication, 1990). It is also possible that the church maintained its own boiler and, therefore, had a network of steam pipes in crawl space below the floor, but not in the ground itself (Plotts, Preservation Specialist, IPC, personal communication, 1990). In addition, the roof was repaired in 1910.

Despite these repairs and improvements, the trustees reflected a grim outlook in this resolution: "... the work of the John Street Church seems increasingly difficult, with the passing of the years; ... the alleged removal of the resident population in the down-town district and the invasion of towering office buildings, with the exclusion of light and air, are assigned as some of the causes for this increasing difficulty in the maintenance of Christian work at John Street" (Minutes of the Board of Trustees 1869-1947).

In "Resolutions Relating to John St. Church" adopted by the New York East Conference, there was conviction that a "reconstruction of the John Street Church property, including the property held at trust ... would receive the general approval of the entire body of American Methodism" (op. cit.: 194). In simple terms, it was proposed that the property be enlarged and improved and new buildings constructed (ibid.). By 1920, the

church's holdings included the church and the John Street Trust Fund Society building, which was once part of the original property. Despite the members' desire for modernization, there was only enough money for stop-gap measures. For example, in 1921, a new three-ply slag roof was placed over the tin roof installed in 1877, repairs were made to the molding and lintel around the front entrance, and leaky plumbing (in an unreported location) was repaired (Minutes of the Board of Trustees 1869-1947: 203-234).

In 1923, the fire destroyed a building on Maiden Lane, directly to the rear of the church. This resulted in more damage to the church, which included broken windows, roof damage, and damage to the organ among other things. Vibrating machinery in the building next door was also causing structural damage. Building records for the structure at 42 John Street, reveal that the second, third, and fourth floors of the building were used for "manufacturing." In 1926, leaking steam pipes in the street damaged the front of the church (op. cit.: 227).

Reflecting the "hard times" of the Depression, Dr. Upham, the pastor, took a volunteer salary reduction. (Minutes of the Board of Trustees 1869-1947: 261). Even so, everyone was painfully aware that extensive repairs were necessary and that the funds were unavailable to make these repairs. During the autumn of 1940, it was established that \$7619 would be needed to fix the building foundations beneath the front of the church and to install new sanitary facilities, also in the front of the church building (op. cit.: 296). In response, a committee was appointed to raise \$15,000 for the restoration of the church front, the construction of a concrete and steel vault beneath the sidewalk and "for new kitchen equipment in the basement of the church" (ibid.). In the spring of 1941, Reverend Robert H. Dolliver

was authorized to explore the possibility of a complete restoration (Resolution 1941: n.p.). Aymar Embury II was chosen as the architect for the proposed restoration and the plan was to restore the face of the present church, build a ladies' lounge, two toilets, sexton's room, and a passage under the front entrance (Dolliver - Embury Letters 1941). "After all," Embury wrote, "if at all possible we ought to take advantage of (any) added space we can get from the city, 9' x 42' by going out under the sidewalk" (ibid.).

Unfortunately, skyrocketing construction costs due to the war, made it "inadvisable to proceed with any plans for restoration of the building" (Minutes of the Board of Trustees 1869-1947: 302). The New Amsterdam Casualty Co. at 60 John Street kindly offered to store church valuables - the altar railing carved by Philip Embury and the Wesley Clock, as well as "furnishings, books and original paintings, and prints, ... during the war emergency, without expense" to the church (op. cit.: n.p.).

In 1943, Rev. Dolliver came up with a new plan. First, he would buy 42 John Street which once belonged to the church. Then he would demolish "all present structures" on 42 and 48 John Street, as well as those on the Church property. He would then replace the those buildings with "substantial replicas of the first John Street buildings on this site" (Minutes of the Board of Trustees 1869-1947: 303). The unanimous opinion of the Board of Trustees was that it was "unwise to destroy and replace present structures as long as they could be suitably repaired, and ... (at) the present time to proceed with the campaign to raise the necessary funds" (op. cit.: 304).

By 1944, with the end of the war in sight, the John Street Church was finally closed for repairs. During construction on the east wall of the church to strengthen the old foundations, bones were exposed in the cellar

(Rogers, personal communication, 1990³). These were exhumed and then reinterred "in a new vault constructed beneath the altar in the Wesley Chapel Museum (Rogers 1984: 48). Additional repair work was undertaken in 1946 and 1947, and in 1950-51 the facade of the church was restored (Tanner 1968: 35).

In 1962, a program was initiated to "complete the restoration of the church interior" (op. cit.: 22). In preparation for the bicentennial celebration of Methodist beginnings in America, the air rights over the church were sold in order to obtain the funds necessary to remodel the basement into the Wesley Chapel Museum--a repository for those objects sacred to Methodists in general and to the John Street congregation in particular. Among other construction, a new library was installed and the kitchen and bathrooms were modernized (Rogers 1984; Tanner 1968).

A letter dated October 31, 1963 from Edward Coe Embury to Rev. Richard L. Francis (found in the church files), reveals that the 120 year old (in 1963) church ceiling was examined and sampled by experts during the rehabilitation program. These experts noted that the ceiling was composed of "lime plaster on wood lathe" and that the ceiling would "probably last indefinitely ... barring leaks in the roof" (Embury 1963).

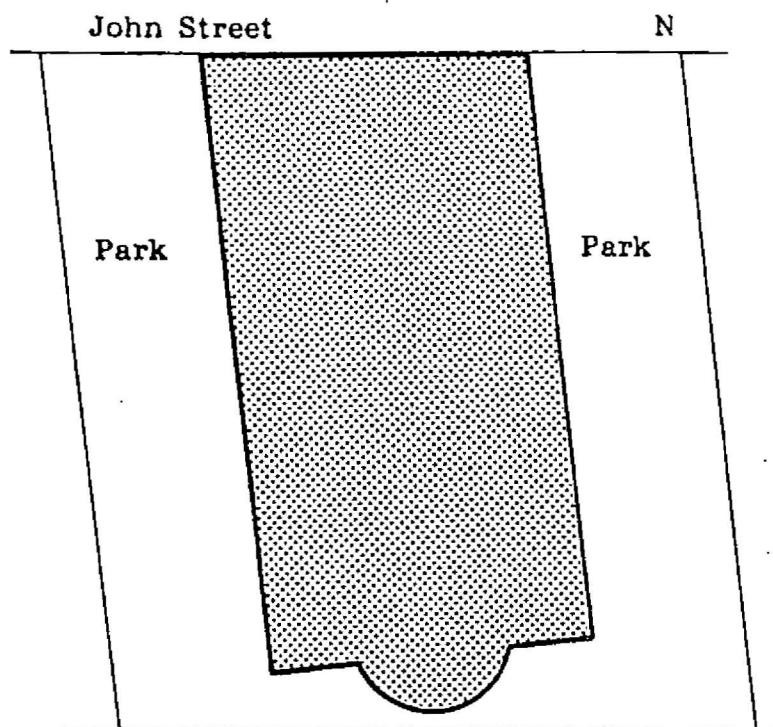
In 1964 the adjacent land and buildings were reacquired by the John Street Church (Records of the Trustees 1960-1980: n.p.). The Trustees of the Park Avenue Methodist Church authorized a contribution of \$50,000, making possible the acquisition of 42 John Street for \$120,000 (ibid.).

³ The report of bones being found during this excavation comes out of Raynor Roger's personal communication with Arthur Moss, former pastor of the John Street Church, now deceased. Mr. Rogers had conversations with Dr. Moss in preparation for writing his book on the history of the church, which was published in 1984.

In 1970 representatives of Pierre Associates, a subsidiary of the Federal Reserve Bank of New York, expressed a desire to purchase 42 John Street (Block 67, Lot 29), as well as a "restrictive covenant with respect to the height of" 44-46 John Street (Block 67, Lot 30) and 48 John Street adjoining the church to the east (Block 67, Lot 31). The "restrictive covenant" pertaining to the church limited the use of 44-46 John St. to "church purposes" while restricting the height of future buildings which might be constructed on that lot (44-46 John St.) (Records of the Trustees 1960-1980: n.p.). The bank also agreed to build "vest pocket parks" on either side of the John Street Church on what was once church land (see Figure 2:26).

The land adjacent to the church acquired by the Federal Reserve Bank was sold to the Park Tower Realty Corporation, which assumed all obligations of the Federal Reserve Bank (Trustees Report for the 1984 General Conference). "The trustees, in negotiation with the New York City Landmarks Preservation Commission, the Park Tower Realty Corp and the Federal Reserve Bank, hold the ... bank ultimately responsible for the maintenance of the two miniparks" (ibid.). In 1973, 42 John Street (Block 67, Lot 29) was demolished.

A twenty-eight story office building was constructed on the lot to the west of John Street Church, causing structural damage to the church during excavation for the new building's foundation in early 1983 (ibid.). To determine the extent of the damage, the western portion of the Wesley Chapel Museum floor was removed in January, 1986. During the course of the excavation, a possible footing from the second church (1817) was discovered as well as some human and animal bone fragments. The discovery of human remains beneath the church resulted in a request by the John Street Methodist Church to the New York City Landmarks Preservation Commission to



John Street Property - 1984

This map indicates the third building and its two adjacent parks.

Figure 2:26 Drafted by Raynor R. Rogers.

have the Commission's City Archaeology Program conduct a small archaeological excavation. The results of this scientific inquiry will be discussed.

CHAPTER THREE: EXCAVATION METHODS AND PROCEDURES

Sherene Baugher

CHAPTER THREE: EXCAVATION METHODS AND PROCEDURES

An archaeological excavation was conducted from January 14 through January 16, 1986. The project was directed by Dr. Sherene Baugher, Director of the City Archaeology Program. The laboratory director was Judith Baragli and the assistant archaeologists were Daniel Pagano and Louise DeCesare. The professional archaeologists from the City Archaeology Program worked with dedicated volunteers from the American Indian Community House and the City Archaeology Program. Inexperienced volunteers were paired with trained crew members.

Excavation Procedures

A building contractor had removed all of the tile and a three inch concrete basement floor from the site prior to the commencement of the excavation.

On January 14, 1986 a shovel test (shovel test #1) was dug to determine the site's stratigraphy. The shovel test was excavated to a depth of eighteen inches. The test contained twentieth century fill primarily composed of cinders, slag, concrete, plaster, and associated building debris. It was extremely difficult to dig a shovel test in this fill. Therefore, in order to remove the fill expeditiously, two trenches, rather than shovel tests, were excavated.

North and south trenches were excavated to remove the twentieth century fill. Below the fill there appeared to be a layer of undisturbed soil sealed by a layer of fine plaster. Shovel test #2 was excavated to test this deposit. The shovel test revealed an intact nineteenth century deposit. Excavation units were mapped and laid out (see Figure 3:1).

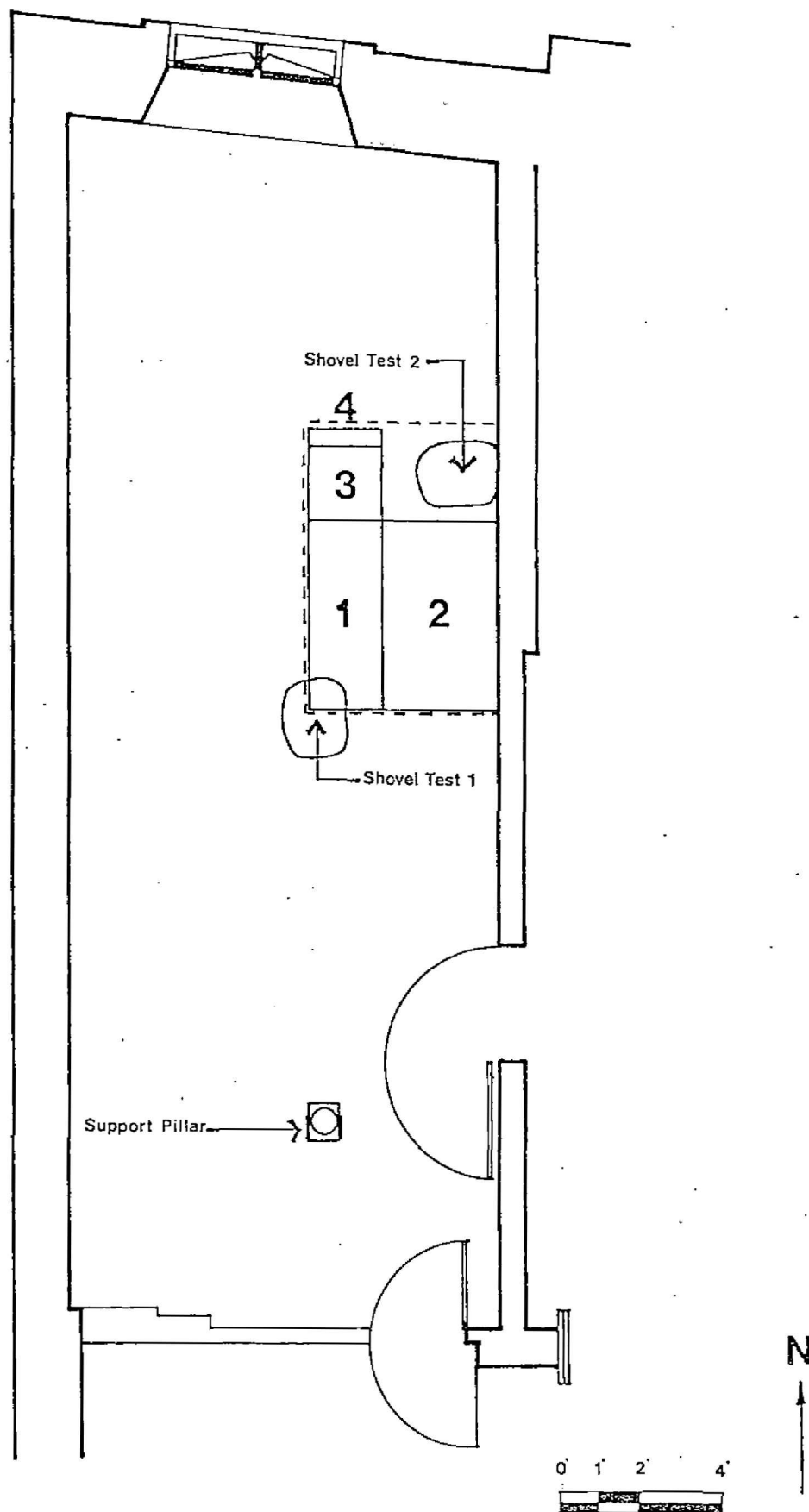


Figure 3:1 Drawing showing the location of shovel tests and excavation units within the kitchen portion of the church basement. The dotted lines indicate the area within which the trenches were excavated. Drafted by Eric Rich.

Units were excavated by removing stratigraphic soil layers from the surface down to natural, sterile subsoil (see Figure 3:2). At times, a layer was subdivided and only a portion of the layer was excavated to obtain preliminary data on the stratigraphy and the archaeological deposits. Later, the level was excavated in its entirety. The average depth for the excavated units was fifty-eight inches and the deepest test was seventy-four inches below the kitchen floor.

Shovels were used to remove all fill and in a few instances hand picks had to be used. Wooden shoring was installed to keep loose fill from the walls of the excavation units from falling into the lower levels (see Figure 3:3). Once undisturbed deposits were located, trowels were the primary excavation tools. All excavated soil (including fill) was sifted through one-quarter-inch mesh screens (see Figure 3:4). Artifacts found were placed in bags with provenience numbers on each bag. Separate bags were used for each soil layer (level) in each excavation unit. Levels were labelled with consecutive numbers.

The Trenches: Twentieth Century Disturbance

On January 14, 1986 a 5' x 5' north trench and a 5' x 2 1/2' south trench were laid out in the kitchen of the church. This kitchen site contained fill from construction work in the 1940s. The goal of the trench excavation was to remove the twentieth-century fill and to locate undisturbed archaeological deposits.

In the 1940s the church underwent major construction to upgrade its utilities. Underneath the tiled kitchen floor was a concrete basement floor. Below this floor was a three inch base of cinders followed by a four inch base of cinders and cement. The cinders and small chunks of cement were used in the 1940s to form a base for the basement floor (Donald

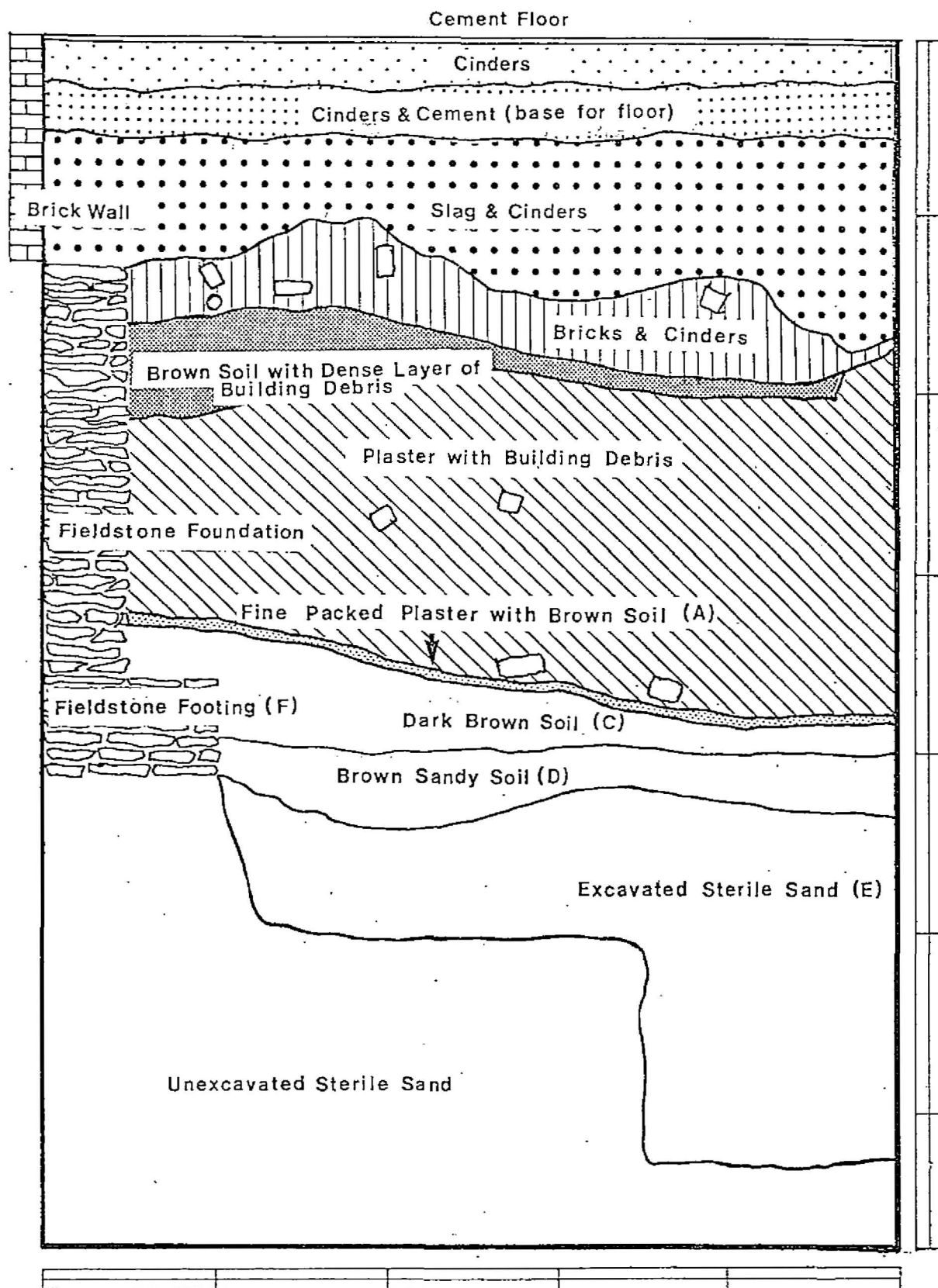


Figure 3:2 Profile of basement stratigraphy. The south wall profile from excavation units 1 and 2 depicts the layers of twentieth century fill over nineteenth century deposits. Identification of layers A-E corresponds to strata described in Table 3:1. Note: The south wall did not contain the golden sandy soil (B).

