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Gold St.

**PHASE 1A ARCHAEOLOGICAL
DOCUMENTARY STUDY**

**LOWER MANHATTAN DEVELOPMENT
CORPORATION**

**FULTON STREET REDEVELOPMENT
PROJECT**

**STREET IMPROVEMENTS
GOLD STREET ADDITION ADDENDUM
MANHATTAN, NEW YORK**

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LOWER MANHATTAN DEVELOPMENT CORPORATION

FULTON STREET REDEVELOPMENT PROJECT

STREET IMPROVEMENTS

GOLD STREET ADDITION ADDENDUM

MANHATTAN, NEW YORK

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EXECUTIVE SUMMARY

The City of New York proposes to enhance Fulton and Nassau Streets and their environs into a vibrant retail corridor serving the surrounding commercial and residential sectors as well as the burgeoning visitor market. As the proposed project is necessary to the continued revitalization of Lower Manhattan, the Lower Manhattan Development Corporation (LMDC) would provide a portion of the funding. The proposed project centers on the Fulton Street Corridor (Corridor). Based on the most current design plans for the Corridor, there are five (5) areas within the project bounds that must be evaluated for potential archaeological resources. These include two areas of proposed open space, a park, and a playground. The fifth location is the Streetbed Improvements, including portions of Fulton, John, Pearl, Cliff, Gold, William, and Nassau Streets. This addendum, authorized in July 2007, addresses solely the archaeological potential of the Gold Street Addition, an additional Streetbed Improvement study area that lies between Beekman and Spruce Streets.

The proposed project requires review under the National Environmental Policy Act (NEPA), the State Environmental Quality Review Act (SEQRA), and New York City Environmental Quality Review (CEQR), all of which require the consideration of potential impacts to historic resources. In addition, potential effects on historic resources are considered in conformance with Section 106 of the National Historic Preservation Act of 1966 (NHPA) and the New York State Historic Preservation Act of 1980 (SHPA). The New York City Landmarks Preservation Commission (LPC) *Guidelines for Archaeological Work in New York City* outlines specific steps to determine whether a proposed action could affect areas of potential archaeological sensitivity. A prior Phase 1A Archaeological Documentary study was completed for the Streetbed Improvements component of the project (HPI 2007a). The Area of Potential Effect (APE) for the Gold Street Addition, an amendment to the previously submitted Streetbed Improvements Phase 1A, is defined as the portion of the project site that will experience subsurface impacts that may disturb areas of potential archaeological sensitivity.

The Gold Street Addition APE has experienced prior subsurface disturbance to varying depths. Archaeological studies undertaken for projects in the vicinity have concluded that there is disturbance to roughly the upper three feet in the neighboring streetbeds. This disturbance has resulted from multiple episodes of road regulating, paving, utility installation, and development. Furthermore, the sidewalks in the APE were created across former City Lots, each with a multi-story building and a basement that caused disturbance to roughly 10' below grade.

Research has concluded that there is minimal potential for precontact archaeological resources in the APE, and if precontact deposits do exist in discrete locations, they would be found where historical fill may have protected them from later disturbance. Specifically, it is possible that precontact resources may be found beneath roughly five-and-a-half feet of fill near the intersection of Gold and Beekman Streets. The APE was also found to be potentially sensitive for historical archaeological deposits that may include historical fill, infrastructure features (e.g., wood water pipes, pumps, street cisterns, and municipal wells), and structural features (e.g., sidewalk vaults and building footprints).

If the proposed project will cause disturbance of three or more feet below grade where the APE has been designated as sensitive for historical archaeological deposits, or more than five to seven feet below grade where it has been designated as sensitive for precontact archaeological deposits, the proposed project may affect potential archaeological deposits. If these impacts cannot be

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INTRODUCTION

The City of New York proposes to enhance Fulton and Nassau Streets and their environs into a vibrant retail corridor serving the surrounding commercial and residential sectors as well as the burgeoning visitor market. As the proposed project is necessary to the continued revitalization of Lower Manhattan, the Lower Manhattan Development Corporation (LMDC) would provide a portion of the funding. The core components of the proposed project include improvements to the streetscape and to the storefronts and facades of buildings that contribute to the heritage and experience of the corridor, as well as the creation, expansion or improvement of open space within the project area.

The proposed project centers on the Fulton Street Corridor (Corridor). As defined in the *Streetbed Improvements Phase 1A Archaeological Documentary Study* (HPI 2007a), the Corridor includes Fulton Street bounded by Church Street to the west and Water Street to the east; and streets intersecting Fulton Street up to a three block area north and south (Figures 1, 2). Based on the most current design plans for the Corridor, there are five (5) areas within the project bounds that must be evaluated for potential archaeological resources. These include two areas of proposed open space, a park, and a playground (Figure 2). The fifth location is the Streetbed Improvements. Phase 1A reports have been completed for all five components of the project. After the Street Improvements Phase 1A Archaeological Documentary Study was completed (HPI 2007a), the APE was expanded to include the Gold Street Addition APE, the topic of this addendum (Figure 3; Photographs 1-4).

The proposed project requires review under the National Environmental Policy Act (NEPA), the State Environmental Quality Review Act (SEQRA), and New York City Environmental Quality Review (CEQR), all of which require the consideration of potential impacts to historic resources. In addition, potential effects on historic resources are considered in conformance with Section 106 of the National Historic Preservation Act of 1966 (NHPA) and the New York State Historic Preservation Act of 1980 (SHPA). The New York City Landmarks Preservation Commission (LPC) *Guidelines for Archaeological Work in New York City* (2002) outlines specific steps to determine whether a proposed action could affect areas of potential archaeological sensitivity. The first step in this process is an initial review of the affected area, in this case the Corridor, to define the Area of Potential Effect (APE). Since this report is to be reviewed by both the New York State Historic Preservation Office (SHPO) and the LPC, this first step, normally undertaken by LPC, has been completed by Historical Perspectives, Inc. The APE is defined as the portion of the Corridor that would experience subsurface impacts that may disturb areas of potential archaeological sensitivity. Once the APE has been defined, an Archaeological Documentary Study – frequently referred to as a Phase 1A Study – must be undertaken to establish the potential effects of the project on potential archaeological resources.

RESEARCH GOALS AND METHODS

This Addendum to the Streetbed Improvements Archaeological Documentary Study addresses only those land areas within the proposed Corridor that would be subject to direct construction activities, which is defined as the APE. As noted above, this study addresses solely one portion of the APE: the Gold Street Addition. For the entirety of this report, the Gold Street Addition

networks. Deeper impacts have been caused in specific locations where sewer and water lines were buried.

In addition to the above-identified prior disturbances, new water mains and utilities have recently been installed in the surrounding area streetbeds to depths of between five and six feet below grade as part of the Wall Street Area Water Main Project, on-going since 1998. Concurrently, the post-9/11 Emergency Roadway Reconstruction program, initiated in response to extensive damage to lower Manhattan Streets caused by the attack on the World Trade Center and subsequent rescue efforts, has disturbed specific locations near the APE as well. The two projects together entail installing new water mains and subsurface utilities, and undertaking road reconstruction or restoration. Resurfacing roads, which includes milling and paving them, has occurred in specific locations with impacts extending between 18” and 24” below grade. Where road reconstruction has been undertaken, which includes ripping up and reconstructing the streets in their entirety as well as replacing underground utility lines, impacts have occurred to roughly five to six feet below grade.

According to the website lowermanhattan.info, that provides updates on construction in Lower Manhattan in conjunction with the LMDC (site accessed February 27, 2007), some streets experienced more extensive restoration than others, which typically only required opening a five foot wide trench in the street. Gold Street between John Street and Beekman Street experienced milling and resurfacing, with impacts extending to roughly 18-24” below grade (Joshua Kraus, NYCDOT, personal communication to Anne Locke, August 10, 2006; see Figure 6).

Further disturbance to the streetbed and adjacent sidewalks in the APE have occurred where there was known grading and changes to the original (predevelopment) topography. Table 1 documents the known elevation changes after 1865, measured Above Sea Level (ASL), at street intersections in and adjacent to the Gold Street Addition APE. It should be noted that Gold Street was regulated and opened prior to 1865, and that the initial grading predates the cartographic recordation of elevations.

