

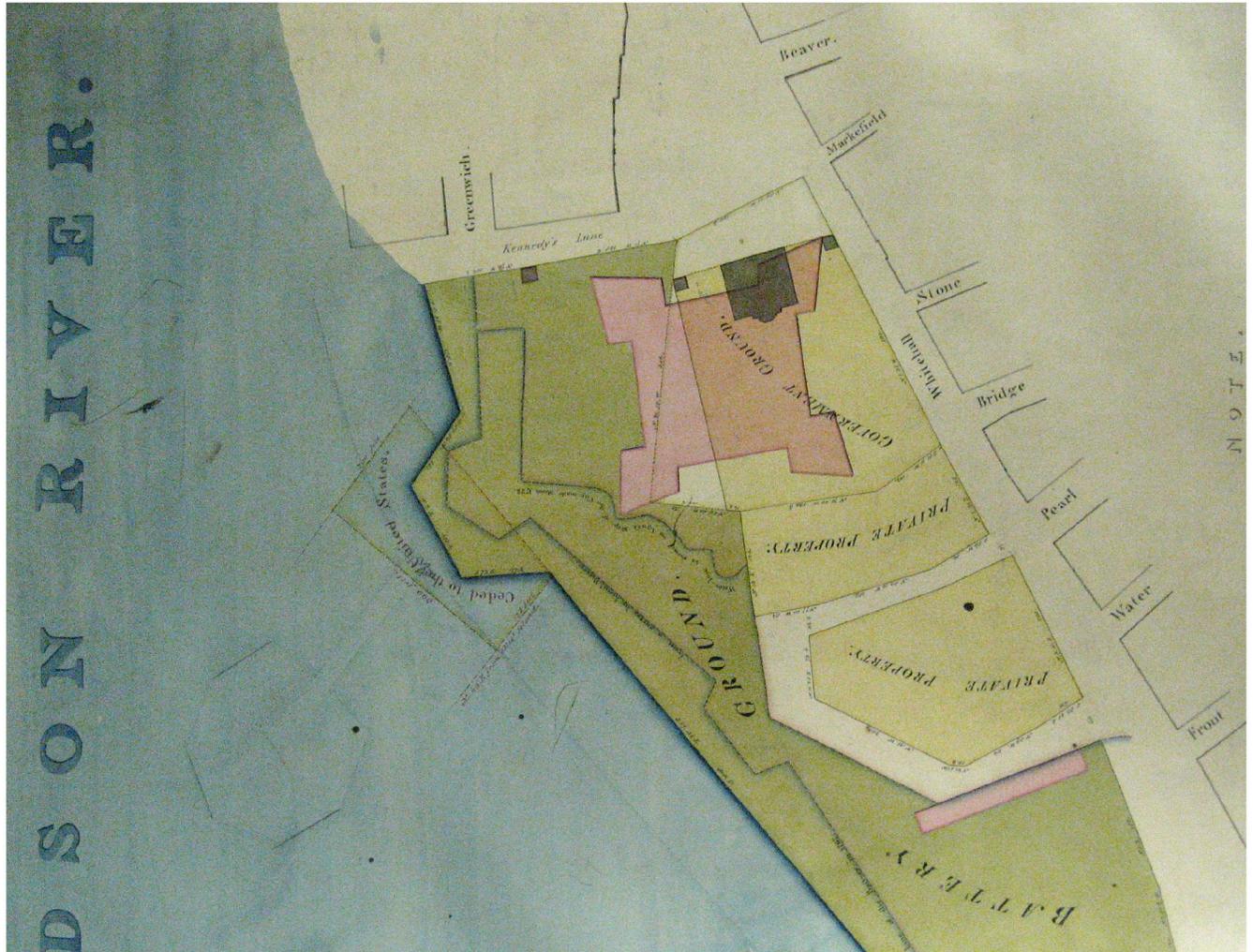
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# The Reconstruction of Battery Park and Perimeter Bikeway Borough of Manhattan, County of New York

## 1A Archaeological Assessment/Letter Report

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Contract No. M005-308M



Ewen 1827-1830

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Prepared for The New York City Department of Parks and Recreation  
in Partnership with The Battery Park Conservancy  
Prepared through Quennell Rothschild & Partners, LLP  
Prepared by Joan H. Geismar, Ph.D., LLC  
November 17, 2010

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November 17, 2010

Ms. Warrie Price, President  
Battery Park Conservancy  
One New York Plaza  
Concourse Level  
New York, NY 10004

*Re: The Reconstruction of the Battery Park and Perimeter Bikeway  
Borough of Manhattan, County of New York  
1A Archaeological Assessment/Letter Report  
(Contract No. M005-308M)*

Dear Ms. Price:

This letter report presents an assessment of the potential impact the proposed undertaking, The Reconstruction of Battery Park and Perimeter Bikeway, located in Lower Manhattan (Figure 1), may have on archaeological resources. It is based on a site visit, a review of recent archaeological research and investigations carried out for and during the South Ferry Terminal Project, and on document research coordinated with plans for the park's proposed reconstruction (hereafter, the park; Figure 2). The project is an undertaking of the New York City Department of Parks & Recreation (Parks) in partnership with The Battery Park Conservancy (the Conservancy). This letter report was prepared through Quennell Rothschild & Partners, LLP, for all concerned parties that include the City and State Department of Transportation (NYC and NYSDOT), the Department of Environmental Protection (DEP), the Metropolitan Transportation Authority (MTA), Con Edison, the New York State Historic Preservation Office (NYSHPO), and the New York City Landmarks Preservation Commission (NYCLPC).