Table 3:1 Soil Stratigraphy and the Archaeological Levels

strata	levels
A. fine plaster	101 and 102 ¹ , 201, 301, 401
B. golden sandy soil	103, 203, 302, 403
C. dark brown soil artifact & faunal rich level)	104, 202 and 204 ² , 303, 402
D. brown sandy soil (numerous brick fragments)	105, 206, 304, 404
E. sterile sand	106, 207
F. footing (feature)	205

¹ Level 102 contains the fine plaster found in Level 101. However, it is a small circular pit six inches in diameter which is four inches in depth. It protrudes into Level 104.

² Level 204 is similar in composition to Level 202. Both contain numerous artifacts and faunal material and are adjacent to one another. The only difference is in their Munsell Color; Level 204 is 7.5 YR 3/4 while Level 202 is 10 YR 3/3.



Figure 3:3 Wooden shoring used to prevent the collapse of twentieth century fill into excavation units. Photograph by Louise DeCesare.



Figure 3:4 Professional staff of the American Indian Community House screening excavated soil. Director Michael Bush seen in lower right. Photograph by Carl Forster.

Plotts, Technical Specialist, Landmarks Preservation Commission, personal communication, 1986). Below the base were between thirty-one and thirty-eight inches of fill. The fill contained bricks, cinders, slag, plaster, and building debris. The building debris included cut electric cables, electric brackets, fragments of iron pipes, fragments of rusted unidentifiable metal, nails, and wood fragments. Within the fill was a sixty-two inch long metal water tank (see Figure 3:5). By the nature of the fill, it seems that the workmen in the 1940s had discarded all broken or nonfunctioning materials, including the water tank and the cut electric cables. The fill layer and cinder base for the basement floor were almost four feet above the intact nineteenth century deposits.

The north and south trenches were initially five feet in width. When an intact nineteenth-century deposit was uncovered, the trenches were widened by another foot in order to place protective shoring into the trenches. The shoring prevented any slippage of fill onto the excavators and/or excavation units. All the fill, including the fill from the enlarged areas of the trenches, was screened.

Shovel Test #2

Shovel test #2 was excavated in order to determine the stratigraphy below the fill layer (see Figure 3:6). The shovel test was located at a depth of thirty-five inches below the kitchen floor and within the area of the trenches. The test revealed four layers of soil. The first level of medium brown soil was three inches thick and contained the footing for the interior (east) wall of the present-day kitchen. At fifty inches below the modern kitchen floor were thirty-two inches of sterile red sand. The test was concluded at eighty-two inches below the kitchen floor. The test revealed that there were approximately fifteen inches of undisturbed,

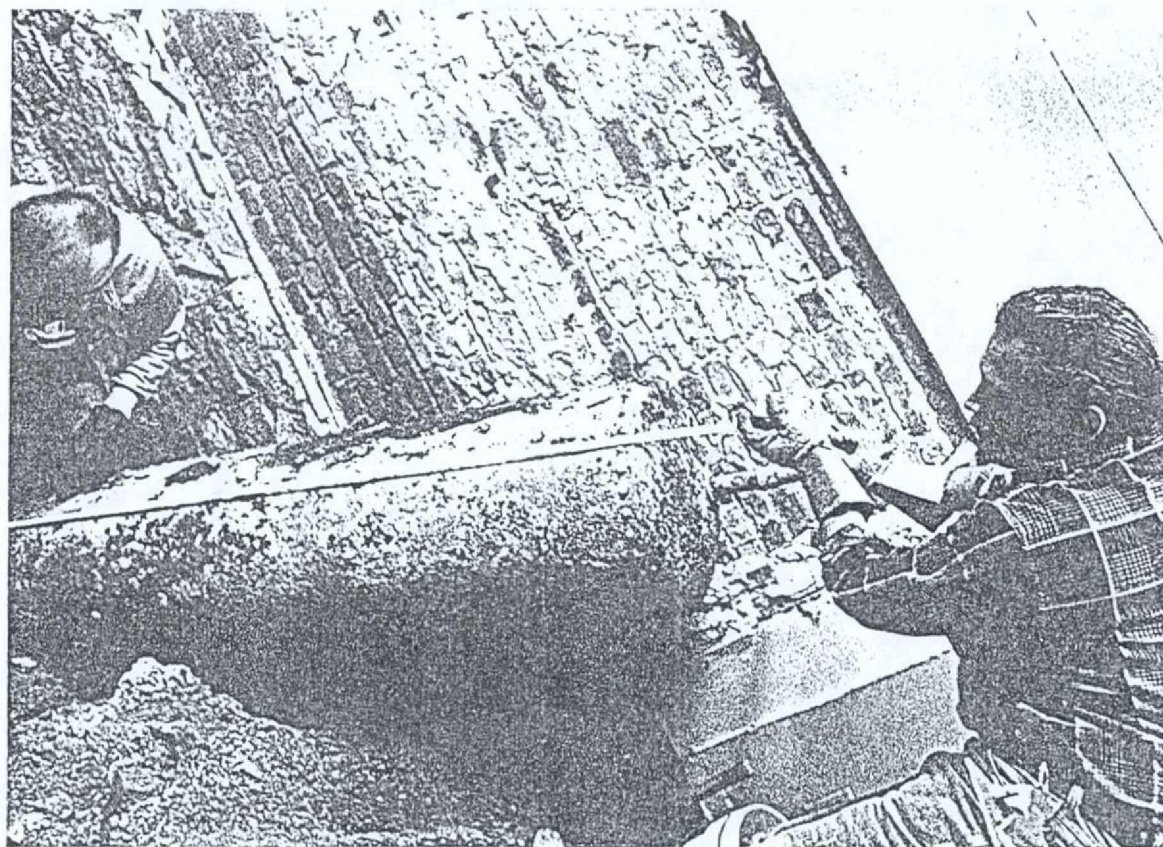


Figure 3:5 Removal of the water tank from the twentieth century fill.
Photograph by Louise DeCesare.

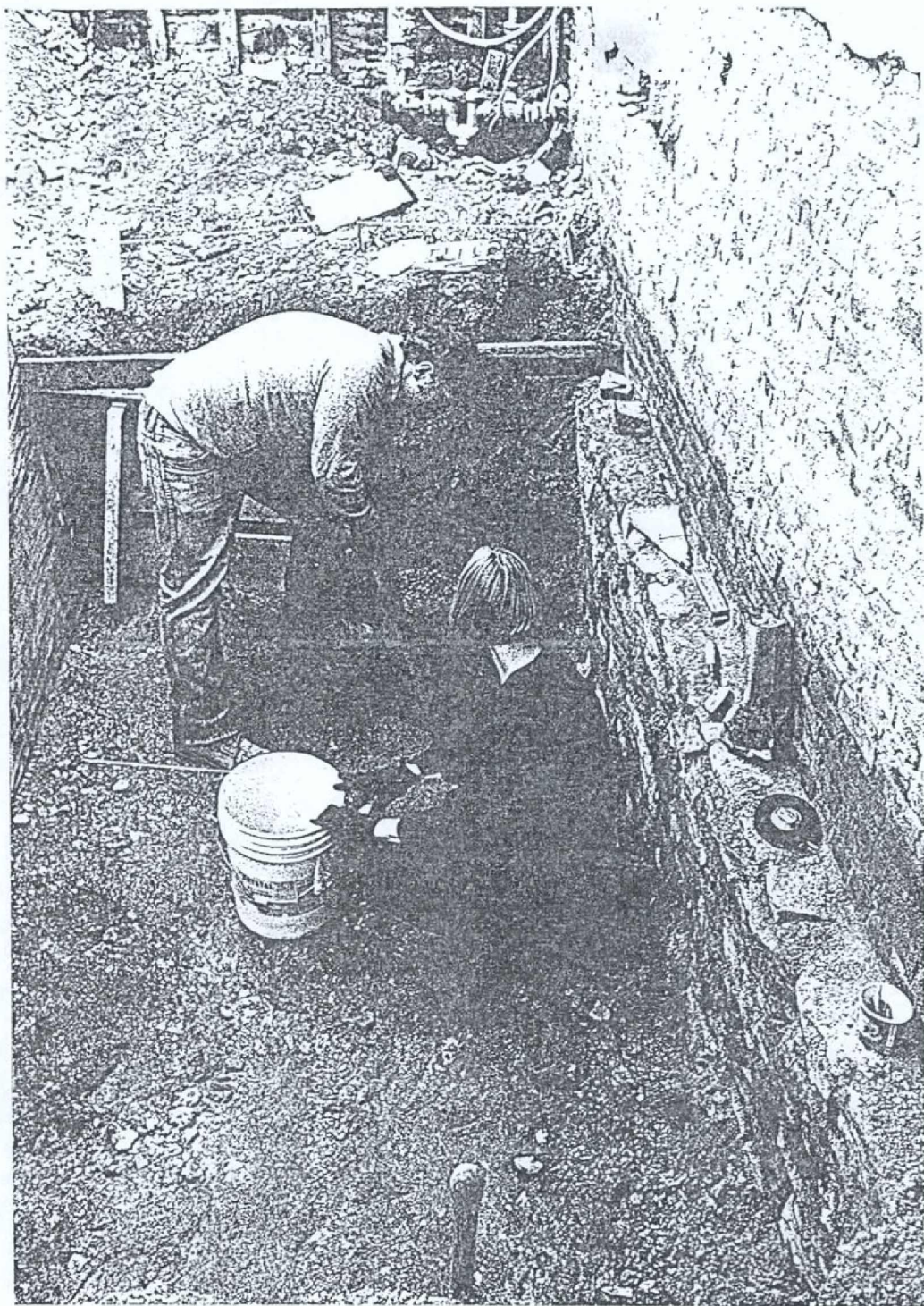


Figure 3:6 Excavation of Shovel Test 2. Twentieth century fill layer seen in background. Wooden shoring used due to instability of this fill layer. Photograph by Carl Forster.

stratified, archaeological deposits at the site.

Excavation Units

Initially two excavation units were opened up (unit #1 and #2). Unit #1 was five feet long and two feet wide, while unit #2 was five feet long and three feet wide. Based on the findings from units #1 and #2 an additional two feet by two feet square was opened (unit #3) followed by a final unit (unit #4) which was one foot by two feet (see Figure 3:1). All four units were excavated into sterile soil. Unit #1 was excavated to a depth of seventy-four inches; the last twenty-one inches were composed of sterile sand. Shovel test #2 was excavated to a depth of eighty-four inches with the last twenty-two inches sterile sand. Because twenty-two inches of sterile sand was excavated, we were confident that there were no other deeper archaeological deposits.

The four excavation units contained five distinct strata (see Table 3:1). Directly below the fill was a layer of fine plaster (Munsell Color: 10 YR 5/2) which ranged from three to eight inches in thickness. A layer of golden yellow sandy soil (Munsell Color: 2.5 YR 4/4) ranging in thickness from one inch to five inches was found in units #3 and #4; it also extended between fourteen and twenty-two inches into the northern portion of units #1 and #2. The next stratum was a layer of dark brown sandy soil (Munsell Color: 10 YR 4/2) between one and five inches in thickness; the layer contained numerous artifacts and faunal material. Below the bone and artifact level was a layer of dark brown sandy soil (Munsell Color: 10 YR 3/3) between eight and twelve inches in thickness, which contained numerous brick fragments. The final stratum was sterile sand.

The stratified deposits ranged in depth from fifteen inches to twenty-four inches. Excavation units #1 and #2 were separated by a thin one inch wide by twenty-three inch long strip of wood. The wood was uncovered in level 104 (the artifact/faunal-rich layer). The current east wall of the kitchen was a brick wall with plaster board covering. The brick wall was sitting on stone spread footings which extended four inches to the west of the wall. It is unusual to have an interior wall mounted on spread footings since that is the construction technique used for exterior walls (Donald Plotts, personal communication, February 1986). No wells, cisterns, or privies were located. No burials were uncovered. The dating of the deposits and analysis of the materials will be discussed in Chapter Five.

CHAPTER FOUR: METHODS OF LABORATORY WORK

Sherene Baugher
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CHAPTER FOUR: METHODS OF LABORATORY WORK

This chapter describes the procedures used during the laboratory work on the John Street Church artifact collection (a review of the LPC laboratory methods written for the general reader can be found in Baugher and Baragli 1987: 34-40). In archaeology an artifact loses much of its value if its context is not known. Therefore, the first task of an archaeological laboratory is to ensure that the provenience of each of the artifacts found during the excavation is accurately and permanently recorded. This chapter describes the recording procedures as well as the studies that were made on the collection in order to interpret the site accurately.

Field and Laboratory Recording

The documentation of the John Street Church site began during the first day of fieldwork. As the artifacts were excavated, they were removed and placed in paper or plastic bags. Each bag was labelled with the exact site location (the code number indicating the excavation unit and soil layer within which the artifacts were found) and the general category of artifacts inside the bag (wood, ceramics, etc.).

After the dig was completed, initial washing of the ceramics, glass, metal, and bone artifacts was undertaken in the LPC lab. The objects were washed in warm water and soft scrub brushes were used to remove the soil from the artifacts.

All the artifacts received a second cleaning. Ceramics, glass, and clay smoking pipes were soaked in warm water with ORVUS paste (modified sodium lauryl sulfate). ORVUS is a mild non-ionic detergent with a pH of 6.3 and is used by conservators. The artifacts were scrubbed with a soft

toothbrush. The objects were allowed to dry on baker's racks for twenty-four hours. Fabric, leather, mortar, bricks, wood, shell, bone, and floral material were cleaned gently with a dry brush. Artifacts were cleaned by unit and level in order to maintain their provenience numbers.

After the cleaning process was completed, selected artifacts (ceramics, bottle glass, window glass, and clay smoking pipes) were labelled individually with their provenience numbers. Most of the architectural material (metal, mortar, and brick) was bagged (with labels on the bags), but provenience numbers were not applied to their surfaces.

Artifacts selected for individual labeling were marked with the number of the excavation unit and its level number; thus, each was numerically coded with its exact site location. For example, a fragment of pottery recovered from unit 1, level 1 would be labeled 101. Care was taken that each label located in a place that would not be obscured during the subsequent mending process. A coat of clear nail polish was applied to the spot to be labelled to ensure that ink did not penetrate the surface of the artifact. When the nail polish was dry, the provenience code number was written on it in indelible ink. After the ink was dry, a second layer of nail polish was applied to serve as a sealer. The use of this method allows for the removal of the label should it be necessary. Artifacts which were too small to be labelled were placed in containers on which the type (e.g., ceramics, glass, metal, etc.) and provenience were written. When cleaning and labelling were completed, artifacts previously grouped according to general category (for example, ceramics) were catalogued into specific subcategories (redware, buffware, delft, etc.).

Artifacts were placed in plastic bags according to specific groups (e.g., ceramic, or clay smoking pipes) and site location. Each bag was labelled on the outside with a waterproof marker.

Some artifacts, as discussed earlier, were not labelled individually. Nails, for example, are usually too rusty to be labelled with sufficient clarity. Each nail, however, was examined to determine its diagnostic physical characteristics (hand-wrought, machine cut, or wire) in order to obtain architectural information and approximate dates of manufacture for the objects. The catalogue sheets contain a record of the exact number of nails of each subcategory (hand-wrought, machine cut, or wire nail) within each stratum: e.g., level one contained fifteen wire nails and eight cut nails.

The diagnostic value of window glass fragments lies in the interpretation of the quantities retrieved from each separate time period based on the method of manufacture (type), e.g., broad glass or crown glass. The glass was individually labelled and then bagged by unit and level. Each bag was labelled on the outside.

Each catalogue sheet was headed with the site name and location (unit and level number) and type of artifact (e.g., buttons) to be catalogued. These sheets were prepared to meet the universal needs of a cataloguing system and also to reflect the characteristics of the artifacts found on this specific site. They were designed to make it possible to enter and to read the necessary data quickly and clearly. Each category of artifacts utilized a catalogue sheet appropriate to its particular type.

The cataloguing process was critical to the interpretation of the artifacts and the site. Because of the availability of documentary information about ceramics and glass bottle necks and bases, these artifacts could be dated quite precisely. Changes in style and in

technical development made it possible to date ceramics and glass bottle necks and bases. Their presence at this site and the record of the stratigraphic context allowed the archaeologists to assign a time span to each level.