TABLE 1: STREET INTERSECTION ELEVATIONS IN THE GOLD STREET ADDITION APE, EAST OF FULTON STREET

INTERSECTION	1865 VIELE	1885 ROBINSON	1891 BROMLEY	2006¹ SANBORN	CHANGE IN FEET (+/-)
Gold x Fulton	28'	23.8'	23.1'	23.1'	-4.9'
Gold x Ann	-	-	21.2'	*20'	-1.2'
Gold x Beekman	12'	17.5'	17.7'	17.7'	+5.7'
Gold x Spruce	11'	-	11.7'	*11'	No Change

Table 1 demonstrates that Gold Street from Fulton to Spruce Street, was altered. To the southwest it was lowered in elevation, and to the northeast it was raised by filling, probably in an attempt to reduce the elevation of a knoll near Fulton Street, and raise the elevation near Beekman’s Swamp (less than 20 feet to the northeast) (Viele 1865; Figure 4). Furthermore, the

¹ Where the modern Sanborn did not record elevations, the 1951 Sanborn elevations are included, as indicated by an asterisk.

GOLD STREET ADDITION ARCHAEOLOGICAL POTENTIAL

For ease of discussion, Spruce Street is defined as the easternmost boundary of the APE, while Beekman Street is considered the westernmost boundary (Figures 1 through 4).

Precontact Land Use

An analysis of precontact land use in the immediate vicinity is presented in the Phase 1A Archaeological Documentary Study of the Street Improvements (HPI 2007a). In summary, a Native American presence has been documented for the Lower Manhattan area.

Precontact Archaeological Potential

The preservation of precontact sites in an urban environment is rare, largely because precontact deposits tend to be shallowly buried in non-alluvial or colluvial environments, and are vulnerable to disturbance from historical land use and development. This is particularly true in Lower Manhattan, where intensive development has occurred for more than three hundred years.

The Gold Street Addition APE may have once been sensitive for precontact resources due to predevelopment topography and proximity to water and upland resources, but historical and modern development has likely disturbed or, more likely, eradicated any potential resources in most locations. There is documented disturbance to the uppermost three feet immediately below grade in the streetbeds, and to a greater depth in specific locations. These historical disturbances would have compromised any shallowly-buried precontact resources. However, the intersection of Gold and Beekman Streets may be potentially sensitive for precontact resources. This location was slightly uphill of Beekman's Swamp, a low-lying swampy area that was filled and subsequently developed (Viele 1865; Figure 7). The elevation data collected for Table 1 of this report indicates that roughly 5.7' of fill was added here to raise the streetbed. If precontact resources existed in this area, it is possible that they have remained undisturbed and lie buried beneath roughly 6' of fill (Figure 17).

Historical Land Use

A detailed history of the vicinity of the Gold Street Addition APE is provided in the Street Improvements Phase 1A Archaeological Documentary Study (HPI 2007a). In summary, the earliest settlement of Manhattan Island began with the founding of Nieuw Amsterdam by the Dutch in 1625. In the 17th century, a wall on the site of present Wall Street bounded the main part of the city on the southwest side, with the developed land beyond the wall partitioned by the Dutch into "bouweries" or farms.

In the 17th century, the upland area of the project site was divided into a number of larger tracts, encompassing several bouweries as well as common pasturage (Map RD 352, 1917; Stokes Vol. VI 1928:77, 236; Innes 1902; see Figure 8). The portion of the APE roughly north of what is now Pearl Street, east of Fulton Street, and south of Gold Street, was granted by Governor Willem Kieft to Philip De Truy in a ground-brief dated May 22, 1640 (Stokes Vol. VI 1928:77). After De Truy was murdered in 1653, his wife conveyed the tract north of Pearl Street to Isaac

A petition was made to widen and straighten Gold Street between Fulton and Beekman Streets in 1819 (MCC October 4, 1819 Vol. 10:564). In 1829 the width of the street was reported as roughly 25' (*Map Acc. No. 7090*, nd., MBPO). It was again widened and improved from Fulton to Frankfort Street - including the APE - on February 25, 1834 (Street Books, Manhattan Borough President's Office).

In 1966 Gold Street was again widened to 54' between Fulton and Spruce Streets; 80' including sidewalks. This was accomplished by expanding the southern part of the street roughly 10' to 15' over City Block 99 between Beekman and Ferry Streets, and expanding the northern part of the street roughly 5' to 10' over City Block 100 between Beekman and Spruce Streets (*Map Acc No. 29832* 1966, MBPO). Structures fronting both sides of Gold Street were razed to allow the widening. All of the buildings fronting Gold Street prior to this event were four- to six-story structures with basements (Sanborn 1951). A recent archaeological assessment of Block 94, bounded by Fulton, Ann, Gold, and Cliff Streets, concluded that there was no archaeological potential from the surface down to 10' below grade due to the depths of prior basements (HPI 2007b:37). The depths of basements beneath the multi-story buildings that previously flanked either side of Gold Street most likely had basements to similar depths.

Historical Archaeological Potential

The Gold Street Addition APE is potentially sensitive for a diversity of historical archaeological resources. Resource types identified for the roads and sidewalks in the FSTC APE and the Streetbed Improvements APE are applicable to this APE (Geismar 2003; Berger 2004; HPI 2007a). Namely, potential resources are likely to include:

- Street or Sidewalk Vaults;
- Historic Building Footprints;
- Historic Sewer and Water Mains (particularly bored-out log pipes dating between ca. 1799-1827);
- Historic hydrants;
- Wells;
- Pumps; and,
- Cisterns.

In addition, there are locations where streets and sidewalks cross former City lots that were developed in the early 19th, and possibly 18th centuries, prior to the introduction of municipal sewer and water (ca.1842 and 1851 respectively; Endicott 1842; Aqueduct Commissioners Report 1857:126). These locations may also be sensitive for domestic lot features such as wells, privies, and cisterns. However, many of the mid-19th century buildings that formerly fronted Gold Street had deep basements (estimated to be ca. 10' in depth) that may have obliterated earlier resources. In addition to potential shaft features, sidewalk vaults are commonly constructed in front of buildings beneath the sidewalk. These served as accessways to basements, and would have disturbed any earlier potential features.

In summary, Gold Street between Beekman and Spruce Streets is potentially sensitive for early 18th to early 19th century domestic features that predate 1835, probably along the perimeter of the

GOLD STREET ADDITION POTENTIAL IMPACTS

The proposed impacts to the Gold Street Addition APE would entail curb improvements and the installation of sidewalk furniture. Anticipated depths of subsurface disturbance are not yet determined.

GOLD STREET ADDITION CONCLUSIONS AND RECOMMENDATIONS

The Gold Street Addition APE has experienced some subsurface disturbance, namely through street improvements, utility installations and replacements, and the construction of multi-story buildings with deep basements where the APE crosses lots that were developed historically. Prior archaeological studies undertaken for projects in the immediate vicinity have concluded that there is extensive disturbance to neighboring streetbeds (Geismar 2003; Berger 2004; HPI, 2003, 2007a, 2007b). Based on these prior studies and a review of the documentary literature, it is estimated that roughly the upper three feet in the entire APE has been disturbed by multiple episodes of road regulating, paving, utility installation, and development.

Research has concluded that there is only the minimal potential for precontact archaeological resources in the APE, and if precontact deposits do exist, they would potentially be found beneath roughly five-and-a-half feet of fill near the intersection of Gold and Beekman Streets (Figure 17). The APE was also found to be potentially sensitive for historical archaeological deposits in specific locations (Figure 18). Potential resources include domestic features (e.g., wells, cisterns, and privies), infrastructure features (e.g., wood water pipes, pumps, street cisterns, and municipal wells), and structural features (e.g., sidewalk vaults and building footprints).

If the proposed project would cause disturbance of three or more feet below grade where the APE has been designated as sensitive for historical archaeological deposits, or more than five to seven feet below grade where it has been designated as sensitive for precontact archaeological deposits, the proposed project may affect potential archaeological deposits. If these impacts cannot be avoided, then an archaeological field testing program should be designed in coordination with the SHPO and LPC.

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FIGURE 1

Streetbed APE. U.S.G.S. Jersey City, NJ and Brooklyn NY Quadrangles, 1979.



FIGURE 2

Streetbed Archaeological APE. Source: AKRF, Inc.

No Scale.