Using a dating system devised by J.C. Harrington and refined by Lewis Binford, it was possible to date, with reasonable precision, the archaeological deposits based on the stems of clay smoking pipes made by the British between 1600 and 1800. During this period, pipes were made with longer and longer stems and the diameter of the hole in these stems (bore hole) became smaller and smaller. By measuring the bore hole's diameter and inserting the size frequency into a mathematical equation, the date of the archaeological deposits was determined. The designs on the pipe bowls changed from the 1600s through the 1800s and these motifs were also used to date the pipes.

When the artifacts had been dated as precisely as possible on the basis of historical documentation, a time span was assigned to each of the levels excavated. A dating technique called terminus post quem (the date after which) was used, that is, the date given to a particular soil level can only be later than the most recent artifact found in that level. Because artifacts have a time span as opposed to an exact date (most objects are produced over a period of time, and not "just once"), it is practical to find a mean date for each category of artifact at a particular level. This date is obtained by averaging the dates of all the artifacts of a particular category at a specific level.

The principle of terminus ante quem (the date before which) was also used to date levels. This dating technique is based on the assumption that the absence in a particular level of a type of artifact for which the date

of origin is documented indicates that the level pre-dates that date of origin.

The dates of all the types of artifacts in a particular context (e.g., kitchen deposit) can be averaged to find the mean date of that deposit. A mean date is a very useful working tool for the archaeologist, but it must be remembered that it is an average rather than precise date.

A total count was made of all the artifacts and of each of the groups and sub-groups. Percentages and ratios for each type of artifact and site location were calculated and charts, graphs, and lists were made. For example, the ratios of domestic (dishes, personal items, etc.) to architectural (nails, window glass, hinges, etc.) artifacts and of high-status wares to low-status wares at a site supplied information about the predominant use of the site and the economic status of its inhabitants. All of these calculations were combined with the dates assigned to each level and the historical documentation about the site's inhabitants in order to interpret the specific use of the site through time (see Chapter Five).

Identification of the Faunal Material

The faunal assemblage was identified by direct comparison with modern skeletal material from the American Museum of Natural History's departments of Mammalogy, Ornithology, and Ichthyology. The collections from the Bioarcheological Laboratory, Department of Anthropology at Hunter College (CUNY) and the faunal analyst's private collections as well as numerous books, reports, and articles were also used.

The identifications of the faunal remains were made to the most definitive zoological classification possible. If a bone fragment could not be assigned to a genus level and, where possible, species level, the

next higher taxonomic level was used. In cases where bones were too fragmentary for a more specific taxonomic classification, they were designated by class, i.e., Mammalia. In turn, this designation was subdivided into categories of large, medium, and small animals. The size range and architecture of the bone fragment was used as an indicator for placement into the respective size classifications.

The Coding System

The Hunter College Bioarchaeological Laboratory coding system was used to record the faunal remains from the John Street Church site. This system is cost-effective and makes intra- and intersite comparisons possible. The remains were catalogued on the standard faunal record forms used at the Bioarchaeological Laboratory at Hunter College. Data was then entered using "QUATTRO-BONE," and IBM PC developed for use with the Borland Company's "Quattro" and "Quattro Pro" programs. The "Quattro Bone" templates are just that, templates, not the spreadsheet program itself. "Quattro" is a registered trademark of Borland International, Scotts Valley, CA (McGovern and Amorosi 1990). Catalogue sheets will be on file at both the Bioarchaeological Laboratory and the City Archaeology Lab at the Landmarks Preservation Commission for future reference.

Recovery and Quantification

Bone material was recovered in situ, or collected in a one-quarter inch wire mesh. However, the use of soil pH readings as a means to monitor bone preservation was not undertaken. As a result, only some generalized taphonomic observations can be made about this assemblage. Bones were tabulated within the following categories: the Total Number of Bones (TNB), the Number of Identified Specimens per Taxon (NISIP), and the Total Number of Fragments (TNF).

A complete discussion of collection, identification, and interpretation of faunal material from the archaeological excavation can be found in Appendix A of this report. A discussion of human remains recovered during the earlier construction project can be found in Appendix B.

CHAPTER FIVE: ANALYSIS OF THE ARTIFACTS

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Diane Dallal
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CHAPTER FIVE: ANALYSIS OF THE ARTIFACTS

This chapter discusses the specific diagnostic artifacts that were found during the excavation at the John Street Church and assigns a date range to these artifacts. The categories to be examined are ceramics, glass, clay smoking pipes, architectural objects, and miscellany (buttons, combs, eating utensils, etc.). Within each diagnostic group the artifacts found in the trench are examined first, followed by the material from the excavation units.

Ceramics

To historical archaeologists, ceramics are usually the most diagnostic artifacts since well documented design and manufacturing changes in pottery can often allow an archaeologist to date a deposit within a twenty-year time span and sometimes as closely as within ten years. The ceramics from every level of every square were dated and analyzed. The general conclusions of the time period for the deposits, based on the ceramic evidence, are presented below.

The Trenches

There were only four ceramic artifacts within the trenches. The two flower pot fragments could have been manufactured anytime between the eighteenth century and the present. The fragment of a white ironstone plate could have been made from the mid-nineteenth century to the late nineteenth century. A burnt porcelain electric insulator was unearthed. It was not until 1882 that the first electric generating station was set up in New York City (Kraehenbuehl and Amick 1970: 3), therefore, the electric insulator would date post-1882. The presence of the insulator suggests that the trench deposit dates no earlier than 1882.

The Excavation Units

There were only seventeen sherds from the excavation units. The sherds all dated to the nineteenth century. The first stratigraphic layer contained two sherds from nineteenth century mixing bowls or jars (one from a buff-colored stoneware jar and one from a black-glazed redware vessel). It also contained a sherd from an undecorated white ironstone plate (mid-to late nineteenth century). The second layer contained one rim sherd from an undecorated white ironstone dinner plate (mid- to late nineteenth century), one fragment of nineteenth century stoneware (possibly a jar), and one fragment of sewer pipe (mid- to late nineteenth century). The third layer contained three undecorated white ironstone sherds (one was from a cup, two from a plate) (see Figure 5:1). The ironstone plates were manufactured in the mid- to late nineteenth century. In addition, there was one undecorated whiteware sherd, probably from a plate or saucer, which dated from 1820 to 1900. Layer four contained one undecorated, white ironstone fragment, one nineteenth century stoneware sherd (possibly from a jar or mixing bowl), one American-made redware sherd with Jackfield-like design/glaze (eighteenth to early nineteenth century) (see Figure 5:2), and three nineteenth century creamware sherds from dinner services (see Figure 5:3). The fifth layer contained one fragment from an English stoneware bottle which was possibly used for ink (1840-1890) (see Figure 5:2).

In summary, of the seventeen sherds, 59% (10) were from tablewares (dinner and tea sets), 29% (5) were from utilitarian wares (jars, mixing bowls, baking pans, general food preparation and storage vessels), and 12% (2) were miscellaneous (the ink bottle and the sewer pipe). The tablewares

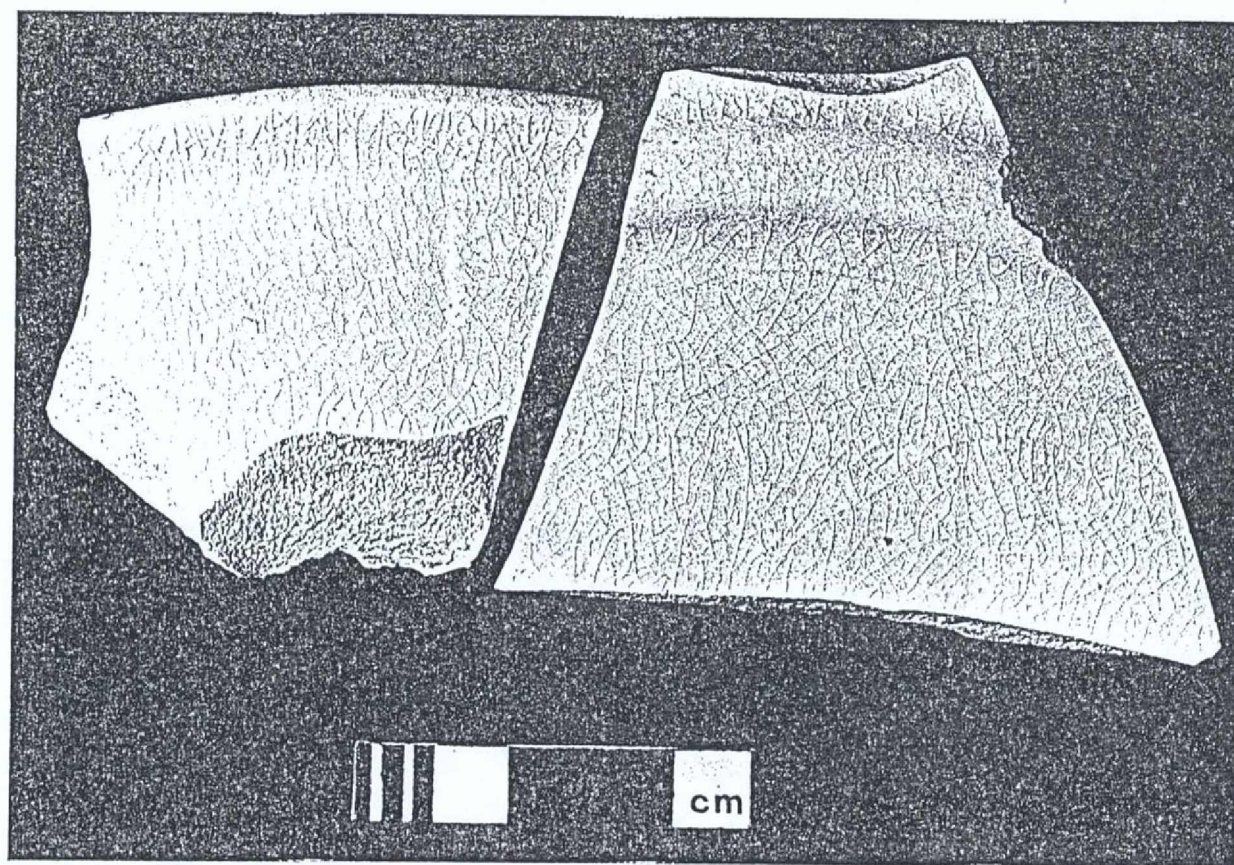


Figure 5:1 Two undecorated white ironstone sherds from plate, mid- to late nineteenth century, from dark brown soil layer. Photograph by Carl Forster.

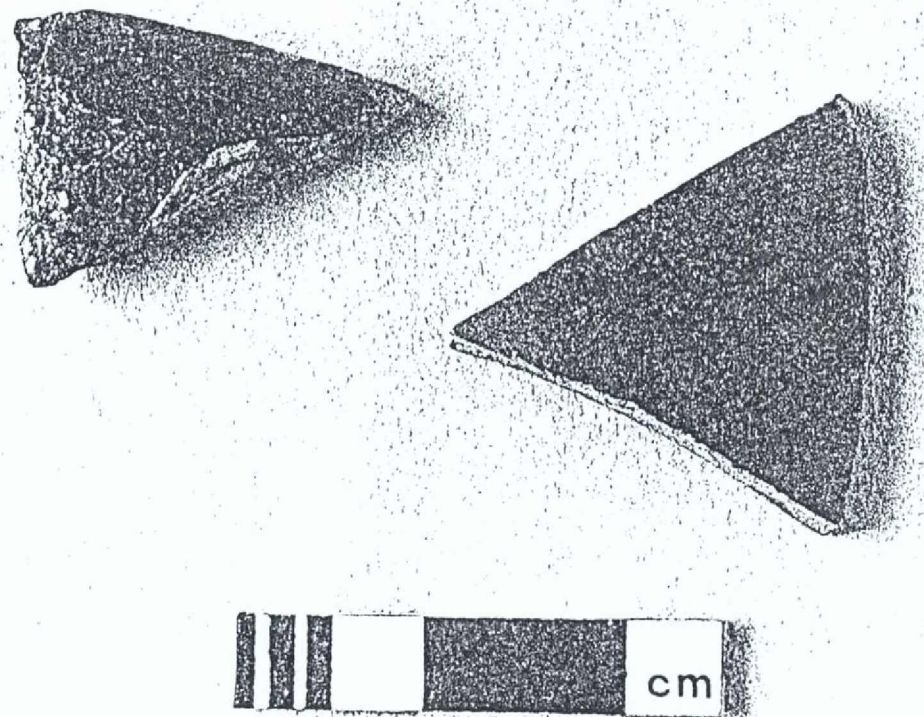


Figure 5:2 American-made redware sherd with Jackfield-like glaze (left), eighteenth to early nineteenth century. English stoneware sherd (right), possibly from an ink bottle (1840-90).

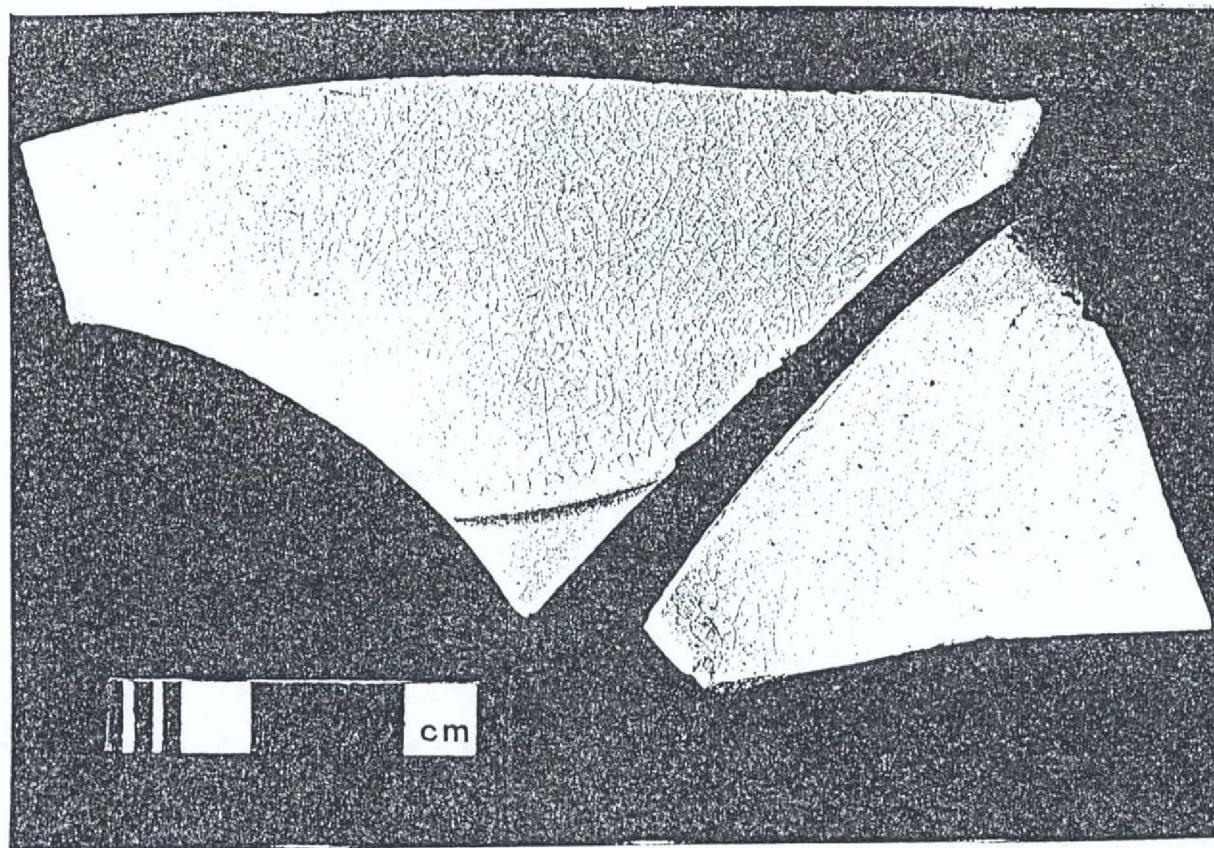


Figure 5:3 Two creamware sherds from dinner service, nineteenth century, from brown sandy soil layer. Photograph by Carl Forster.

were all undecorated creamware or undecorated ironstone. Undecorated creamware was the least expensive type of dish in the nineteenth century (Miller 1980). Undecorated white ironstone, however, was a popular and expensive ware in the mid-nineteenth century, but was a moderately priced ware by the last quarter of the nineteenth century (Miller 1990). Every layer had at least one ceramic sherd that dated post-1840. Therefore, the ceramic evidence suggests that the entire deposit from the excavation units dates to the period of the third church (1840-1900). Most of the ceramics had a broad date range making it difficult to date the deposits precisely.

Glass

Bottle glass is usually very useful for dating purposes. In the seventeenth and eighteenth centuries there was an evolution of bottle shapes; these distinctive forms enable archaeologists to date the bottles (Noel Hume 1970; McKearin and McKearin 1941). With the growing demand for bottles in the early nineteenth century, molds were introduced, both to speed up production and to standardize the shapes (Baughner-Perlin 1978: 132-33). The mold markings provide a more precise range for dating bottle glass (Steward and Consentino 1976; Jones, Sullivan et al. 1985). Commercial embossments enable archaeologists to determine the place of manufacture and the exact product (Munsey 1970; Berkow 1973). In addition, a bottle's function can be determined by its shape and color (Adams 1971).

The Trenches

The trenches contained fragments of twentieth century bottle glass. A machine-made clear glass jar (post-1903) was found (see Figure 5:4). A neck and lip from a machine-made clear glass jar (post-1903) was unearthed. The other bottle glass fragments were not large enough to determine exact

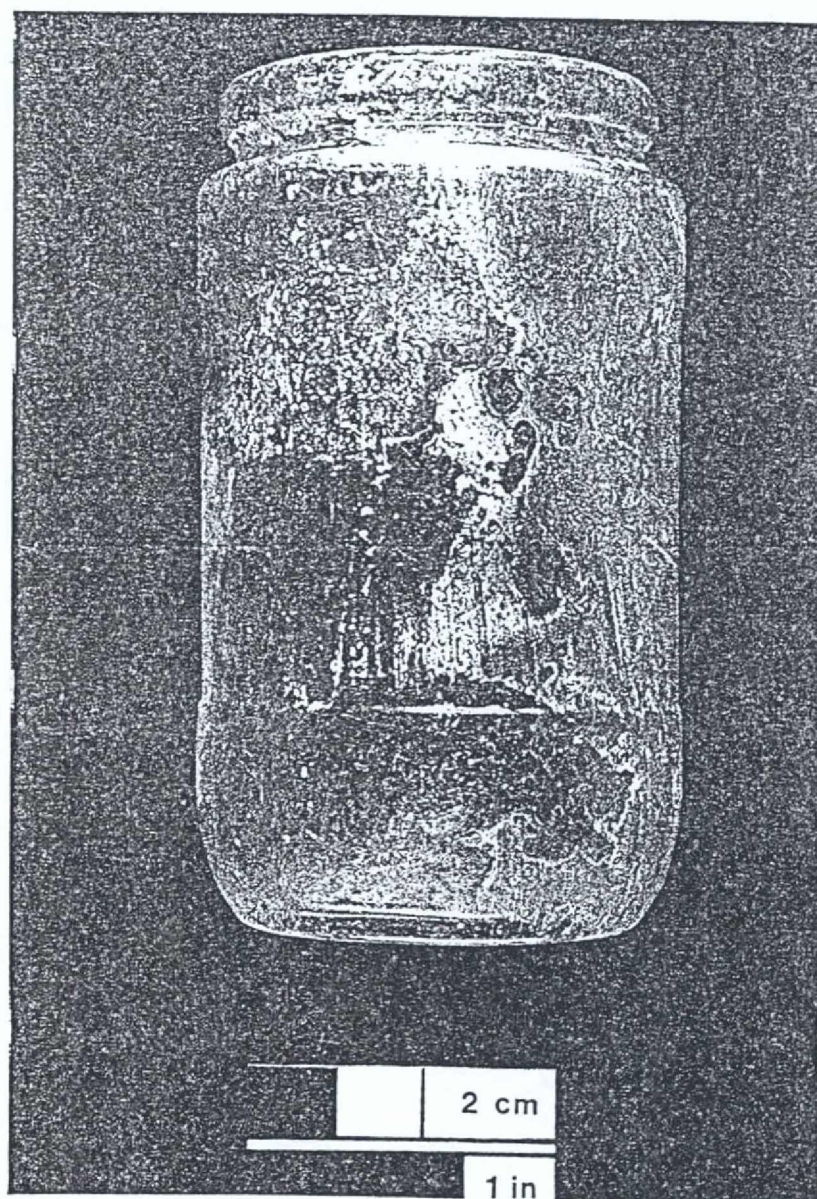


Figure 5:4 Machine-made clear glass jar, post-1903, from excavation trench. Photograph by Carl Forster.

function. Trade network information, which can be gleaned from embossments on bottles, could not be determined at this site since the bottle glass fragments were so small. The only two datable glass objects from the trenches were both twentieth century bottles.

The Excavation Units

In the first stratigraphic layer, the interface between the trench and the undisturbed deposits, contained fragments of both nineteenth and twentieth century bottles. A whole machine-made (post-1903) beer bottle was unearthed (see Figure 5:5). In addition, within this same layer the lip of a mid-nineteenth century soda/mineral water bottle was found; the bottle had an applied lip (post 1840) which dates this layer to the period of the third church (see Figure 5:6).

In the second stratigraphic layer (level 202) the base of a soda/mineral water bottle was unearthed. The base had a bare iron pontil mark which dates from 1845-1870, placing this layer within the period of the third church. The third layer contained a clear glass lip from a medicine vial. The bottle lip was "rolled out" and was probably manufactured in the second quarter of the nineteenth century. There were no datable bottle fragments in the fourth or fifth layers. The embossments on the bottle glass fragments were too small to determine the company's name or place or manufacture (see Figure 5:6).

The fifty-eight fragments of window glass in all the levels appeared to be made by the sheet process method which dates from 1830 to the present. Some of the post-1830 glass may be from replacement windows in the second church but the probability is that the the glass fragments are from the period of the third church.

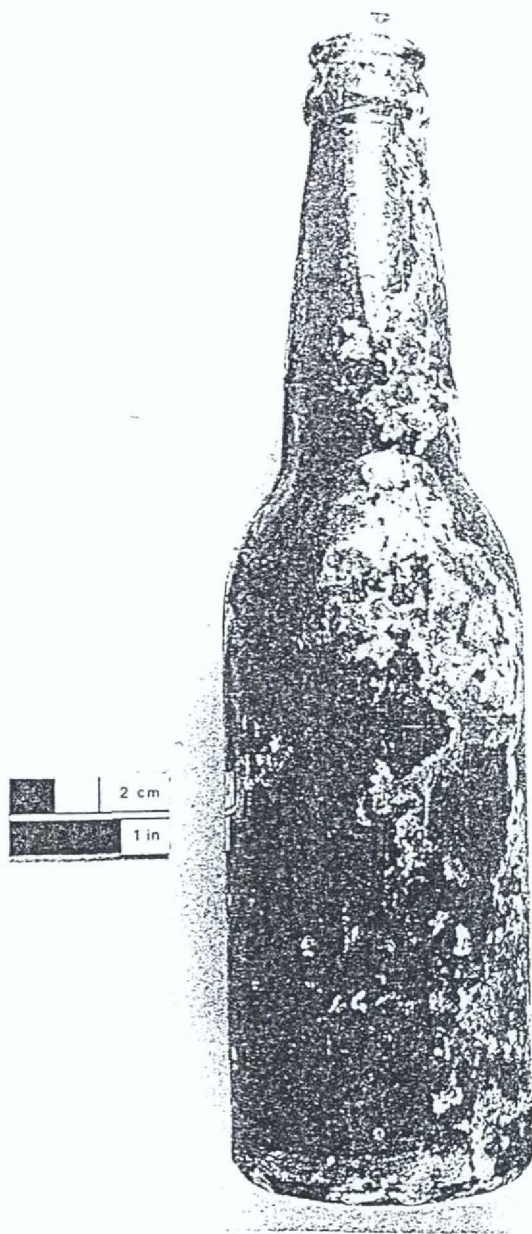


Figure 5:5 Machine-made beer bottle, post-1903, from fine plaster interface layer. Photograph by Carl Forster.

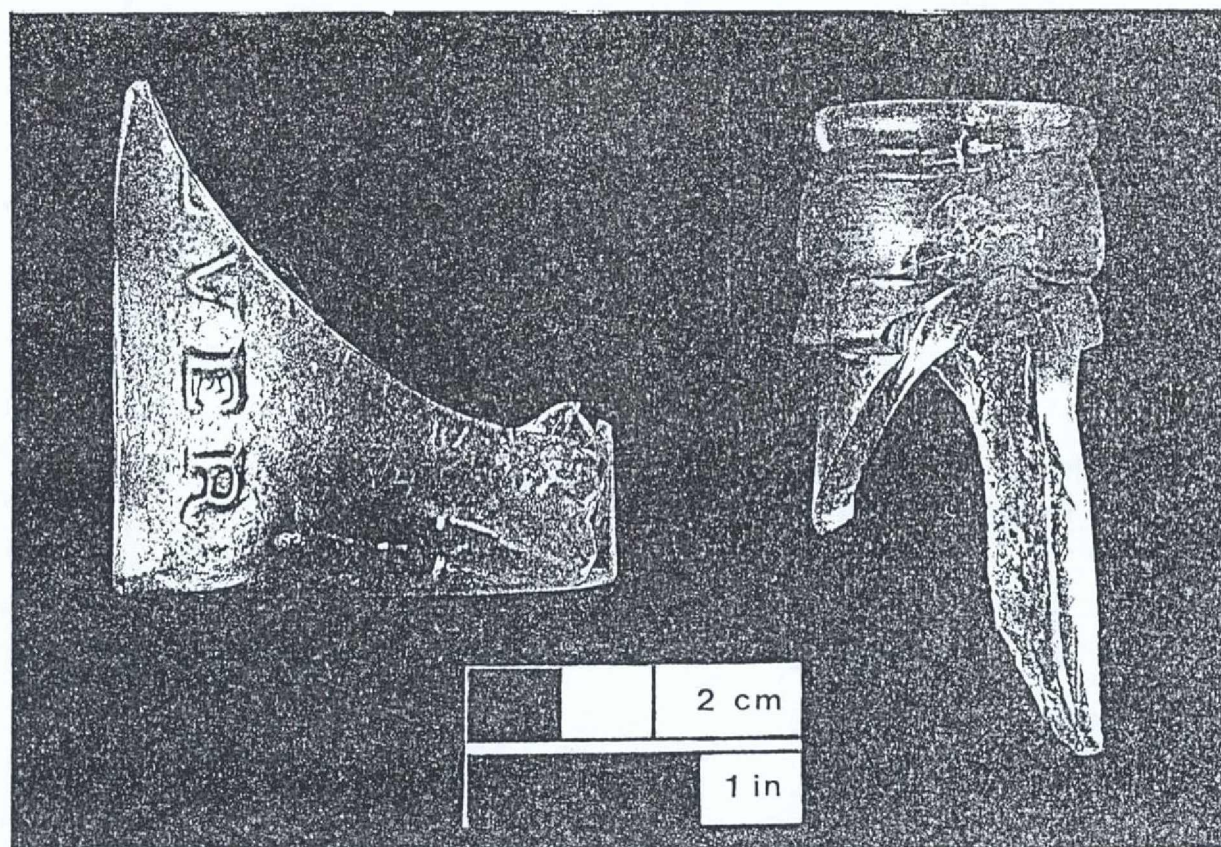


Figure 5:6 Applied lip of a soda/mineral water bottle, post-1840, from fine plaster interface layer (right). Example of embossing on a bottle fragment (left). Photograph by Carl Forster.

In summary, the datable bottle glass from the excavation units dates primarily from 1830-1870, except for the machine-made beer bottle from the interface layer between the twentieth century fill from the trench and the nineteenth century deposits. All of the window glass dated post-1830. The datable glass appears to be from the third church during the first thirty years of its history. The third stratigraphic level contained a medicine vial which could be associated with the use of the second or third church.

The entire bottle glass assemblage from the John Street Church site contained very few embossments or mold markings. Those few artifacts with embossments had only fragments of designs or small portions of one or two letters; consequently, there was not enough data to determine trade networks. Of all the bottle glass (105 objects) only seven artifacts were large enough to determine the bottle's function--there were three jars, two soda/mineral water bottles, one beer bottle, and one medicine vial. The three jars were found in the trench. One soda/mineral water bottle and the beer bottle were found at the interface layer between the trench and the undisturbed deposits. One soda/mineral water bottle and the medicine vial were found in the undisturbed areas. Most of the bottle fragments were small and without diagnostic features so dates could not be assigned to them.

Other Kitchen Group Artifacts

One carved ivory cutlery handle was found in unit 104 (see Figure 5:7).

Clay Smoking Pipes

Archaeologists have found that clay tobacco pipes can be a useful tool in site interpretation. Pipes have a number of attributes which can be examined to determine their date, country of origin, and the person or

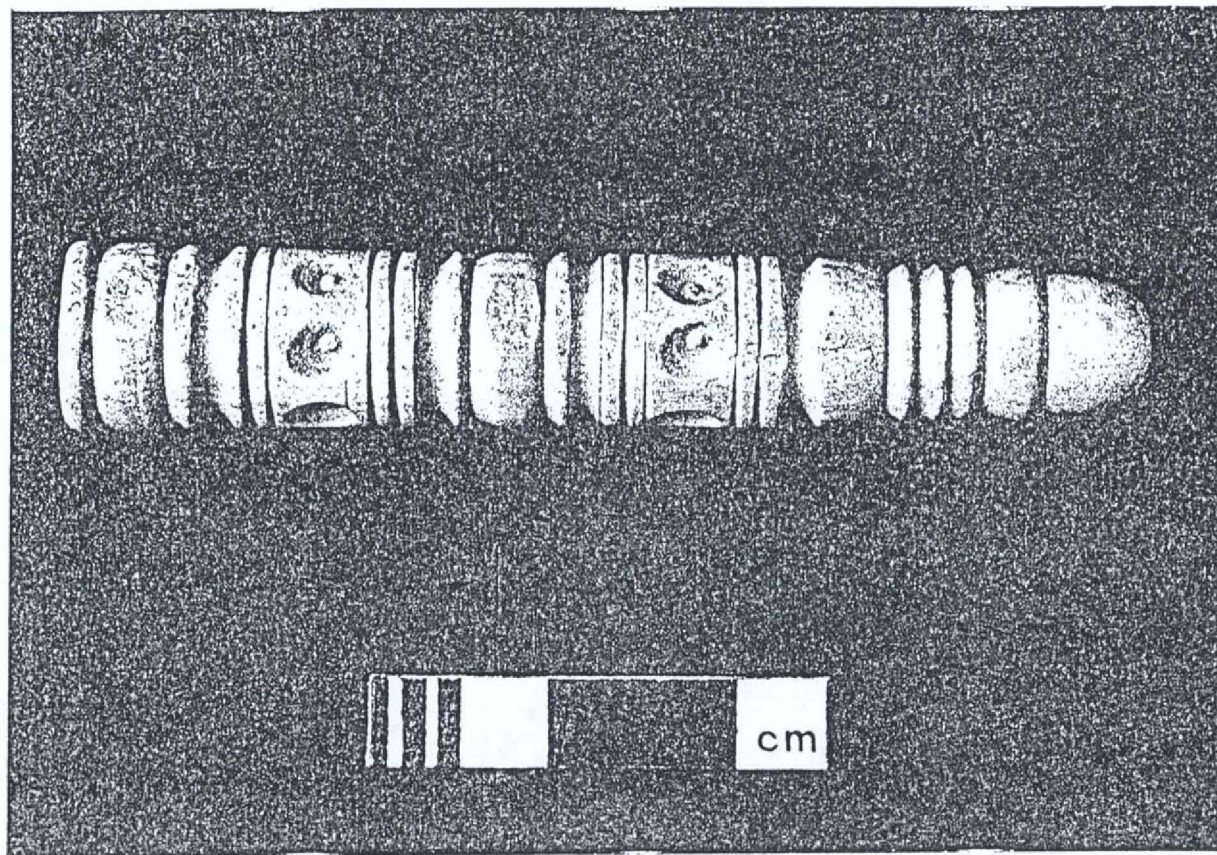


Figure 5:7 Carved ivory cutlery handle. Photograph by Carl Forster.

factory which made them. Three major factors allow us to use pipes as dating tools. First, the size of the smoke hole bored through the stem gradually narrowed through time. Second, there was evolution in pipe shape, as well as changes in iconography and the placement of decorative motifs. Finally, pipemakers often marked their products with their own special trademarks.

As archaeologists, we are always interested in how the material record relates to the "official" record. Although the rule books of the church offer no formal prohibitions against smoking, the Directions Given to Band Societies (1744), and The Doctrines and Discipline of the Methodist Episcopal Church written during the eighteenth and nineteenth centuries offer directives against "needless self-indulgence" (Directions 1744: 79). Although there are strictures against tasting "spiritous liquor, no dram of any kind, unless prescribed by a physician," there are no prohibitions against the taking of tobacco (Doctrines 1848, 1852: 77). Wine is allowed medicinally and/or "sacramentally." Tobacco is never mentioned, although members are warned against indulging "in the carnal diversions of the world" (Doctrines 1798: 142; Doctrines 1852: 58). There are proscriptions against "dancing, card playing and horseracing" as these were considered to be "inconsistent with true religion" (Doctrines 1798: 142). All of these things are considered "softness and needless self-indulgence" and "doing what we know is not for the glory of God," both incompatible with the teachings of the Methodist Church (Doctrines 1860: 31).

Therefore, although there are no prohibitions against smoking, there are certainly admonitions against wasting one's time in "frivolous" activities. Given the strictures against other types of social behavior often linked with smoking--drinking liquor, gambling, etc., it is not hard

to imagine a censorial connotation lending itself to smoking as well.

It was surprising, therefore, that a small deposit of clay smoking pipes was found during an archaeological excavation beneath the cellar floor of the John Street Methodist Episcopal Church. To whom did these pipes belong? Were they relics of long forgotten workmen who lost or broke them during the church's destructions, rebuildings, and numerous repairs? As discussed above, the first church was built in 1768, the second in 1817, and the third in 1841. A study of the pipe deposit helps to link the artifacts with a particular time period, one which might, in turn, be tied to a particular episode in the history of the church.

The Pipe Sample

Ten pipe fragments were excavated from beneath the basement floor of the John Street Methodist Church. The sample as a whole consisted of a small deposit of nineteenth century pipes. The date attributed to the pipe sample is based on a number of chronologically distinct bowl shapes and decorative motifs which were popular in the nineteenth century.

Unit 101

A total of three pipes fragments were excavated from this unit. There were two mouthpieces, one with a smoke hole diameter of 6/64" and which was smudged with the pipemaker's fingerprints and the other, crudely made of brown clay, with a 5/64" bore hole. This brown mouthpiece may have been locally made. A decorated stem with a 6/64" bore hole diameter was found. The decorations consisted of parallel ribs and raised bands near the end of the stem in the juncture where it would have met with the bowl. The decorated stem was also marked with the letters "C.P." (see Figure 5:8).