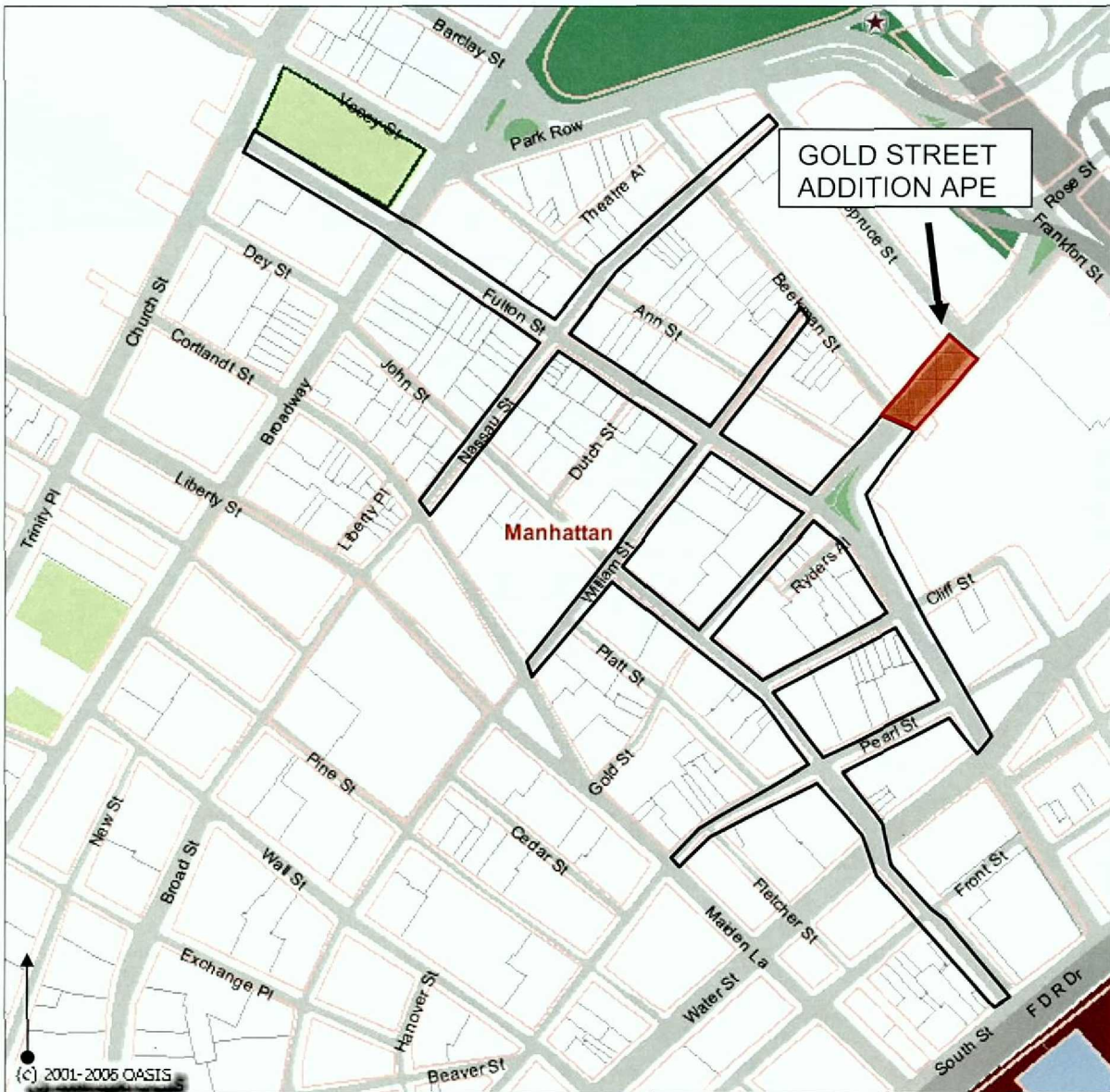


FIGURE 3

Corridor Streetbed APE Boundaries.

Base Map: NYC OASIS, 2007.

Approximate Scale: 1" = 400'

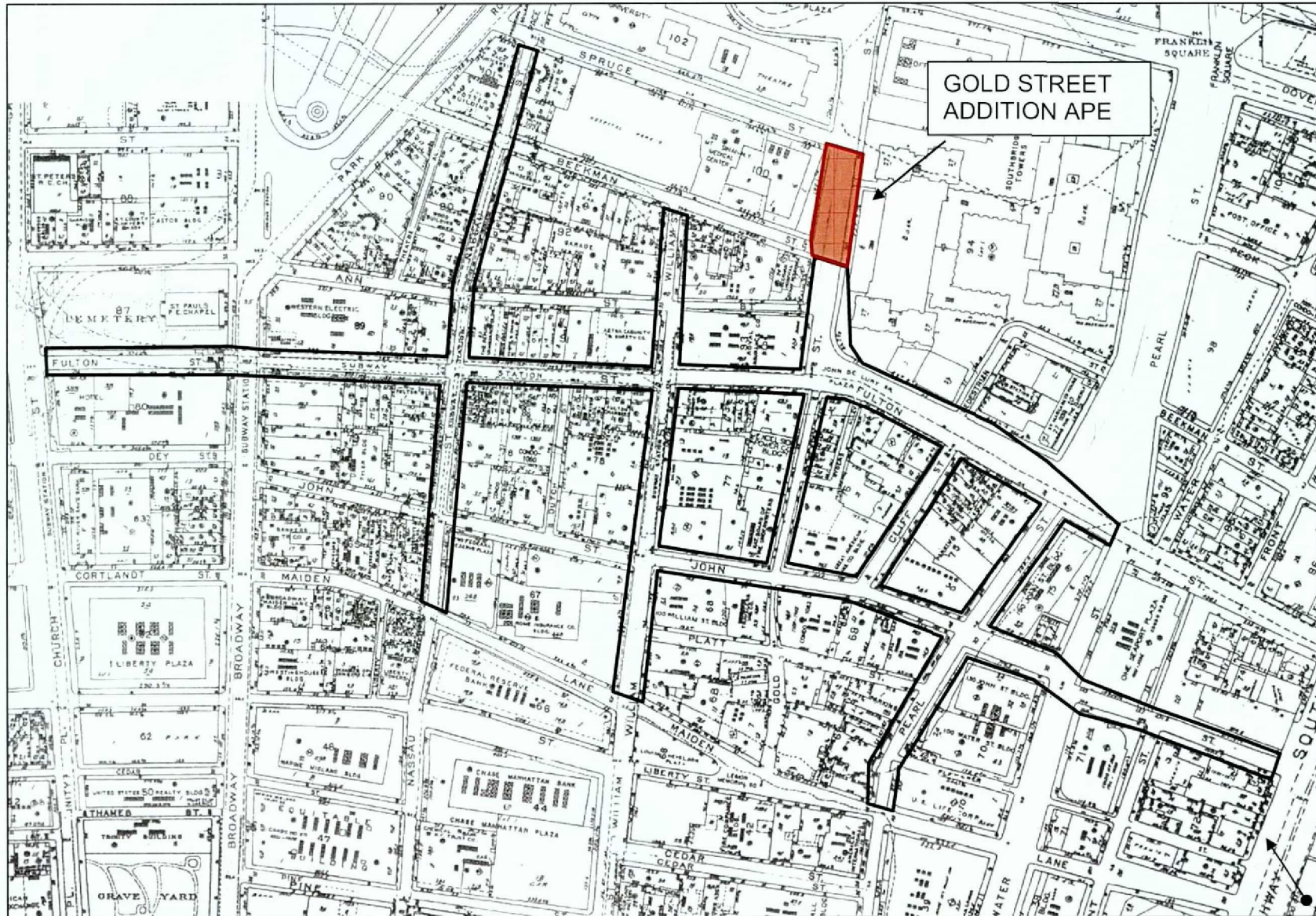
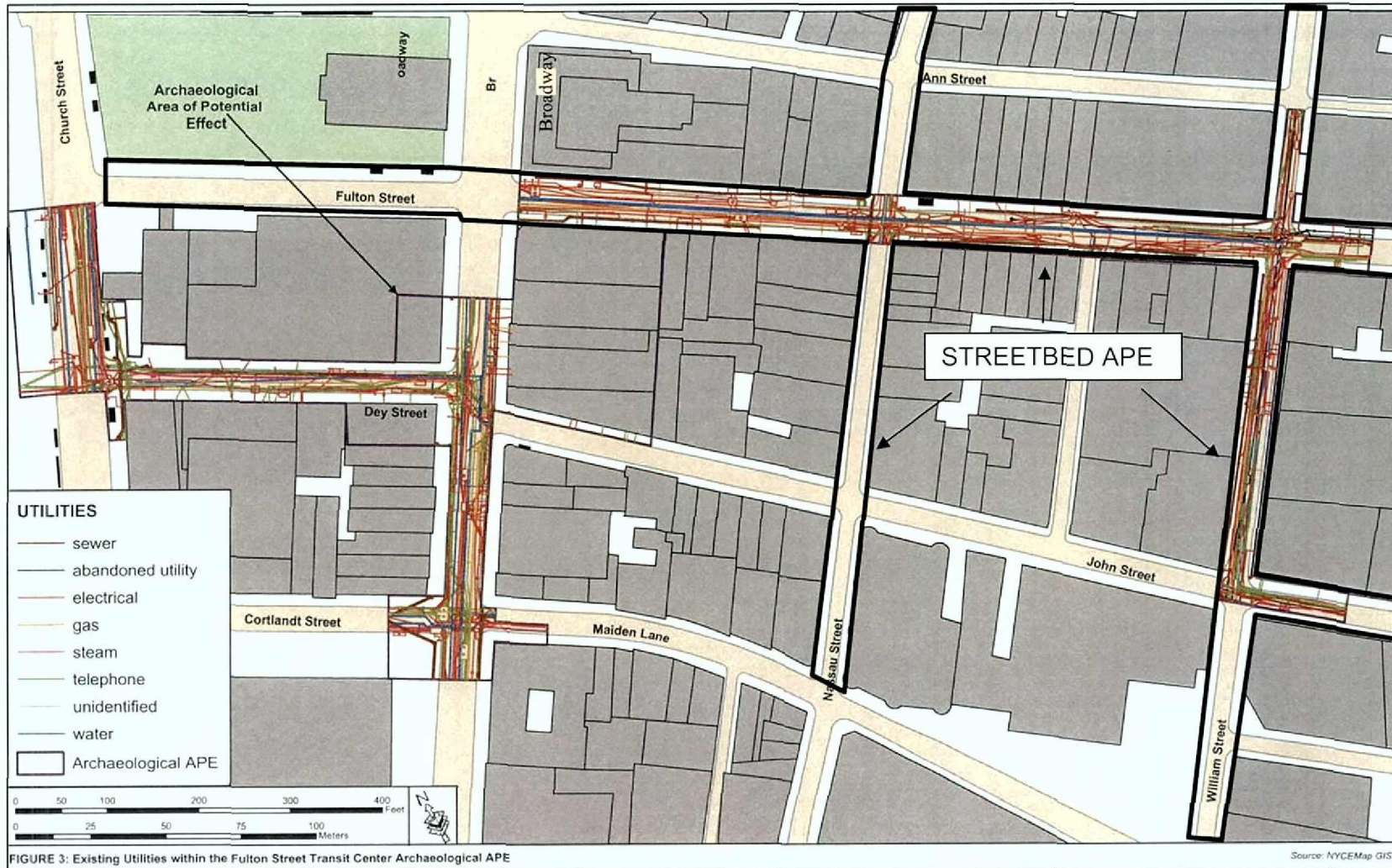


FIGURE 4

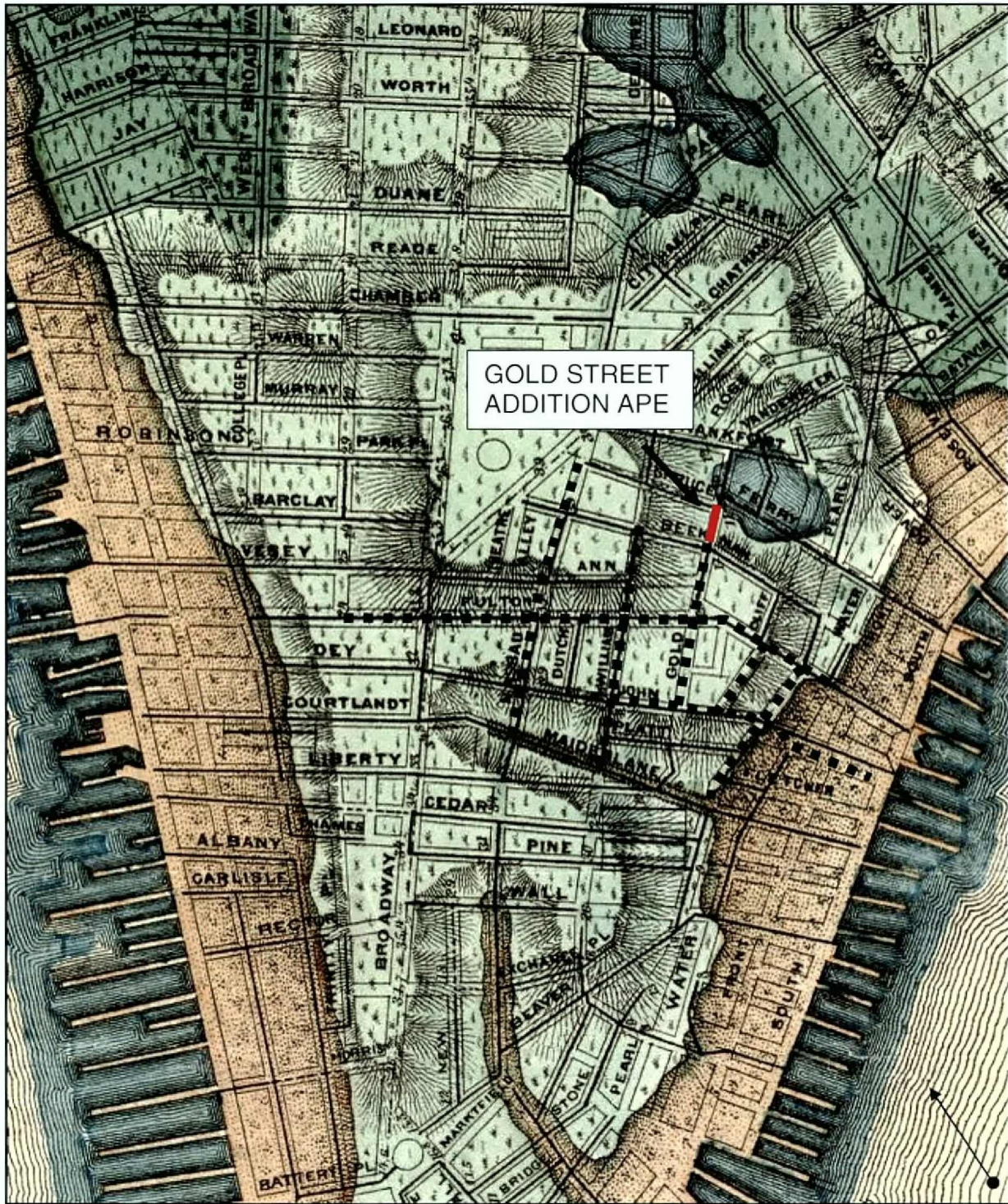
Insurance Maps of Manhattan. Sanborn 2005.
Approximate Scale: 1" = 320'



Gold Street Addition APE is to the east of the mapped area.

FIGURE 5

Existing Utilities within the Fulton Street Transit Center Archaeological APE. Figure 3 in Berger, 2004.



GOLD STREET
ADDITION APE

FIGURE 7

Map of the City of New York from the Battery to 80th Street Showing the Original Topography of Manhattan Island. Viele, 1865.

No Scale.