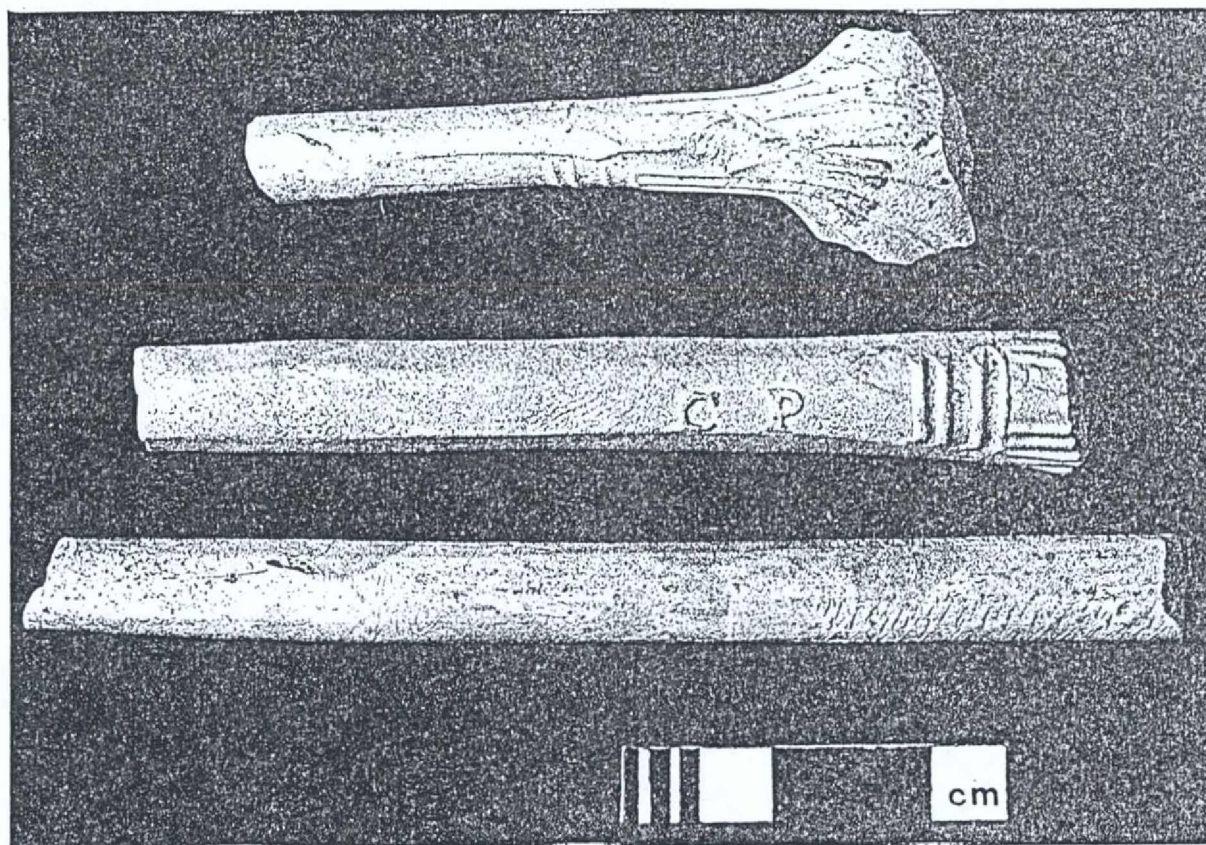


Figure 5:8 Three nineteenth century smoking pipe stem fragments:
Stem with fluting extending to pipe bowl, from dark brown soil layer (top).
Stem with "C.P." marking, from fine plaster interface layer (center).
Undecorated pipe stem (bottom).
Photograph by Carl Forster.

Several stems marked "C.P." decorated with the same ribbing and raised bands were excavated from mid- to late nineteenth strata at the Meadows Site in Philadelphia (Berger 1991). These pipes were associated with fluted/ribbed pipes which were the most common type of pipe throughout the nineteenth century. They were also associated with pipes marked "PETER/DORNI" (1850-1881) as well as those marked McDougall/Glasgow (1846+). The initials "C.P." do not refer to any known pipemaker of that time period nor was it a "typical" form of maker's mark. Initials were generally placed on the heel or the bowl in the seventeenth and eighteenth centuries. The pipemaker's entire surname was spelled out on one side of the stem and the city of manufacture on the other during the nineteenth century.

"C.P." may stand for the model name, such as "cutty pipe" which was one of the most popular styles in the nineteenth century. Of course, it could also stand for "clay pipe," "cheap pipe," or "common pipe." The George Zorn & Company pipe catalogue (1892), mentions the abbreviation "C.D." in an advertisement for common clay pipe (Zorn 1892: 9). In this case, "C.D." may stand for "common domestic" pipes, which are advertised as the "cheapest clay pipe in existence" (ibid.).

Unit 104

Five pipe fragments were excavated from Unit 104. These consisted of four stems and one pipe bowl. A stem with an unusual decoration consisting of opposing lines of "V's" which combined to create the illusion of fish scales was excavated. This fish-scaled stem, with a bore diameter of 5/64", is reminiscent of seventeenth century pipes which represent Sir Walter Raleigh being swallowed by a crocodile who spat him out because he was rank with the smell of tobacco. In Holland these pipes are

alternatively known as "Jonah" pipes and the Walter Raleigh tale may be a permutation of the biblical story of "Jonah and the Whale." In seventeenth century Holland and England Raleigh was a Protestant hero, and the popularity of this motif may have been due to the fact that Raleigh was engaged in the tobacco trade and was subsequently executed by anti-smoking and very Catholic James I of England. The pipestem from the John Street Church, however, while suggestive of the Raleigh pipe, does not date to the seventeenth century. The walls of the stem are too thin and the smoke hole too narrow (Harrington 1954; Binford 1962: 19-21).

There are also two white, undecorated stems with $4/64$ " and $5/64$ " bore diameters, respectively. Interestingly enough, however, a stem decorated at the end nearest the bowl sported the same raised bands and thin flutes/ribs as the "C.P." stem in Unit 101. The stem in Unit 104, however, had more of the pipe bowl present and it was possible to see how the fluting extended up into the bowl itself (see Figure 5:8). This pipe may have had a small heel/spur which broke off. It is common nineteenth century pipe type (see above).

In addition to the four stems, a pipe bowl in the shape of a man's head was found (see Figure 5:9). At first the bowl seemed unique, with few, if any, such examples in the literature. The single exception was a reference to a "Jacob" pipe known to have been manufactured by the famous French Gambier firm whose pipes were "especially famous for their bowls in the form of outstandingly molded heads, either portraits or caricatures, the most famous of which, the Jacob pipe, was widely plagiarized" (Walker 1983: 32). Jacob pipes made by Gambier had "JE SUIS LE VRAI JACOB" written across the turban (ibid.). Imitations of this pipe had variations of this slogan inscribed across the pipe. Although the pipe excavated from beneath the John Street Church was not identical to the description of Jacob pipes

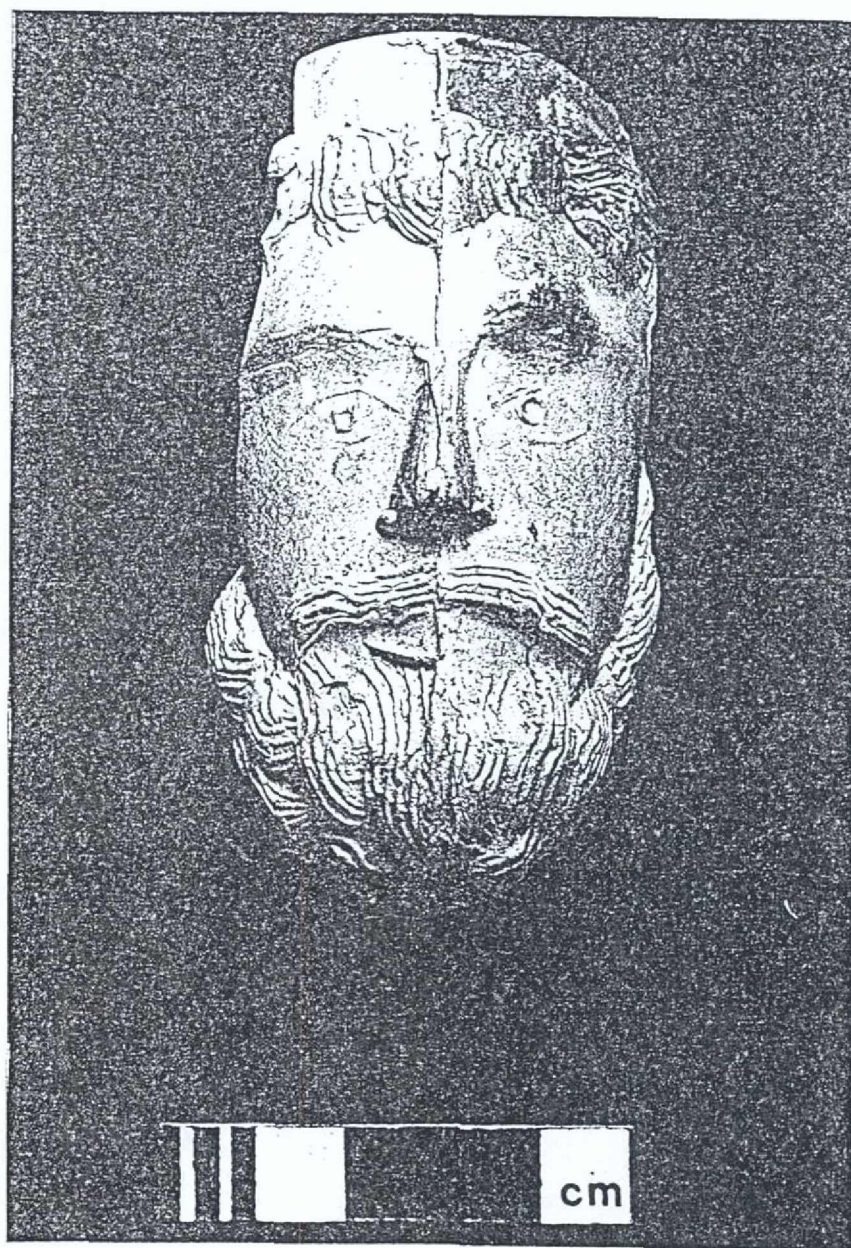


Figure 5:9 Pipe bowl in the shape of a man's head, nineteenth century, from dark brown soil layer. Photograph by Carl Forster.

made by Gambier, it is possible that there were variations of the Jacob model.

The discovery of a pipe depicting a biblical figure beneath the floor of a church may suggest some meaningful link between the artifact and the site. We know now, however, that there were several French firms who were manufacturing fine pipes in the shapes of heads, horses, and other figures in the nineteenth century. And, in addition to the French, pipemakers in such separate places as Gouda and Glasgow were doing the same thing, although not in such a grand manner. In addition, a pipe discovered in 1988 at the Meadows Site in Philadelphia, a superb example of the clay tobacco pipemaker's art, is a replica of the John Street Church pipe. The bowl depicted a "classical figure," perhaps a god, with a flowering beard, a mustache and long wavy hair. The beard, the mustache, and the hair were interconnected, one flowing into the other in sculpted relief. The eyes were wide and deeply set (it was even possible to see the pupils) and the nose sharp and aquiline. The lips were full, and the hair, beard, and mustache, carefully molded.

In contrast, the John Street Church pipe is clearly an imitation of the Meadows pipe -- a crudely executed copy of the finer bowl. It is a unique example of the attempt to copy a finer and, most probably, more expensive model. The details of the John Street pipe are not as sharp, as if the pipemaker's mold had worn out: the lips cannot be seen, the eyes are not deeply set and the features are not clearly delineated.

The quality of the pipe from the Meadows Site suggests French origin. It may have been manufactured by L. Fiolet, a company described in 1851 as producing pipes "mostly in the form of heads" and mostly in the form of historical or mythological figures (Walker 1983: 31). At the height of its

propriety the Fiolet factory produced as many as 28.8 million pipes a year (ibid.). It is suggested that Fiolet pipes in North America date between 1834 and 1892.

The pipe could also have been manufactured by Dumeril, another fine French company, about half the size of Fiolet. Despit both firms entering their pipes in the Great Exhibition of 1851 and despite their winning "Honorable Mentions," the judges did not particularly care for either firm's products. Commenting about Fiolet, they felt that the pipes did not display that good taste for which the French were purportedly famous (Walker 1983: 31). As for Durmeril, the judges remarked that these pipes were "more remarkable for their cheapness and very excellent manufacture, than for any beauty of design" (ibid.).

It was the Gambier pipe which was considered to be the highest quality, even though it was never entered into competition at the Great Exhibition (ibid.). These pipes are generally found in strata which date from the middle of the nineteenth century to 1892.

Other pipe manufacturers making ornately molded heads were Goedewaagen (1859+) in Gouda, and Thomas Davidson, Jr. (1862-1911) and Duncan McDougall (1864-1968) in Glasgow. The poor quality of the pipe excavated from beneath the cellar floor of the John Street Church makes it doubtful that it represents the product of any of the French firms so renowned for their excellent quality. Rather, it is more likely a popular model copied elsewhere, perhaps in Glasgow by one of the pipe making firms whose products we find in such abundance on nineteenth century American sites.

Unit 202

A beautifully molded pipe bowl in a typically nineteenth century rounded "apple" shape was excavated from this unit (see Figure 5:10). Large, broad leaves in graduated sizes and bisected by veins encircle the bowl. Above the leaves, which look like stylized Prince of Wales feathers, are small flowers composed of raised dots which form petals. A raised central circular stamen is surrounded by six smaller petals represented by the dots. This bowl has been smoked. If complete, the stem would have extended diagonally from the bowl at a forty-five degree angle--also a nineteenth century diagnostic characteristic.

The careful execution of the decoration suggests Fiolet or Gambier as the manufacture, however, a Glasgow manufactory could also have been responsible. A mid- to late nineteenth century date is suggested for this pipe.

Unit 303

A single undecorated pipestem with a 5/64" bore diameter was found in Unit 303.

In summary, it was suggested that the small sample of pipes excavated from beneath the floor of the John Street Methodist Episcopal Church dates to the period of the building of the third church (1840-41), at the earliest. Based on stylistic considerations, the date ranges of the pipes cluster at the mid-nineteenth century and extended into the latter part of the nineteenth century.

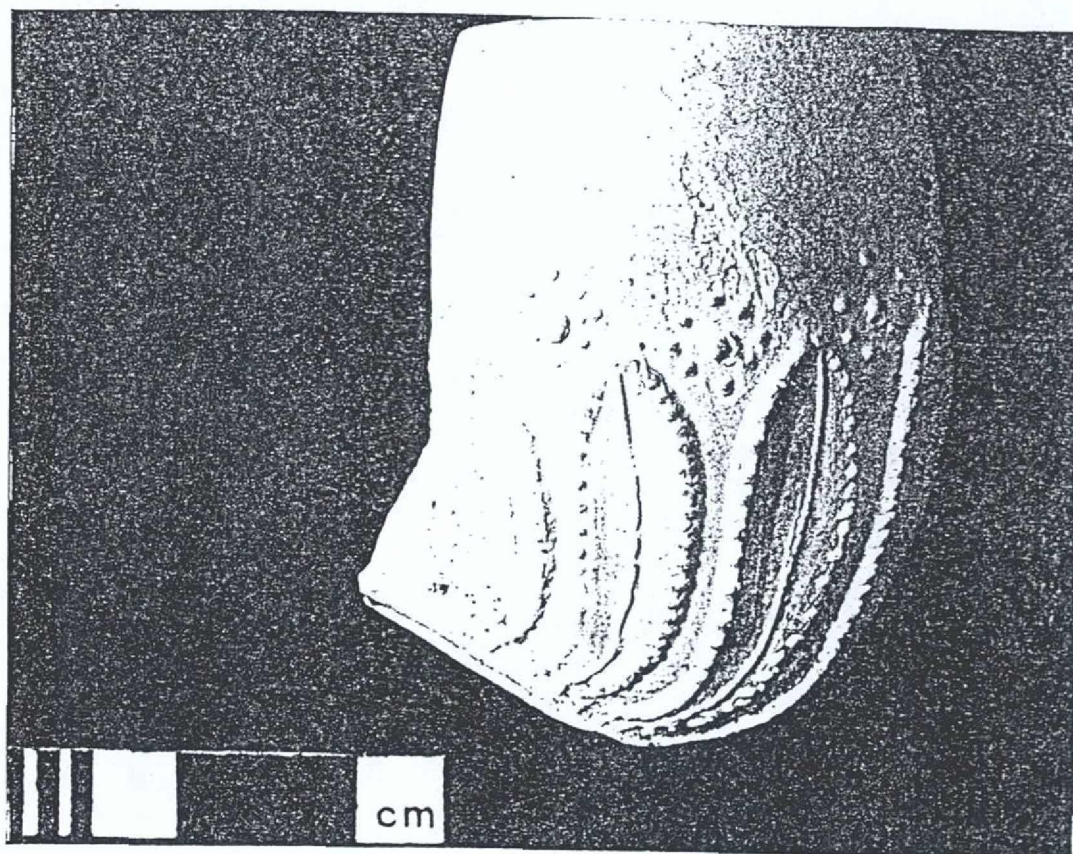


Figure 5:10 Pipe bowl decorated with leaves and flowers, nineteenth century, from dark brown soil layer. Photograph by Carl Forster.

Architectural Group Artifacts

Window Glass

Window glass was found throughout the entire site. A total of 113 specimens were recovered from the site, fifty-eight of which were found specifically within the excavation units. There are three basic types in the collection. The first type is clear to light green in color in three different sizes: one millimeter, one and one-half millimeters, and three millimeters. The second type is aquamarine in color and seven millimeters in thickness.

The stratigraphic context of the specimens plus their size-thickness indicate that they date from the late nineteenth century to the twentieth century. In general, window glass in the nineteenth century was made thicker with the passage of time (Walker 1971: 78).

Nails

Nails are one of the most common artifacts recovered from the excavation of a historic site. These small bits of iron, which are usually badly rusted, bent, twisted or broken, can be used in dating old buildings as well as determining structural changes over time.

Four hundred, thirty-nine nails were recovered from the entire John Street Church site. There are thirty-seven hand-wrought nails within this collection, 390 machine cut nails, and twelve wire nail specimens. The hand-wrought nails date from the eighteenth century while the machine cut nails date from c. 1790 onward (Noel Hume 1969: 252-54). Wire nails date from 1850 to the present. The presence of these three types attests to the fact that structural changes or additions took place over time.

Building Hardware

Several specimens of building hardware were recovered from the site. Among these were eight pieces of iron pipe, numerous fragments of wire mesh, a drain cover, and a metal pipe bracket. Also found were an iron "s" hook, a brass bracket, a square-headed tack, a wood screw, and two hinges. Only the bracket and the square-headed tack were found in diagnostic levels (Unit 202).

Structural Materials

Numerous specimens of brick, mortar, and plaster were recovered from the excavations. These artifacts were present throughout the area of construction and excavation. Although a substantial percentage of the brick was found in diagnostic levels, the fragments were too small to indicate what kind of structure they composed. A large number of wood fragments were found as well.

Lighting Materials

Several fragments of lamp glass were recovered from the excavations. We also found several fragments of light bulbs as well as glass bulbs with attached metal bases. One fragment of lamp glass was found in a diagnostic level (Unit 105) and one fragment of a modern lightbulb was found in the plaster "interface" level described above.

Miscellaneous Architectural Artifacts

Three fragments of asbestos insulation and one fragment of linoleum were recovered from unit 101. Two fragments of rubber insulation from electrical wire were found within unit 101 as well. One asbestos insulation fragment was also found within unit 202, a dark brown soil layer, and several within disturbed contexts and date from the nineteenth to

twentieth centuries.