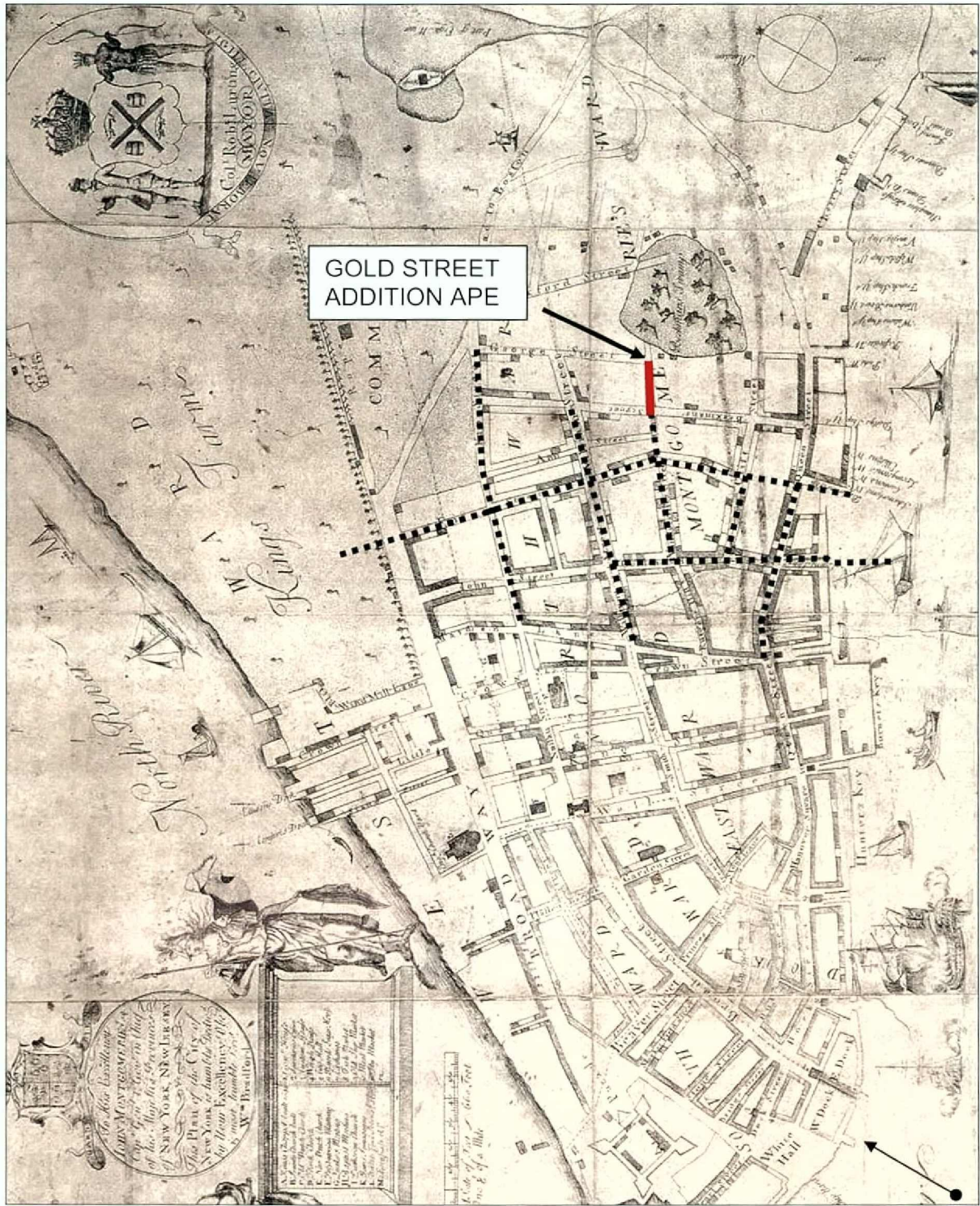


FIGURE 10

A Plan of the City of New York From an Actual Survey. Lyne, 1730.

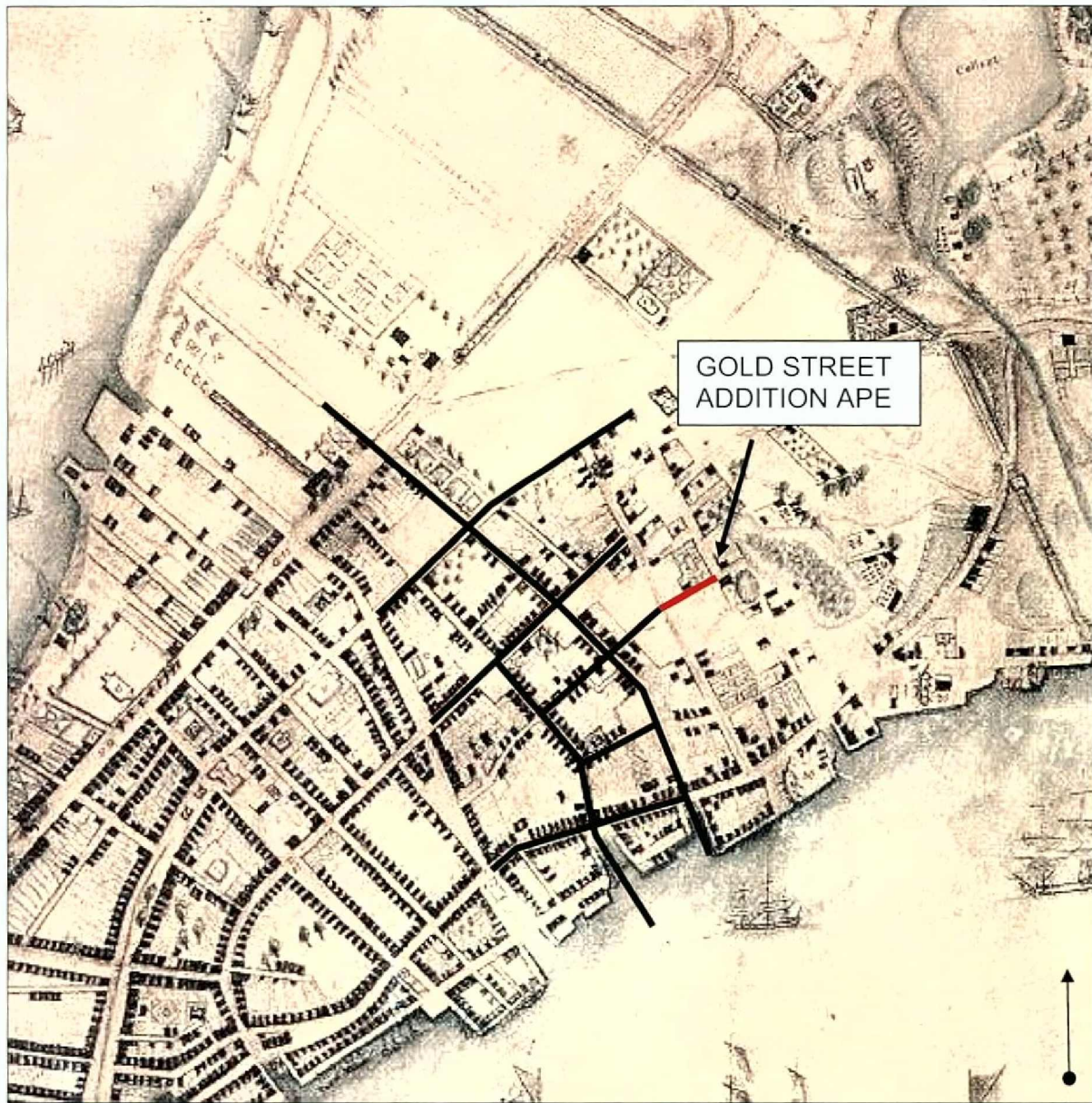


FIGURE 11

*A Plan of the City and Environs of New York
as they were in the years 1742, 1743, and 1744. Grim 1813.*

Approximate Scale: 1" = 580'

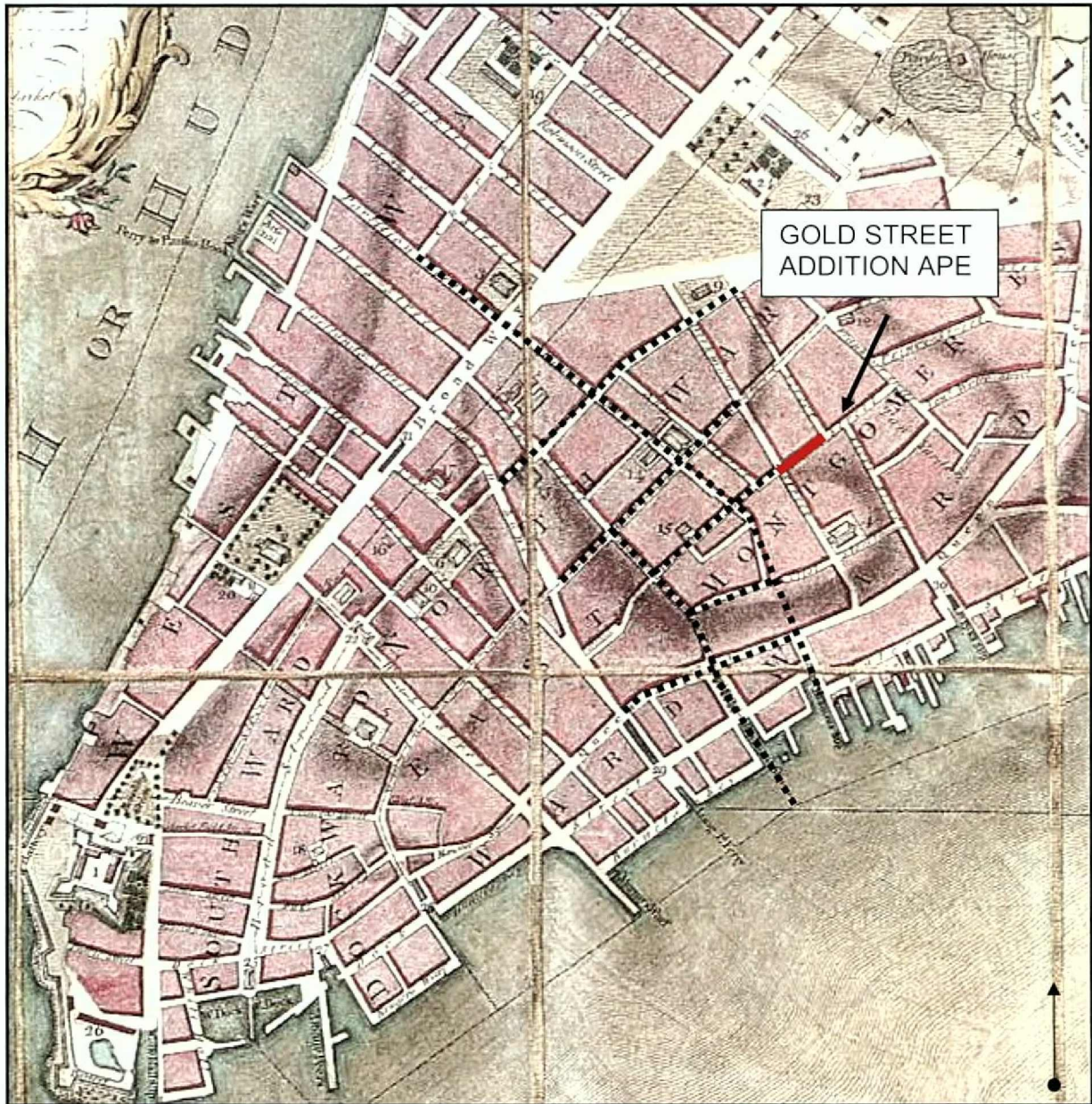


FIGURE 12

Plan of the City of New York. Surveyed in 1767. Ratzer, 1766/67.

Approximate Scale: 1" = 615'

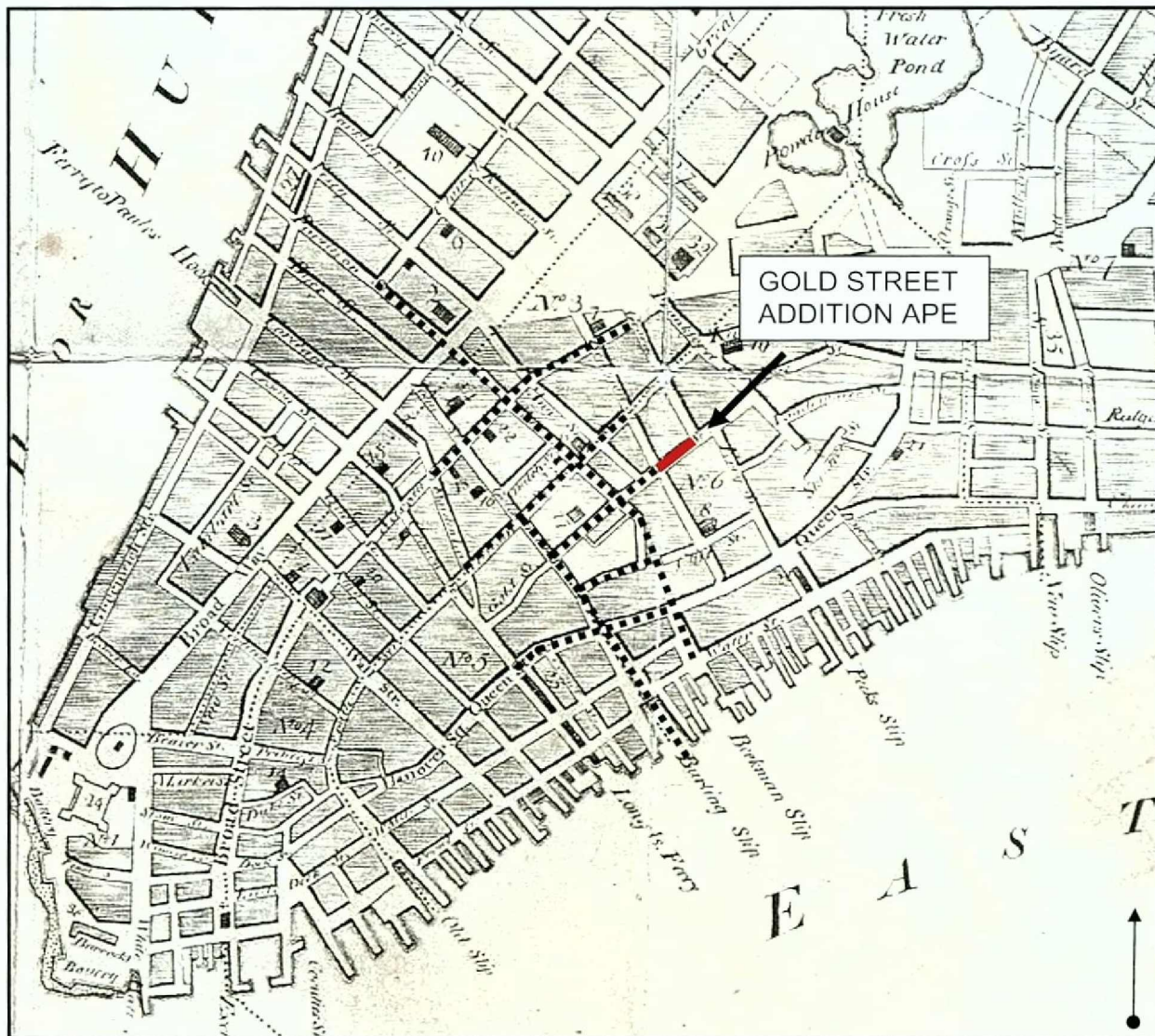


FIGURE 13

The New York Directory and Register for the Year 1789. McComb, 1789.

Approximate Scale: 1" = 860'

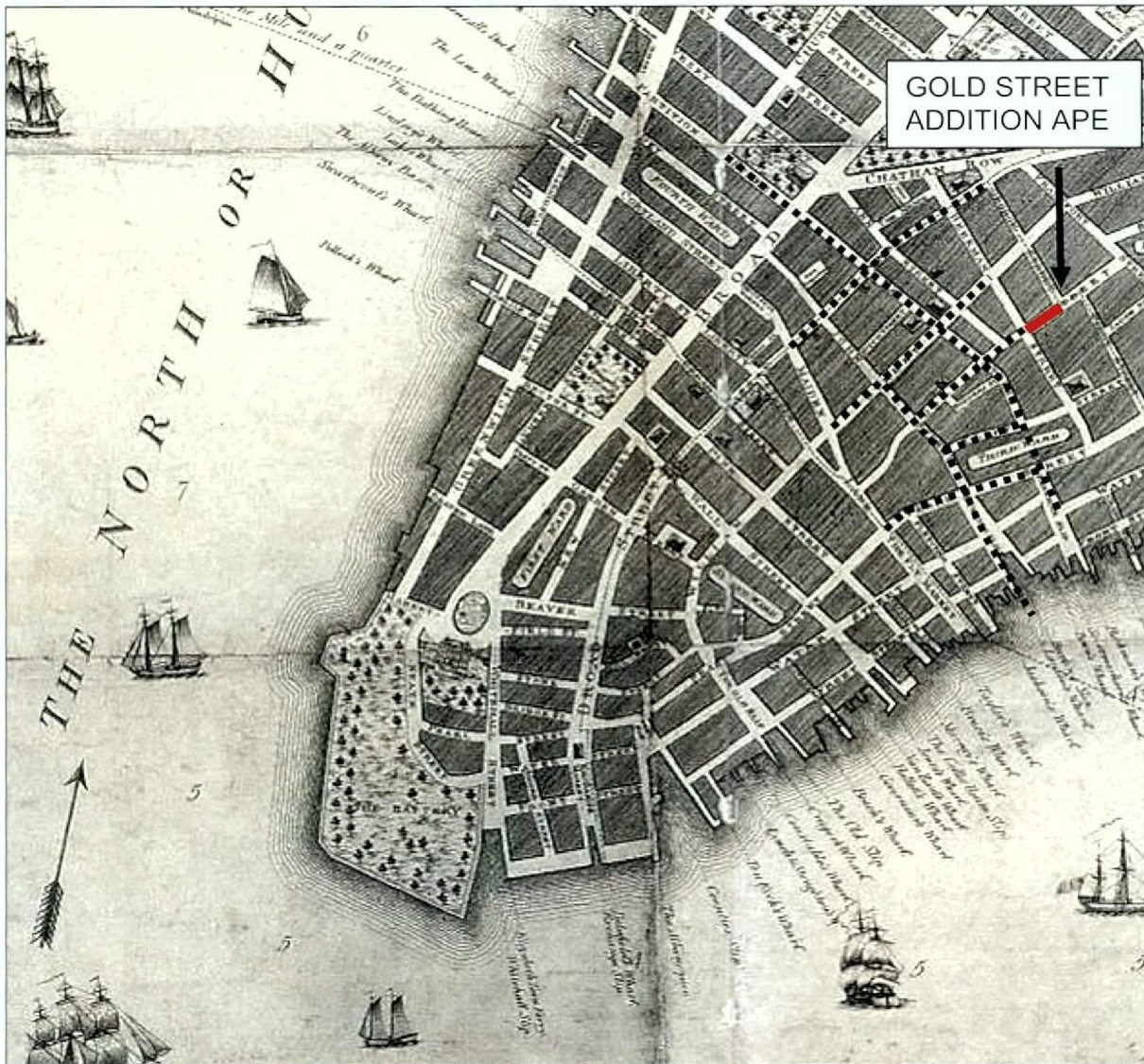


FIGURE 14

A New and Accurate Plan of the City of New York. Taylor-Roberts, 1797.