Miscellany

A collection of diverse artifacts that were not discussed under the categories of ceramics, glass, or pipes was recovered from the site. Due to the low frequency of these specimens, there is insufficient data to permit us to make extensive interpretations. However, we have analyzed these items according to general morphology under various functional categories as indicated below.

Buttons

A small collection of buttons was recovered from the site. Two complete shell buttons were found, one containing two fastening holes and the other four fastening holes. They were found within unit 101, a fine plaster layer, and probably date to the nineteenth century. One milk glass button snap and a single-hole milk glass button fragment were also recovered from the same soil level and these items are datable to the nineteenth century. One metal snap-type button was found in unit 101 that is probably from a pair of overalls and dates to the nineteenth century as well. Finally, an ivory button dating to the nineteenth century was found within unit 402, dark brown soil.

Clothing Group Specimens

One small straight pin and one fragment of cloth were recovered from unit 101. A piece of cloth was also recovered from the wall trench north cinder layer. These artifacts were found in disturbed contexts and thus cannot be accurately dated.

Personal Group Items

One complete rubber comb and one rubber comb fragment were recovered from unit 101. One rubber comb fragment was found in unit 202 and two rubber comb fragments were recovered from unit 303; these levels were within a dark brown soil layer. These combs probably date to the late nineteenth century (see Figure 5:11).

One slate pencil was found in unit 204, a dark brown soil layer. This specimen dates to the late nineteenth century. A piece of pencil lead which dates to the twentieth century was found in unit 203, a golden sandy soil layer.

One coin, a 1948 penny, was recovered from unit 101, a disturbed unit that contained both nineteenth and twentieth century artifacts.

Activities Group

Six clay marbles were recovered from the excavations at the site. Two of these specimens, one gray and one brown in color, were found within unit 104, a dark brown soil layer. Four clay marbles, three of which are gray in color and one white with blue and red design, were recovered from unit 303, also a dark brown soil layer. All of these artifacts date to the nineteenth century (see Figure 5:12).

Conclusions

The John Street Church site contained 895 artifacts, of which 598 were associated with the nineteenth century period of the third church. Table 5:1 itemizes the total site deposits and Table 5:2 categorizes the assemblage from the nineteenth century and the plaster "interface" layer. The trench contained mixed deposits of nineteenth and twentieth century material; the mixed deposits are the result of the extensive intrusions of utility lines in the basement.

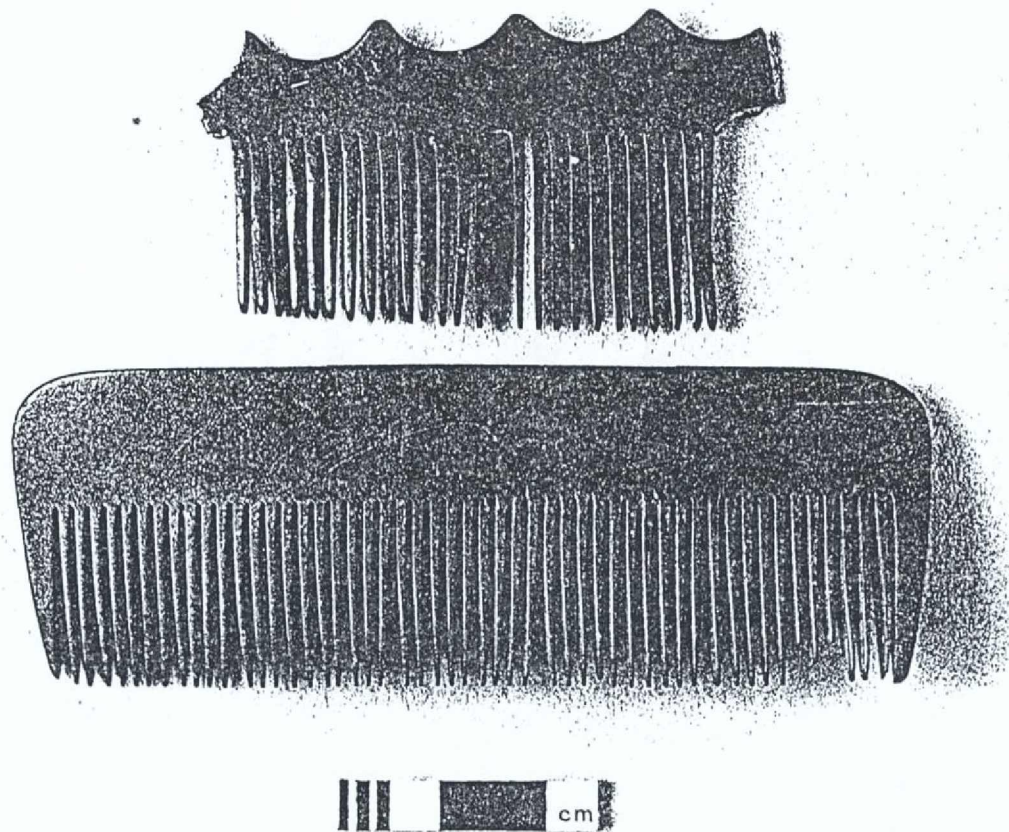


Figure 5:11 Rubber comb fragment (top) and rubber comb (bottom), late nineteenth century. Photograph by Carl Forster.

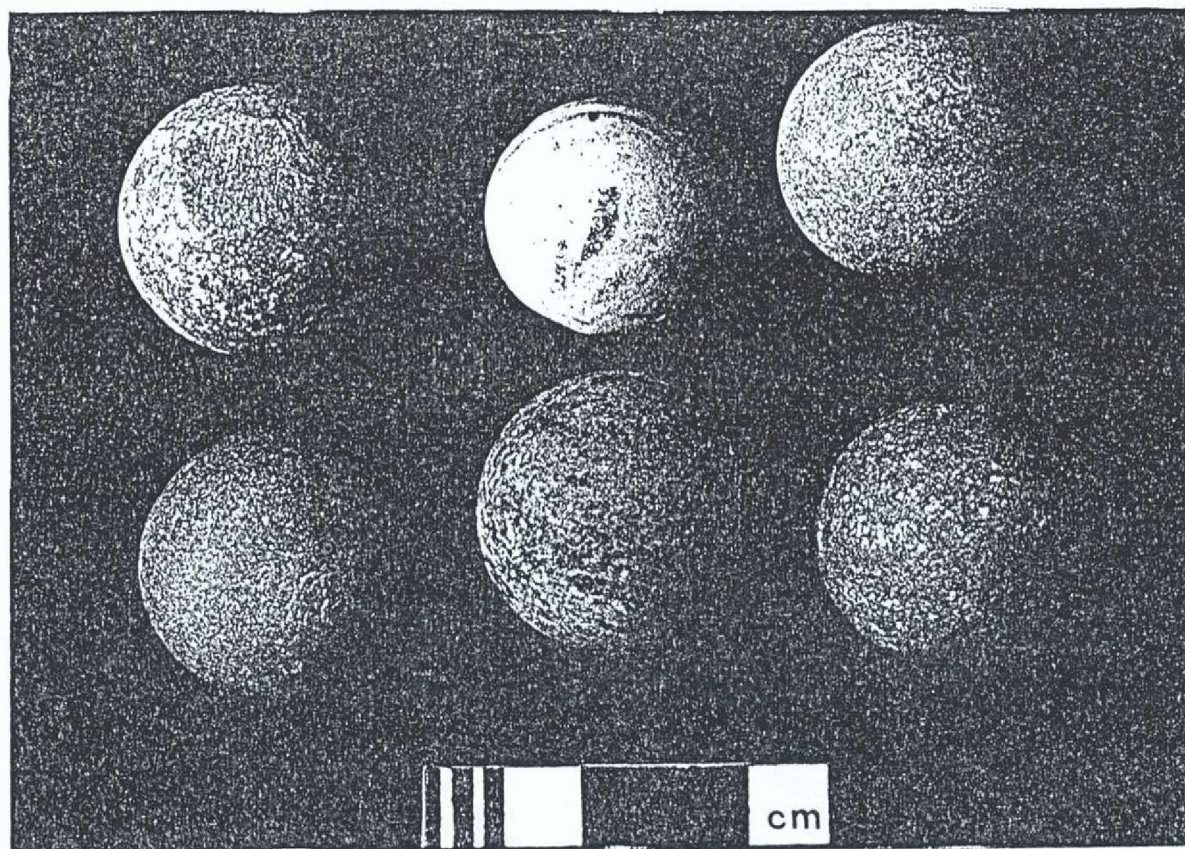


Figure 5:12 Six clay marbles, nineteenth century. Photograph by Carl Forster.

The dates for the ceramics, glass, clay smoking pipes, and buttons all confirm a nineteenth century date for the undisturbed deposit in the church's basement. The deposit is kitchen-related (see Table 5:2). Because the basement was purposefully altered over time, the deposit contained a tremendous amount of architectural debris. The architectural group composed almost 78% of the collection. The second largest category of artifacts (16%) were in the kitchen and dining group. The deposit suggests that people were both preparing food and consuming food in this section of the building.

Table 5:1 The functional categories for the John Street Church site.

Entire Site (including trenches)

<u>Class Name</u>	<u># of Artifacts</u>	<u>% of Artifacts</u>
<u>Kitchen and Dining Group</u>		
1. Ceramics	23	2.6
2. Bottles	105	11.7
3. Table Glass	5	.6
4. Cutlery (carved ivory handle)	1	.1
Total	134	15.0
<u>Architecture Group</u>		
1. Window Glass	113	12.6
2. Nails	439	49.1
3. House Parts (lighting-chandelier)	19	2.1
4. Unidentifiable Metal (function/type)	146	16.3
Total	717	80.1
<u>Clothing Group</u>		
1. Buttons	6	.7
2. Straight Pins	1	.1
3. Leather	1	.1
4. Textiles	10	1.1
Total	18	2.0
<u>Personal Group</u>		
1. Personal Items (pencils, coins, combs, mirror, slate)	10	1.1
2. Tobacco Pipes	10	1.1
3. Toys (marbles only)	6	.7
Total	26	2.9
Assemblage Total	895	100.0

Table 5:2 The functional categories for the John Street Church site.

Excavation Units

<u>Class Name</u>	<u># of Artifacts</u>	<u>% of Artifacts</u>
<u>Kitchen and Dining Group</u>		
1. Ceramics	17	2.8
2. Bottles	75	12.5
3. Table Glass	1	.2
4. Cutlery (carved ivory handle)	1	.2
Total	94	15.7
<u>Architecture Group</u>		
1. Window Glass	58	9.7
2. Nails	287	48.0
3. Hardware (hinges, pipes, brackets)	14	2.3
4. House Parts (lighting-chandelier)	4	.7
5. Unidentifiable Metal (function/type)	101	16.9
Total	464	77.6
<u>Clothing Group</u>		
1. Buttons	6	1.0
2. Straight Pins	1	.2
3. Leather	1	.2
4. Textiles	6	1.0
Total	14	2.4
<u>Personal Group</u>		
1. Personal Items (pencils, coins, combs, mirror, slate)	10	1.7
2. Tobacco Pipes	10	1.7
3. Toys (marbles only)	6	1.0
Total	26	4.4
Assemblage Total	598	100.0

CHAPTER SIX: INTERPRETATIONS AND RECOMMENDATIONS

Judith M. Gaston

CHAPTER SIX: INTERPRETATION AND RECOMMENDATIONS

The discovery of human bones beneath the John Street Church prompted the archaeological excavation discussed in this report. The excavation was not undertaken in the same location where the bones were uncovered because this site had already been extensively disturbed by construction. Another undisturbed area near the site of the bones was chosen in hopes of discovering a stratified, and therefore datable, deposit (see Figure 6:1); the area to be excavated was slated for construction and, therefore, disturbance. If a burial ground had existed on the John Street Church site, the archaeological excavation might have uncovered additional burials in this location. As it turned out, the excavation area did not contain any human remains.

As discussed in Chapter Five the diagnostic artifacts from the undisturbed strata of the excavation area dated to approximately 1830-70 and, thus, were associated with the last years of the second church and the early period of the third church or the early years of the third church only. The artifacts and faunal materials uncovered give us information about the use of the church in the mid-nineteenth century, but we are left with no further artifactual information about the bones discovered further south below the basement of the church. Our historical research and the analysis of human remains (Appendix B), however, enable us to draw some conclusions about the likely origin of the human bones.

The archaeological excavation was located outside of the footprint of the original Wesley Chapel, built in 1768 (see Figure 6:2), in the area beneath the brick walkway connecting the chapel and its parsonage and leading to John Street (see Figure 2:11, 2:13, 2:14). The excavation area,

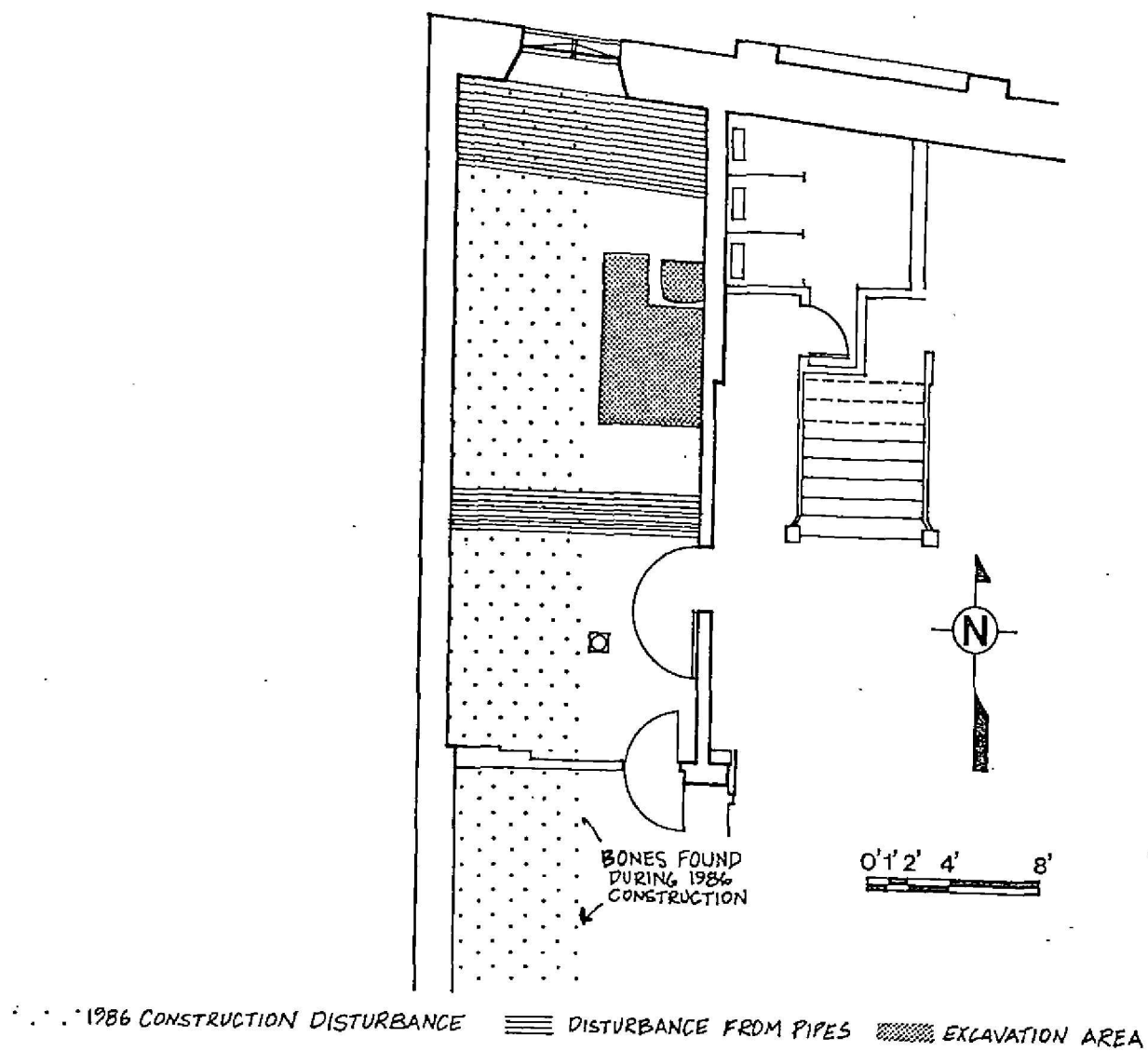


Figure 6:1 Drawing showing locations of construction disturbance, human bones, and archaeological excavation within the basement of the John Street Church. Drafted by Louise DeCesare and Eric Rich.