Approximate Scale: 1" = 860'

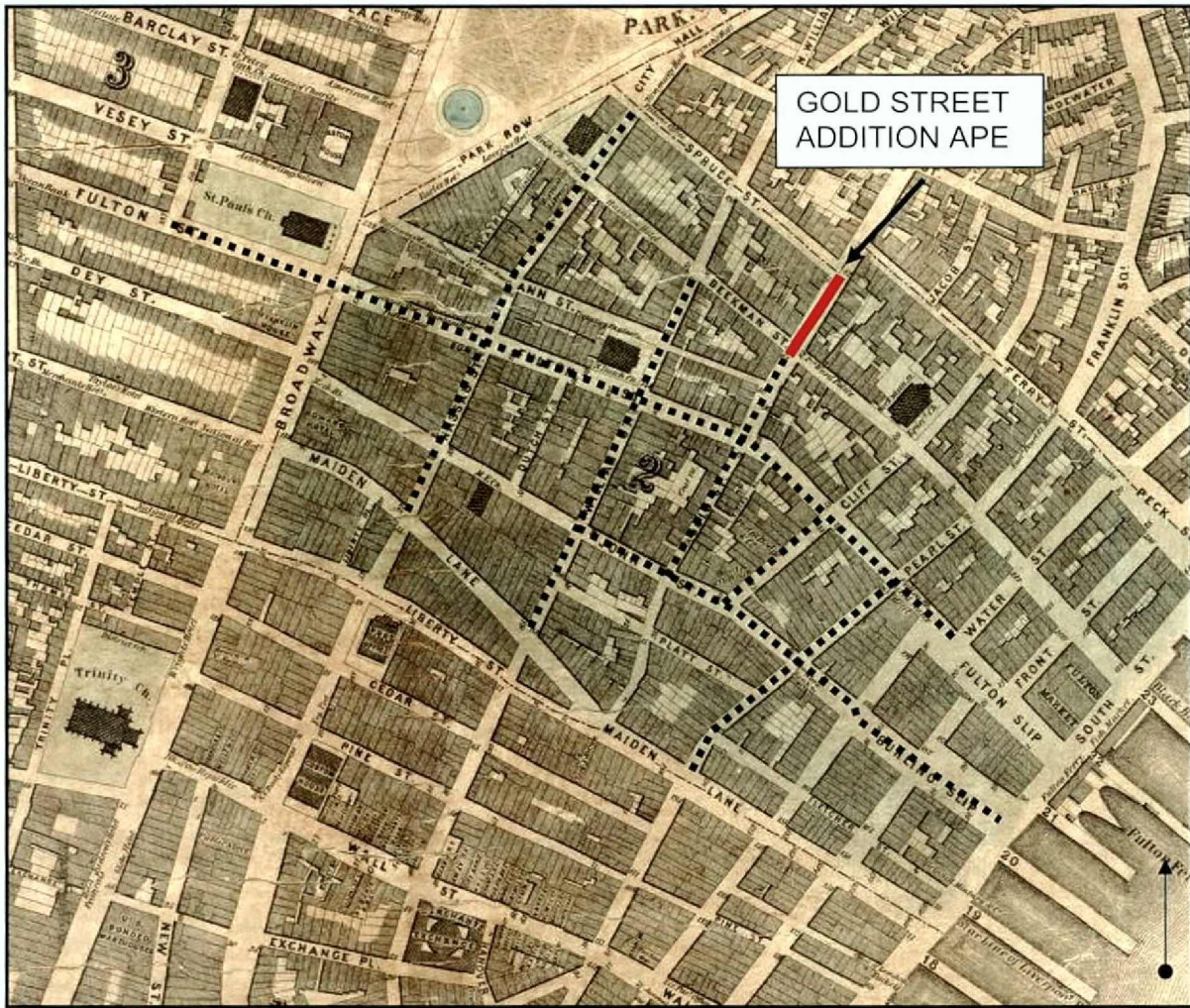


FIGURE 15

*Map of the City of New-York Extending Northward to Fiftieth Street.
Dripps, 1852.*

Approximate Scale: 1" = 470'

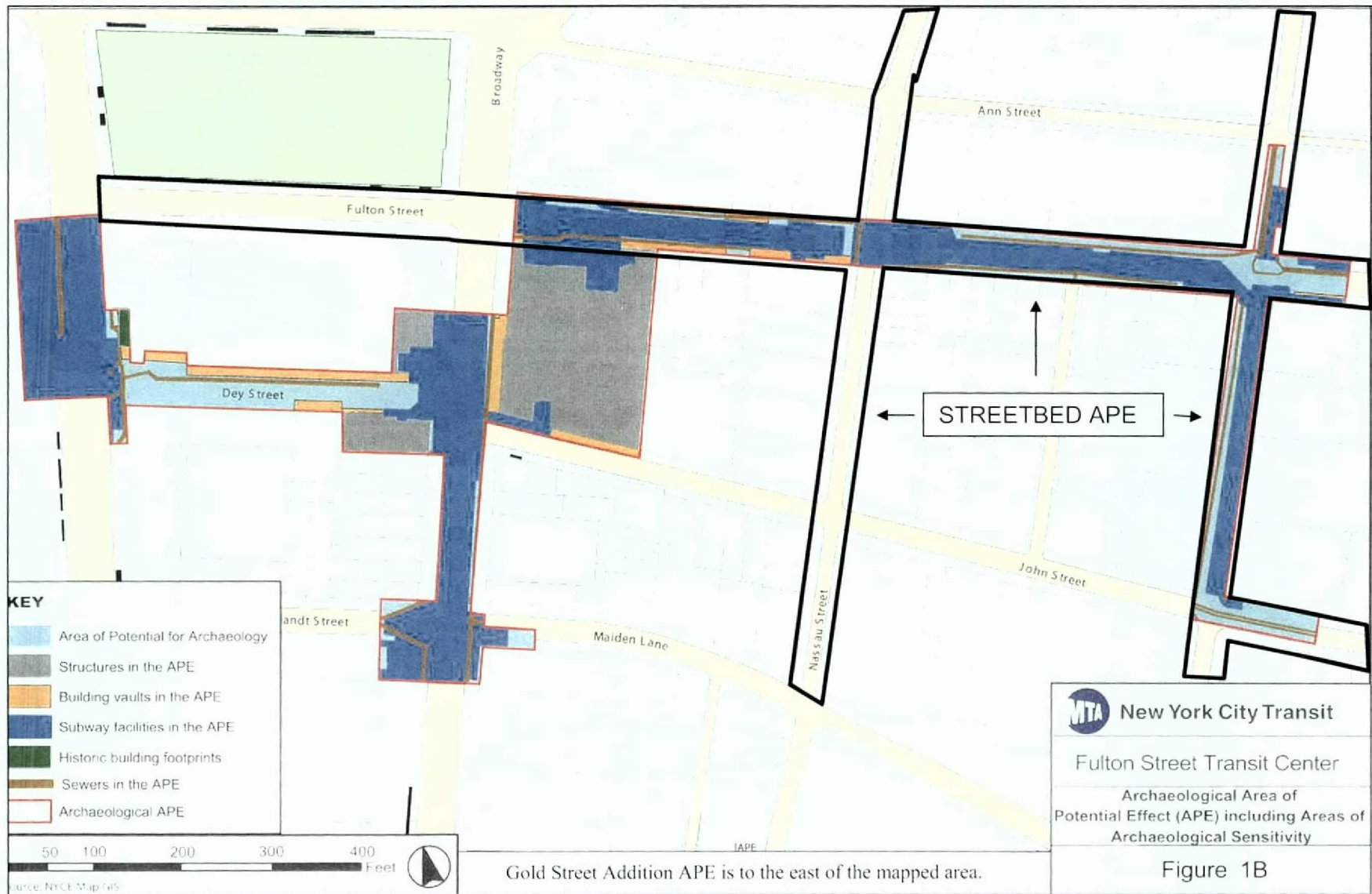


FIGURE 16
Areas of Archaeological Sensitivity Identified for the Fulton Street Transit Center Archaeological APE.
Figure 1B in Berger, 2004.