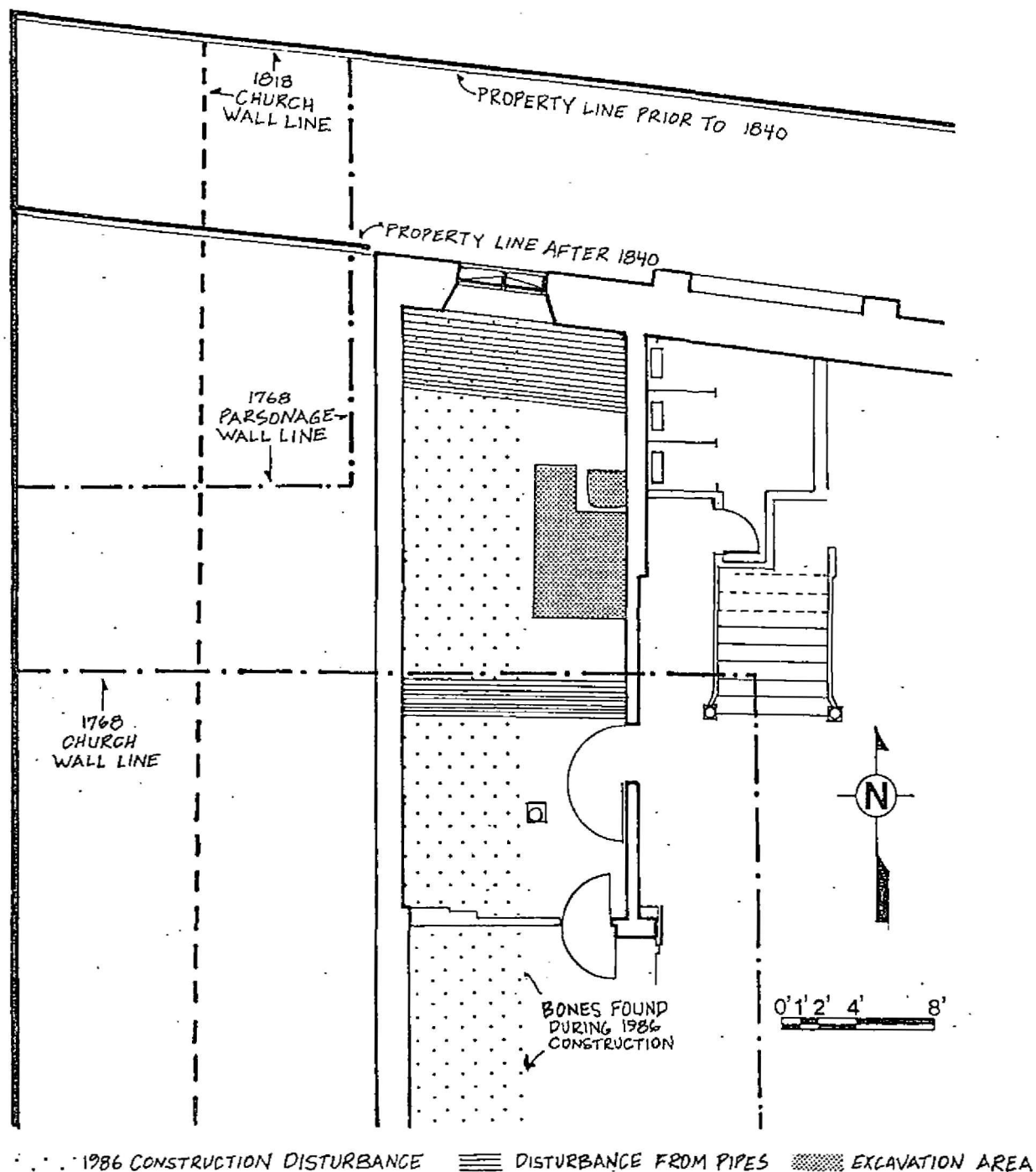


Figure 6:2 Drawing showing locations of construction disturbance, human bones, and archaeological excavation. Dotted lines indicate the walls of the structures previously built on this site. Drafted by Louise DeCesare and Eric Rich.

however, was beneath the footprint of both the second church, built in 1818, and the third church, built in 1840. The artifacts analyzed in Chapter Five represent either deposits from both of these churches or from the third church only.

The human bones were found beneath the footprint of the original church (as well as the second and third), which indicates that they were either present on the site prior to 1768 or were placed beneath the floor of the first, second, or third church. We have ascertained that prior to 1640 this site, because of its environmental setting, may have been occupied by American Indians, but we have no artifactual or documentary evidence of occupation (see Chapter Two). American Indian artifacts have been found on other sites within the Wall Street/financial district of lower Manhattan (Lenik 1990), but the excavation of the John Street Church site yielded no Indian artifacts.

After the excavation was completed we traced the history of the site from 1640 to the present and found no documentary evidence that the site was used as a burial ground before the building of Wesley Chapel in 1768. After this date we find suggestions of a Methodist burial ground, used only briefly (see Chapter Two), and vaults beneath the floor of the chapel. The burial ground would have been located to the east of Wesley Chapel on the only piece of property not covered by any structure, a thirteen foot wide strip of land. The Methodist burial ground is mentioned in one source only and is neither described in any way nor depicted in the various extant views of the property (see Chapter Two). We might also question whether a burial area of only thirteen feet in width was practical. The evidence of vaults beneath the floor, however, seems more convincing; they are mentioned in several sources and in a number of anecdotes (see Chapter Two).

The bones are at least one-hundred years old (see Appendix B). We know that the Methodists discontinued the practice of burial in or near their churches by around 1800, so it is probable that these bones were originally interred during the period of the first church. Some of the bones also showed signs of at least one reinterment (see Appendix B). Our research shows that bones from the vaults were gathered and reburied by the church members in 1817 when Wesley Chapel was torn down and rebuilt. Therefore, these human remains are probably the bones that were reburied, or bones that were inadvertently left behind at that time, but have been scarred during other construction. Two accounts, in 1880 and 1944, mention the discovery of human bones during construction projects in the basement area (see Chapter Two). These, too, may have been bones originally buried in the vaults under Wesley Chapel, or reburied under the second church. It is worth noting here that the bones were discovered at a depth below the basement floor (Danskin 1990, personal communication) that may represent the difference between the current floor level and the lower floor level of the second church (see Chapter Two).

Thus, the excavation in the basement of the John Street Church has helped us to understand the history of the site outside the strict confines of the excavation units. In addition, our artifactual finds within these units reconfirm the use of at least part of the basements of the second and third churches as kitchen areas (see Chapter Five), a use that was traditional perhaps as early as Wesley Chapel itself (see Chapter Two). The faunal deposit from the excavation site also confirms that this area was used for food preparation and consumption (see Appendix A). Although we have no specific documentary details about church gatherings, we do know that the church has had a long history of feeding the poor (Danskin 1990, personal communication). This may explain the unusually high percentage of

older sheep/goat bones in the deposit (see Appendix A). It would have been most economical to purchase the least expensive meat to serve in quantity. These meats, used primarily in stews (to make the meat more tender), may have been standard fare for the poor who came to eat at the church.

The artifacts also offered some surprises. A beer bottle, possible wine bottle fragments, and smoking pipes were unexpected finds at a Methodist church, because Methodists discouraged behavior associated with these kind of artifacts (see Chapter Five). We should not assume that these items could only be connected with church members; the church undoubtedly had a number of outside visitors who would have spent some time in the basement: the "deputies" from the "uptowners/downtowners" dispute (see Chapter Two) and construction workers who helped to build the third church and worked on various subsequent projects.

The tremendous amount of architectural artifacts and debris (78% of the collection, not including plaster brick, mortar, wood, and slag) and the range of dates of these materials (see Chapter Five) is indicative of the history of demolition, construction, and renovation we have documented.

Other artifacts, such as combs and children's marbles, suggest that other activities took place in the basement area just as they do today. The excavation units in the John Street Church were adjacent to the present-day ladies' lounge, where women still comb their hair; the units lie directly beneath the modern children's playroom where children might still play with marbles, among other toys.

The Wesley Chapel Museum is currently being installed in a section of the basement of the John Street Church. This report, in addition to the numerous documents and objects displayed in the museum, should help members

of the church, as well as the general public, better understand the history of the church, the land on which it stands, and the people who built and maintained it.

Recommendations

In light of the confirmed presence of human remains within the current museum area, we recommend that all future below-ground construction projects be undertaken with extreme care and in consultation with an archaeologist (see Figure 6:3). Due to the heavy construction disturbance in the museum area, remaining human bones may be found even at the shallowest depths, but in disturbed deposits. If there are any intact artifactual deposits between areas of prior construction disturbance, we would expect to find them at a depth of four feet or lower below the current floor. Such deposits may be similar to those discussed in this report.

The present-day kitchen and children's room were thoroughly disturbed by construction in 1986. The utility and restroom areas of the basement have also been extensively disturbed and have a very low probability of yielding any valuable archaeological information. There would be no need for consultation prior to construction in these areas.

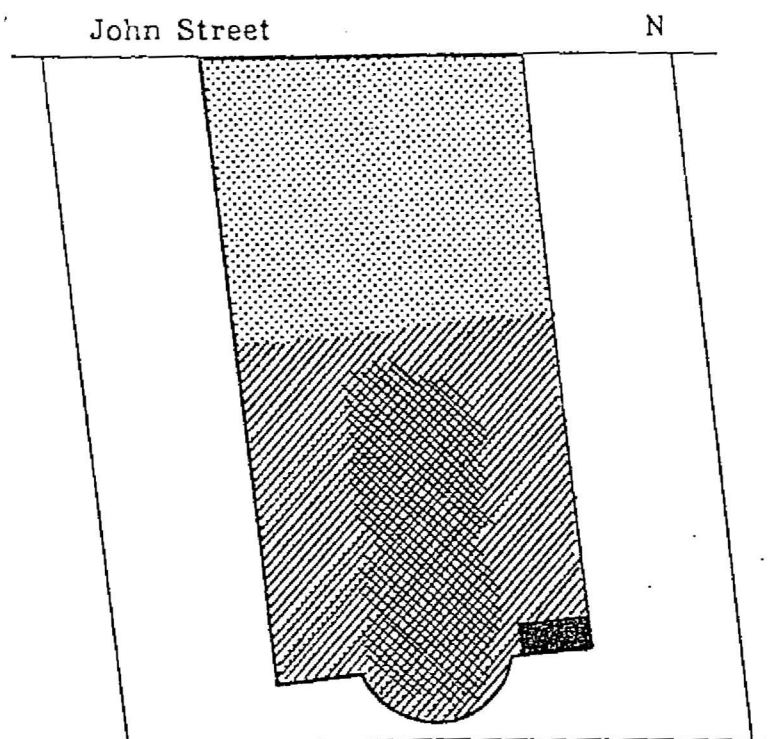





Figure 6:3 The John Street Church: Areas of Archaeological Sensitivity

-  Indicates museum area under which human bones may be found.
-  Approximate area in which intact deposits may be found.
-  Area in which human bones unearthed in 1986 were reburied.

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APPENDICES

APPENDIX A: JOHN STREET CHURCH FAUNA

Daniel H. Russell and Thomas Amorosi

A small faunal collection was recovered from beneath the floor boards of the basement kitchen of the John Street Methodist church located at 44 John Street, New York City. The assemblage was recovered in situ and by dry screening through a quarter inch wire mesh screen. A total of 1433 bone and shell fragments were recovered. The six human bones recovered during an earlier construction project in the basement "museum" room of the Church were analyzed by Bobbi L. Brickman and are reported in Appendix B of this report.

The stratigraphy of the site is dated on the basis of chronological implications of associated artifacts. A stratum of dark brown soil containing artifacts, bone, and shell was dated between 1830 and 1870 (Baughner personal communication). This stratum contained 47.65% of the faunal material (Table 4). A sandy brown stratum with brick fragments, artifacts, and bone dating to the 1820s (Baughner personal communication) contained 2.68% of the faunal material (Table 6). These are the only strata for which dates are available.

Methods and Quantification

The archaeofauna was identified by the use of comparative specimens from the American Museum of Natural History (Department of Mammalogy), the Bioarchaeology Facility, Department of Anthropology at Hunter College and private collections of the authors. Specimens were identified to the lowest taxonomic classification (genus and species) possible. Specimens not identified to species or genus were assigned to the next higher level of classification (family or order). Specimens too fragmentary to be

identified were assigned class and size categories (Table 1).

Identification of ribs was not attempted since there is great deal of variation in rib morphology on both the inter- and intra-species levels. Therefore, ribs were included in the large and medium mammal categories.

The taxonomic measures used here are the quantification methods of ordinal counts; the Total Number of Bones (TNB), the Number of Identified Specimens per Taxon (NISP), the Total Number of Fragments, and the ratio scale measure of Relative Frequency (RF). There are other methods of quantification available, but these are not applicable to the John Street faunal assemblage.

The more popular methods of the Minimum Number of Individuals (MNI) and meat weight yields have been severely criticized (Casteel 1977, 1978; Gilbert 1978; Gilbert and Singer 1982; Grayson 1978, 1979, 1981, 1984; Klein and Cruz-Uribe 1984; Lie 1980; McGovern 1985). The use of MNI requires the assumption that faunal remains are buried on newly exposed, clean surfaces and immediately sealed (Grayson and Thomas 1983; Thomas and Mayer 1983). One such example of this phenomenon is the Shearson-American Express site (Russell and Amorosi 1987). The deposit of cattle crania and sheep/goat pedials was the result of butcher's waste deposited in a series of single dumps and quickly sealed. The macro-plant remains also recovered from the Shearson-American Express site indicate that the deposition of faunal remains was rapid and the grass became quickly established. However, the bone deposits from John Street Methodist Church were found from many accretional events, such as the infilling of a basement. There is no stratigraphic data to indicate that a single depositional episode occurred at the John Street Church.

There are other methodological problems with MNI and meat weight yields that also preclude its use at John Street. MNI determinations lack replicability since different analysts apply different criteria with significant differences in results. Since MNI methods do not yield accurate and replicable results, meat weight yields are therefore prone to errors (Klein and Cruz-Urbe 1984: 24-38; McGovern 1985).

In sum, the problems mentioned above are severe enough to preclude the use of MNI and meat weight yields. Although the ordinal measures of TNB, NISP and TNF suffer from similar methodological problems (Grayson 1983, 1984; Klein and Cruz-Urbe 1984: 101; Crabtree 1985), Grayson (1983: 101) has argued that these ordinal measures carry virtually all the information embodied by MNI counts and are statistically valid ordinal levels of analyses.

Mammal Remains

Mammals comprised 65.35% of the archaeofauna (Talbe 1). The dominant species represented are Ovis/Capra (42.28%), Rattus (40.94%) and R. norvegicus (6.04%) (Talbe 1). Table 2 demonstrates that most of the collection was derived from stratigraphic units 101, 202, and 205 with total NISP's of 38, 49, and 23 respectively. Stratigraphic unit 101 was the richest in diversity of recovered species (Table 2).

A stratum of fine plaster overlaying the stratigraphic units of 101, 102, 301, and 401 contained the second largest concentration of bones (Table 3) and is similar to unit 101 in species diversity (Tables 2 and 3).

In stratigraphic units 104, 202, 204, 303, and 402 a layer of dark brown soil, numerous artifacts and faunal remains were recovered. This stratum, dated between 1830 and 1870 (Baughner personal communication), contained 47.65% of the identified mammal bones (Talbe 4). The dominant

species represented, Ovis/Capra, comprised 59.15% of the identified mammal bones from this stratum (Table 4).

A deposit of yellow sandy soil (stratigraphic units 103, 203, 302, and 403) contained 2.68% of the identified mammal bones (Table 5). This stratum could not be dated.

A deposit of sandy brown soil with brick fragments and artifacts (stratigraphic units 105, 206, 304, and 404) dated to the 1820s and contained 2.68% of the identified mammal bones (Table 6).

Stratigraphic unit 205, a sandy soil along the fieldstone footing of the 1840s church foundation or the wall of the 1818 church contained 22 postcranial elements of Rattus sp. and one mandible of R. norvegicus (Table 7). These remains may represent a single individual of R. norvegicus and comprised 15.44% of the mammal collection (Tables 2 and 7).

Tables 8, 9, 10, 11, and 12 record the frequencies of mammal remains recovered from stratigraphic units that are not discussed. Less than 6.0% of the identified mammal bones were recovered from these excavation units.

Rattus comprised the dominant taxon with 46.98% of the mammal remains, which included Rattus sp. (40.94%) and R. norvegicus (6.04%) (Table 1). The genus Rattus can only be distinguished by cranial and dental characteristics (Brown and Twigg 1969). Maxillae and manibles were identified to the species level. Postcranial elements were assigned to the taxonomic classification of Rattus sp.

Tooth eruption and epiphyseal fusion data indicate that the Rattus specimens were derived from a population of rats living beneath the floor boards and foundation walls of the church. This is supported by 23 rat remains recovered from stratigraphic units 205 and the high proportion (68.83%) of rodent gnawed bones (Table 13).

Amorosi (1987) was used to assess the tooth eruption, dental wear and epiphyseal closure. Of the cranial remains, three incisors, four maxillae and four mandibles recovered were from adult individuals. Epiphyseal fusion data obtained from 41 specimens show that 39 (95.12%) were from adult individuals aged between 2 years, 80 days to 3 years, 48 days (Figure 1). The data also suggests that 20 elements recovered from excavation unit 205 may have been from a single individual aged between 2 years, 270 days to 3 years, 40 days. A right mandible of a mature adult specimen of R. norvegicus may belong to this individual providing a nearly complete skeleton of R. norvegicus.

The age profile constructed for Rattus (Figure 1) forms a pattern consistent with age profiles for rats from other New York City archaeofaunas: the 175 Water Street site, Barclays Bank Site, and the Nicoll's Homestead (Amorosi and Russell 1985). The lack of juvenile specimens may be due to sampling bias or poor bone preservation. Bones of immature rats may not survive taphonomic stress or may not be recovered by excavators due to their small size and delicate structure.

Domestic cat (Felis catus) remains were represented by two phalanges and comprised only 1.34% of the mammal bones (Table 1). Both specimens were removed from excavation unit 101 (Table 2).

Domestic pig (Sus scrofa) is represented in trace amounts (1.34%). These remains consist of one neo-natal phalanx and one adult lumbar vertebra (Table 1). Both specimens were recovered from stratigraphic unit 101 (Table 2).

Cattle (Bos taurus) appear to be under-represented in the mammalian fauna (6.17%) (Table 1). The distribution of body parts indicates that 70.00% of cattle remains were derived from vertebrae (Table 14) and 30% from loose teeth. Furthermore 30.00% of the Bos remains exhibited evidence

of butchering (Table 13) and 70.00% were rodent gnawed.

The absence of cattle bones cannot be attributed to taphonomic causes. Bos remains from the 174 Water Street assemblage (Briddick 1982), 80 Broad Street (Greenfield 1984) and Barclays Bank Site (Amorosi et al. 1987) indicate that cattle and sheep/goat usually appear in nearly equal proportions in New York City archaeofaunas. The absence of cattle bones in the collection may be attributed to a differential preference for sheep.

Ovis/Capra comprised the second most abundant species (42.28%) (Table 1). The skeletons of domestic goat (Capra hircus) and the domestic sheep (Ovis aries) are morphologically similar, making it difficult to distinguish between the two species (Boessneck 1970). The skeletal sample of caprines from John Street is extremely fragmentary, making the identification of these species extremely difficult; therefore the caprine remains are lumped together in the general category of Ovis/Capra.

Table 2 shows that Ovis/Capra are concentrated in two stratigraphic units 101 and 202. Analysis of the aggregated body parts (Table 14) demonstrates that 53.97% of the sheep/goat remains were derived from vertebrae; 4.77% were derived from the shoulder and forelimbs and 17.46% were derived from the pelvis and hind limbs. Table 15 indicates that lumbar vertebrae comprised 39.68% of the total ovicaprid remains recovered or 73.53% of the ovicaprid vertebrae. This might indicate a preference for the posterior portion of the spinal column. Briddick's (1982) analysis of the 175 Water Street fauna indicates that the cervical, thoracic and lumbar vertebrae of ovicaprids were approximately equally represented in the collection. Table 13 shows that 60.32% of the sheep/goat bones exhibited evidence of butchering. The high proportion of meat-bearing elements (Tables 14 and 15) and butchering (Table 13) suggests

that the bones were derived from kitchen refuse. The podial elements may have been derived from butcher waste (Lyman 1977). The absence of cranial elements indicates that prepared cuts of meat were utilized.

Age determination based on epiphyseal fusion followed Amorosi (1987), Schmid (1972), and Silver (1969). Analysis of 34 specimens of Ovis/Capra elements (Table 16) for epiphyseal fusion shows that 58.82% of the specimens were fused. Fused specimens were arranged according to general age groups (Table 17). Table 17 indicates that 60% of the population were mature, over two years of age.

White tail deer (Odocoileus virginianus) was represented by two specimens forming 1.34% of the mammalian fauna. Both specimens were derived from the pelvis (Table 14) and exhibited evidence of butchering (Table 13).

Avian Remains

Table 18 shows the distribution of bird bones in the site. A total of 24 bird bones were recovered from the John Street Methodist Church fauna. Six specimens were identified to the species level (Table 1). Chicken (Gallus gallus) formed 66.67% of the identified bones. the remaining 33.33% were assigned to the other galliformes.

Discussion

Comparison of faunal data from John Street with data from 175 Water Street (Biddick 1982) and Barclays Bank Site (Amorosi et al. 1987) shows several similar patterns. Analysis of aggregated body parts for sheep/goat recovered from 175 Water Street and Barclays Bank Site shows that 20.4% to 25% of the sheep/goat bones were derived from vertebrae (Biddick 1982; Amorosi et al. 1987) compared to the 53.97% vertebrae (Table 14) for John Street.

The high proportion of vertebrae in the John Street fauna may be a function of: 1) the number of vertebrae present in the skeleton; 2) a preference for cuts of meat containing vertebrae or 3) the high degree of butchering (Table 13). This portion of the skeleton has a high meat yield (Lyman 1977).

Biddick's (1982: 568) analysis of epiphyseal fusion data shows a mature age profile for sheep/goat, which suggests that mutton was eaten rather than lamb. This compares closely with John Street (Tables 16 and 17) which shows a mature age profile with 60% of the population greater than two years of age. Spring lamb was a luxury item and expensive compared to mutton or beef (Biddick 1982: 574 and Figure 4:13) based on 1763 prices. A mutton diet may be in keeping with a "poor" church economy. However, caution must be taken before developing any economic scenario based on such a limited collection.

Conclusion

Data from the John Street Methodist Church fauna is inconclusive due to the highly fragmentary nature of the remains. The faunal collection does possess some interesting patterns consistent with other historical urban sites (Amorosi and Russell 1985). This includes the distribution of small mammals in rubble layers (Tables 2 and 3) and foundation walls (Table 7) and age profiles (Figure 1).

What is notable is the under-representation of important food species such as domestic pig (1.34%) and domestic cattle (6.71%) in contrast to the over representation of Ovis/Capra (42.26%). Domestic cattle remains and sheep/goat remains usually appear in approximately equal proportions in New York City historical collections (Amorosi 1984; Amorosi et al. 1987; Amorosi and Russell 1985; Biddick 1982; Geismar 1982; Greenfield 1984).

Even domestic poultry appears as a trace species in this collection (1.75% of total NISP).

The relative frequency and age profile for sheep/goats (Tables 15, 16, and 17) suggest that the sheep/goat remains could have been derived from a minimum of two individuals. However, the highly processed condition of the remains (Table 13) indicates that prepared cuts of meat were utilized. Therefore a determination of the MNI for sheep/goats cannot be made.

Caution must be exercised with this data. Further detailing of an economic pattern will require a better understanding of New York City's historic past within the context of zooarchaeological regional perspective. The John Street Methodist Church archaeofauna provides a critical point in a growing data base necessary to document changing subsistence strategies in large urban centers. At present, we are only beginning to understand regional differences, and it seems clear that these variations may have significant implications for understanding the growth and development of large urban centers like New York City.

TABLE 1

Summary of Identified Specimens
Recovered from John Street, New York City

TAXON	NISP	PERCENT OF GROUP	PERCENT OF WHOLE
MAMMALIA			
Order Rodentia			
Family Muridae			
Rattus sp.	61	40.94%	26.75%
R. norvegicus	9	6.04%	3.95%
Order Carnivora			
Family Felidae			
Felis cattus	2	1.34%	0.88%
Order Artiodactyla			
Family Suidae			
Sus scrofa	2	1.34%	0.88%
Family Bovidae			
Bos taurus	10	6.71%	4.39%
Ovis capra	63	42.28%	27.63%
Family Cervidae			
Odocoileus virginianus	2	1.34%	0.88%
<hr/>			
TOTAL	149		65.35%
AVES			
Order Galliformes	2	33.33%	0.88%
Family Tetraeonidae			
Gallus gallus	4	66.67%	1.75%
<hr/>			
TOTAL	6		2.63%
PISCES	71		31.14%
CRUSTACEANS	1		0.44%
MOLLUSCA	1		0.44%
<u>GRAND TOTAL</u>	228		

	NISP	PERCENT OF WHOLE
LARGE MAMMALS	60	4.17%
MEDIUM MAMMALS	262	18.21%
SMALL MAMMALS	4	0.28%
SCRAP	867	60.25%
<hr/>		
TOTAL UNIDENTIFIED	1193	82.90%
AVES	18	1.25%
<hr/>		
TOTAL TNF	1211	84.16%
TOTAL NISP	228	15.84%
TOTAL TNF	1211	84.16%
<hr/>		
<u>TOTAL TNB</u>	1439	

TABLE 2

Distribution of Identified Mammal Specimens
from
John Street, New York City

Context	Rat.sp.	R. norv.	Felis	Sus	Bos-	O/c	Odoc.	TOTAL
101	13	3	2	2	4	13	1	38
102					1	1		2
103	1							1
104	6					2		8
105	1	1						2
202	8				4	37		49
205	22	1						23
206	1							1
207						1		1
302	1	1			1			3
303	6	1				3		10
304						1		1
401		1						1
402	2	1					1	4
406						1		1
Shovel								
Test 2						2		2
S. Trench 33"-43"						1		1
S. Trench 43"						1		1
TOTAL	61	9	2	2	10	63	2	149

TABLE 3: Mammal bones recovered from the layer of fine plaster;
Stratigraphic units 101, 201, 301, and 401.

UNIT	Rat.sp.	R. norv.	Felis	Sus	Bos	O/c	Odoc.	TOTAL
101	13	3	2	2	4	13	1	38
201								0
301								0
401		1						1
TOTALS	13	4	2	2	4	13	1	39
% OF STRATA	33.33%	10.26%	5.13%	5.13%	10.26%	33.33%	2.56%	
% OF TAXON	21.31%	44.44%	100.00%	100.00%	40.00%	20.63%	50.00%	
% OF TOTAL	8.72%	2.68%	1.34%	1.34%	2.68%	8.72%	0.67%	26.17%

TABLE 4: Mammal bones recovered from dark brown soil with artifacts, bone and shell (104, 202, 204, 303 and 402) dated to circa 1830-1840s.

UNIT	Rat.sp.	R. norv.	Bos	O/c	Odoc.	TOTAL
104	6			2		8
202	8		4	37		49
303	6	1		3		10
402	2	1			1	4
TOTAL	22	2	4	42	1	71
% OF STRATA	30.99%	2.82%	5.63%	59.15%	1.41%	
% OF TAXON	36.07%	22.22%	40.00%	66.67%	50.00%	
% OF TOTAL	14.77%	1.34%	2.68%	28.19%	0.67%	47.65%

TABLE 5: Mammal bones recovered from yellow sandy soil
(103, 203, 302, and 403).

UNIT	Rat.sp.	R. norv.	Bos	TOTAL
103	1			1
302	1	1	1	3
TOTAL	2	1	1	4
% OF STRATA	50.00%	25.00%	25.00%	
% OF TAXON	3.28%	11.11%	0.00%	
% OF TOTAL	1.34%	0.67%	0.67%	2.68%

TABLE 6: Mammal bones recovered from sandy brown soil with brick fragments, some artifacts and bones (105, 206, 304, and 404) dated to circa 1820s.

UNIT	Rat.sp.	R. norv.	O/C	TOTAL
105	1	1		2
206	1			1
304			1	1
404				
TOTAL	2	1	1	4
% OF STRATA	50.00%	25.00%	25.00%	
% OF TAXON	3.28%	11.11%	1.59%	
% OF TOTAL	1.34%	0.67%	0.67%	2.68%

TABLE 7: Mammal bones recovered from stratigraphic
unit 205, sandy soil along fieldstone footing.

UNIT	Rat.sp.	R. norv.	TOTAL
205	22	1	23
TOTAL	22	1	23
% OF STRATA	95.65%	4.35%	
% OF TAXON	36.07%	11.11%	
% OF TOTAL	14.77%	0.67%	15.44%

TABLE 8: Mammal bones recovered from stratigraphic unit 102.

UNIT	Bos	O/C	TOTAL
102	1	1	2
TOTAL	1	1	2
% OF STRATA	50.00%	50.00%	
% OF TAXON	10.00%	1.59%	
% OF TOTAL	0.67%	0.67%	1.34%

TABLE 9: Mammal bones recovered from stratigraphic unit 207.

UNIT	O/C	TOTAL
207	1	1
TOTAL	1	1
% OF STRATA	100.00%	
% OF TAXON	1.59%	
% OF TOTAL	0.67%	0.67%

TABLE 10: Mammal bones recovered from stratigraphic unit 406.

UNIT	O/C	TOTAL
406	1	1
TOTAL	1	1
% OF STRATA	100.00%	
% OF TAXON	1.59%	
% OF TOTAL	0.67%	0.67%

TABLE 11: Mammal bones recovered from
Shovel Test #2.

UNIT	O/C	TOTAL
Shovel Test #2	2	2
TOTAL	2	2
% OF STRATA	100.00%	
% OF TAXON	3.17%	
% OF TOTAL	1.34%	1.34%

TABLE 12: Mammal bones recovered from
the South Trench.

LEVEL	O/C	TOTAL
33"-43"	1	1
43"	1	1
TOTAL	2	2
% OF STRATA	100.00%	
% OF TAXON	3.17%	
% OF TOTAL	1.34%	1.34%

TABLE 13: Number of Specimens Modified by Rodent Chewing
and Butchering.

TAXON	NISP	RODENT N	CHEWING PERCENT	BUTCHERING N	PERCENT
Sus	2	2	100.00%	0	0.00%
Bos	10	7	70.00%	3	30.00%
Ovis/Capra	63	43	68.25%	38	60.32%
Odocoileus	2	1	50.00%	2	100.00%
TOTAL	77	53	68.83%	43	55.84%

TABLE 14: Aggregated Distribution of Body Parts for Large and
Midsize Mammals by Species from John Street, New York City.

	SUS		BOS		OVIS/CAPRA		ODOCOILEUS	
	TNB	PERCENT	TNB	PERCENT	TNB	PERCENT	TNB	PERCENT
CRANIAL								
cranial frags.								
horncores								
loose teeth			3	30.00%	1	1.59%		
maxilla								
mandibles								
AXIAL								
ribs								
vertebrae	1	50.00%	7	70.00%	34	53.97%		
APPENDICULAR (THORACIC)								
scapula					1	1.59%		
humerus					1	1.59%		
radius					1	1.59%		
ulna								
APPENDICULAR (PELVIC)								
pelvis					4	6.35%	2	100.00%
femur					5	7.94%		
tibia					2	3.17%		
fibula								
IRREGULAR								
carpals/tarsals	1	50.00%			5	7.94%		
metapodials					6	9.52%		
phalanges					3	4.76%		
TOTALS	2		10		63		2	

TABLE 15: Aggregated distribution of Body Parts and
Relative Frequencies for Ovis/Capra from
John Street, New York City.

	TNB	OVIS/CAPRA PERCENT	PERCENT VERT.	RF
CRANIAL				
cranial frags.				
horncores				
loose teeth	1	1.59%		
maxilla				
mandibles				
AXIAL				
ribs				
vertebrae				
cervicals	1	1.59%	2.94%	0.14
thoracic	5	7.94%	14.71%	0.38
lumbar	25	39.68%	73.53%	4.17
caudal	1	1.59%	2.94%	0.06
sacral	2	3.17%	5.88%	0.40
APPENDICULAR (THORACIC)				
scapula	1	1.59%		0.50
humerus	1	1.59%		0.50
radius	1	1.59%		0.50
ulna				
APPENDICULAR (PELVIC)				
pelvis	4	6.35%		2.00
femur	5	7.94%		2.50
tibia	2	3.17%		1.00
fibula				
IRREGULAR				
carpals/tarsals	5	7.94%		0.21
metapodials	6	9.52%		1.50
phalanges	3	4.76%		0.09
TOTALS	63			13.95

TABLE 16: Age determination in years for Ovis/Capra based on epiphyseal fusion data (after Schmid 1972, Silver 1969, Amorosi 1975).

Element:	scapula	humerus	femur	tibia	metapodia	phalanx	calcaneus	pelvis	vertebrae	TOTAL
		prox.	prox.	dist.	dist.	prox.		acetabulum		
Age:	0.5-0.75	3.5	3-3	1.25-1	1.6-2	0.5-0.75	3.0	0.5	4-5	
FUSED	1	1	2	2	2	1	1	2	8	2
UNFUSED					4				10	1
TOTALS	1	1	2	2	6	1	1	2	18	3

TABLE 17: Age groups for Ovis/Capra based on epiphyseal fusion data.

AGE	N	PERCENT
0.5-1.0	4	20.00%
1.0-2.0	4	20.00%
2.0-3.0	1	5.00%
3.0-4.0	3	15.00%
4.0-5.0	8	40.00%
	20	100.00%

TABLE 18: Distribution of Identified Bird Specimens
from John Street, New York City.

Context	Galliformes	G. gallus	TOTAL
101	1	3	4
202	1	1	2
TOTAL	2	4	6

APPENDIX B: JOHN STREET CHURCH HUMAN REMAINS

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A total of six human bone fragments were recovered during a construction project at the John Street United Methodist Church located at 44 John Street, New York City.

The remains were identified by direct comparison with skeletal material from the Science Department of Hunter College High School and by the use of the following references: Bass (1971), Brothwell (1981), and McMinn and Hutchings (1977).

Forensics

Due to the fragmentary nature of the skeletal material, traditional methods of age, sex, and race determination were not possible, though for several of the remains, general development of the bone was used as an indication of the age range of the individual.

Supraorbital Ridge of the Left Frontal Bone

<u>Features Present:</u>	Supraorbital notch, frontal sinus on cerebral surface, (endocranial) cerebral plate and ectocranial plate fused.
<u>Age:</u>	Is determined to be that of an adult due to the fusion of the cerebral and ectocranial plates of the skull.
<u>Sex:</u>	Indeterminate due to lack of evidence.
<u>Condition of Bone:</u>	Little post-depositional damage, except for recent breakage around the edges due to excavation.

Vertebra — Thoracic 4 or 5

Features Present: Spinous process, right superior articular process and both transverse processes are broken off.

Age: Indeterminable.

Sex: Indeterminable.

Condition of Bone: The body of the vertebra is heavily worn and damaged, which makes specific identification of thoracic vertebra placement impossible. There are several older shovel cuts present on the anterior aspect of the body. These are indicated by the presence of microscopic dirt in the deep recess of the cut as well as the patina on the cut bone surface. This would indicate that the vertebra was moved at least once prior to the 1986 construction.

Shaft of Femur

Features: Heavily developed linea aspera.

Age: The presence of a heavy linea aspera is dependent upon the development of several femoral muscles which attach at this point. These include the biceps femoris, the adductor magnus, longus and brevis, all of which aid in the movement of the knee and thigh against gravity. The extent to which the linea aspera is developed indicates an adult individual who did a lot of stooping and bending.

Sex: Indeterminable.

Condition of Bone: The markings on the bone surface indicate reburial sometime after initial burial. This is evidenced by a patina which is formed over the original (old) shovel cuts and over an old erosion spot on the shaft.

Head and Neck of Femur with Lesser Throchanter

Features: None.

Age: Indeterminable.

Sex: Indeterminable.

Condition of Bone: The subchondral bone on the head is very pitted and worn and the entire bone is extremely worn and damaged.

Metacarpal - tarsal

Features: None.

Age: Indeterminable.

Sex: Indeterminable.

Condition of Bone: This bone is in poor condition which makes identification of the exact element impossible. The midshaft of the bone exhibits much post-depositional damage, including weathering. The upper tables of the compact bone are cracked. Recent trowel trauma is exhibited on the bone.

Head of Femur

Features: Remnant of epiphyseal line on external surface.

Age: Adult, older than 25 years, which is when fusion is complete.

Sex: Indeterminable.

Condition of Bone: Within the spaces of the trabecular bone of the femur head are deposits of salts. This is the bone found in the plaster layer and the salt deposits are probably due to the composition of the plaster.

Discussion

Construction on this site would have caused reinterment of remains, accounting for the large number of secondary depositional finds and the large number of disassociated bone fragments. This is a common occurrence during reinterment of bones, especially when large numbers of individuals are involved. The recent excavation of the Little Bighorn battle field revealed that 300 small human bone fragments were recovered, mostly those

of hands and feet (Jordan 1986, Scott and Connor 1986). These were the remains of soldiers that had been exhumed and reburied in 1879 and again in 1881. As Scott and Connor state, "Whenever untrained people gather up bones they may overlook small ones such as hand and foot bones or not recognize them as human (1986: 53). It might also account for the occurrence of human bone fragments found during the archaeological excavations of land fill areas across the city; 53rd at Third Avenue (Brickman 1984), Shearson American-Express (Brickman 1987) and the 175 Water Street site (Geismar 1983).

Conclusive evidence is not available as to whether the remains uncovered from the John Street United Methodist Church are from one individual or from six separate individuals. There is not enough evidence to determine the sex, race (White or Indian) or the exact age of the individual at the time of death. The pattern of secondary deposition exhibited by these fragments is consistent with the human bone fragments recovered from the other New York City excavations.