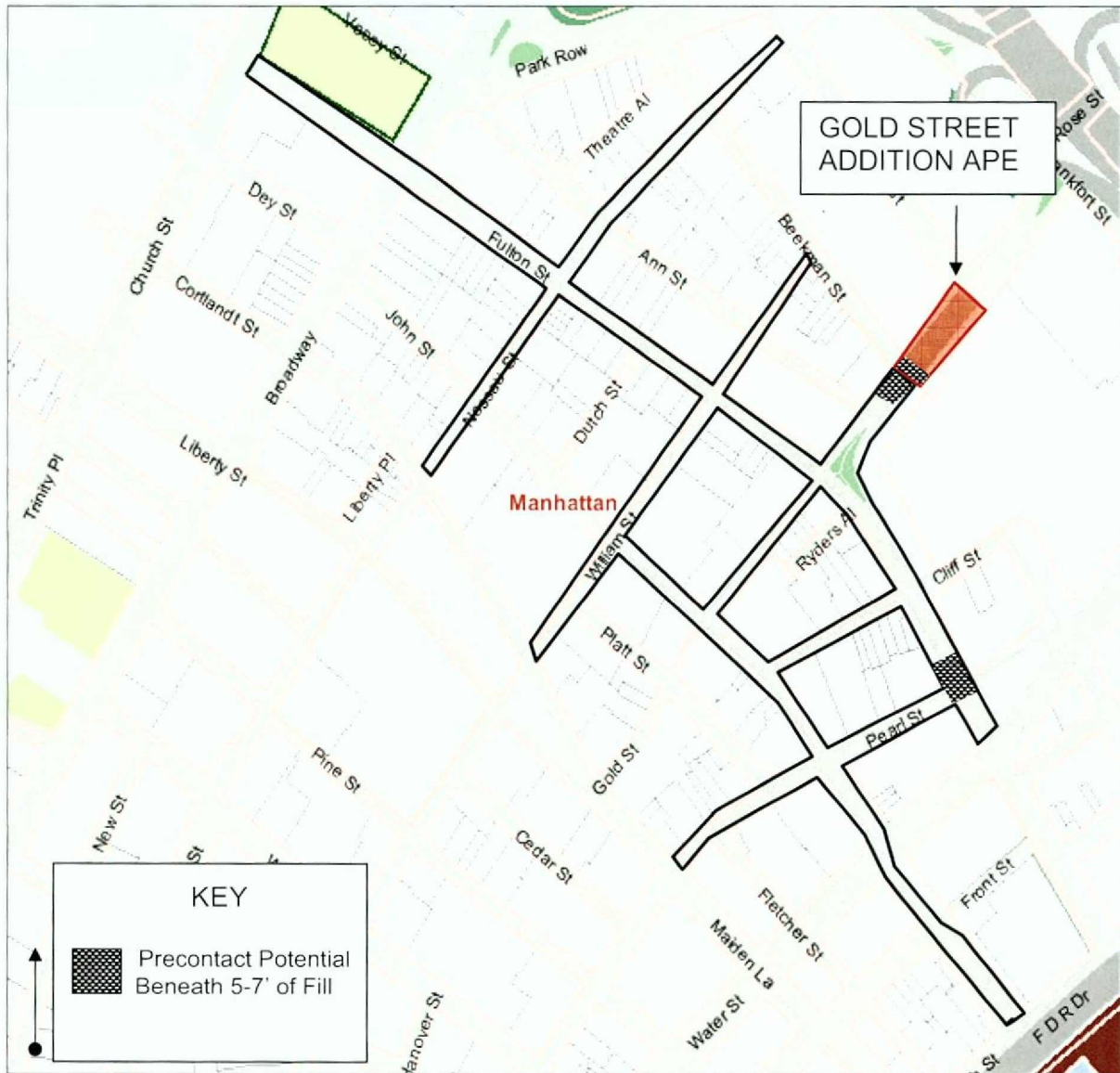


FIGURE 17

Precontact Archaeological Potential, Corridor Streetbeds APE.
Base Map: NYC OASIS, 2007.

Approximate Scale: 1" = 400'

Note: Locations Are Approximate

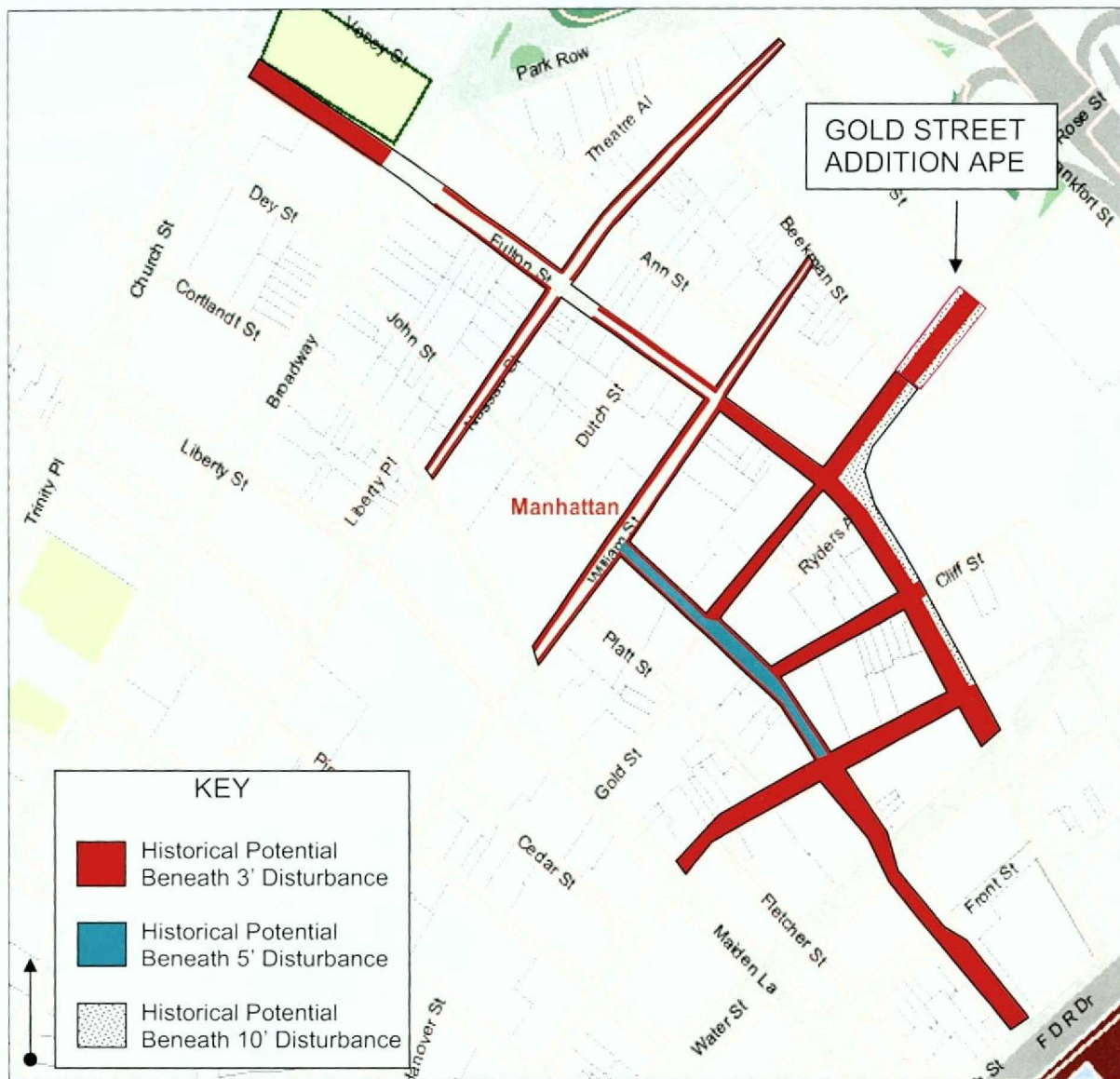


FIGURE 18

Historical Archaeological Potential, Corridor Streetbeds APE.
Base Map: NYC OASIS, 2007.

Approximate Scale: 1" = 400'

Note: Locations Are Approximate



Photograph 1: Gold Street Addition facing north from the intersection of Gold and Beckman Street.



Photograph 2: Gold Street Addition APE facing southwest from the intersection of Gold and Spruce Street.