Archaeologically monitored excavations for the South Ferry Project's new subway tunnel, from 2005 to 2006, exposed four stone wall segments identified as 18th-century military features--Battery Walls—and an unidentified log “platform” in historic landfill. These features were discovered within the footprint of the MTA's new subway tunnel that runs along the eastern part of the park, but the number and extent of surviving wall segments and other features, in the park remain unknown. At least two episodes of 19th-century land reclamation have occurred within the project area, or Area of Potential Effects (APE). Consequently, both defensive and landfill-retaining features must be a consideration where deep disturbance, albeit extensive throughout the park, cannot be documented.

The archaeological discoveries made during the South Ferry Project excavations illustrate the tenacity of archaeological features. In the park, they persist despite major building episodes that include cut-and-cover subway construction (beginning in 1904 with subsequent episodes [Hall 1945]) and the introduction of two vehicular tunnels. The earlier and deeper of the two (NYC 1948), the Brooklyn/Battery Tunnel that connects Manhattan and Brooklyn, was

constructed in the 1940s while the park underpass that links the West Side Highway on the west side of Manhattan to the South Street Underpass and the FDR Drive on the east side, was an early-1950s undertaking. The former was at least partially a cut-and-cover operation, the latter entirely so.

Based on the extensive historical research carried out for the South Ferry Project (Louis Berger 2003) and the findings of archaeological monitoring and excavation during recent construction (AKRF et al. 2010),<sup>1</sup> the research reported on here focused on the possibility of impacting additional 18th-century military constructions as well as early- and mid-19th-century bulkhead located within the limits of the APE.

## PROJECT DESCRIPTION

The following project description is taken from the package submitted to the NYSHPO for locally-administered federal-aid projects under Section 106 of the National Historic Preservation Act. A graphic depiction of the project plan is shown in Figure 2:

The 12-acre site will include a sinuous perimeter bikeway through lushly planted gardens that completes the connection between the Hudson River Greenway and the East River Greenway; the Battery Green, a large oval public assembly and performance area; a protected and replanted woodland area; an upgraded and ADA compliant comfort station with bike amenities such as water and air; perimeter definition surrounding the Park with new walkways, tree plantings and seating, and restoration and relocation of 10 monuments to the perimeter for increased visibility, and upgraded site paving, edging, and other materials.

With the exception of a limited number of new catch basins, the park plan is minimally intrusive. It calls for paving and land sculpting augmented by planting that includes trees that require shallow excavations (Franz 2010: personal communication). In this regard, the project engineer has provided the following information:

...With the installation of irrigation, there will be excavation of 2 [feet] +/- throughout the entire area of the project. The lighting wiring will involve 2-3 [feet] deep excavations which will generally follow the paths. The storm drains will be 3-5 feet deep generally where shown on the utility plan. Footings for walls and monuments -4 feet (Grogg 2010:e-mail to Beth Franz)

## METHOD

The history of the project area as presented in the aforementioned 1A report (Berger 2003) provided information about the project site's long development history. Mainly, it is a history tied to military concerns that began under British Colonial rule in the late-17th century and land reclamation. Discrete landfill episodes, that is, those not associated specifically to the various defenses built around the shoreline, were post-Revolutionary War developments that began in the first quarter of the 19th century and continued episodically into the 20th century.

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<sup>1</sup> Selected information from the field report currently under review was generously made available through AKRF and the MTA

In addition to what is presented in the 2003 Berger report in regard to military defenses, Paul R. Huey, Scientist (Archeology), now *Emeritus*, in the Bureau of Historic Sites in the Division for Historic Preservation in the New York State Office of Parks, Recreation and Historic Preservation, compiled a narrative history of the city's shoreline fortifications gleaned from documents and maps (Huey 2006). This compendium provides an excellent account of shoreline alterations and military installations within the APE. In addition, two manuscript maps in the collection of the Topographical Bureau of the Manhattan Borough President's Office, and a published map in the Map Division of the New York Public Library, offer detailed information relevant to the park's history and development. Daniel Ewen, a longtime City surveyor (NY Times 1865; *American Annual Cyclopaedia* 1869:630), drew all three maps based on actual surveys, both his and those of earlier surveyors. In addition, research was conducted at the Battery Park Conservancy, the archives of the MTA Bridges and Tunnels, the Municipal Archives, the City Hall Library, the New York Historical Society Library, and in old newspapers. The Internet was also researched, and the site was visited on September 15, 2009.

## FINDINGS

Research conducted for this assessment focused on three elements of the park's development: military defenses, landfill features, and subsequent construction disturbances.

Like much, if not all, the land that comprises today's Lower Manhattan's shoreline, Battery Park was in the historical past almost entirely Land Under Water. As mentioned earlier, land reclamation in the park initially was tied to defense of the British colonial town. Huey traces fortifications back to 1693 when stockades and a platform to create a battery were to be erected on the "Out Most rocks...under the fort" on the Hudson River (Huey 2006:10). These defenses incorporated natural features, such a "Flat Rock" located near the fort, and were among several episodes of defense-building that also included the East River shore at Whitehall Street.

Of particular interest here is "the New Stone Battery" built in 1755 that stretched along the shore under Fort George (originally, under the Dutch, Fort Amsterdam) and was meant to protect the English town from attack by the French. In 1759, it was reported, "Along the front of the headland, they have constructed on outcrops of rock a wall 12 feet thick" that formed a low rampart to the fort. On it were "90 cannon, from 12- to 24-pounders, deployed as a battery. The gun platforms are all large flagstones" (Huey 2006:17). The battery wall incorporated three bastions, with "The Flat Rock," the natural feature mentioned earlier, located north of the middle bastion (Huey 2006:18). This battery is shown on several historical maps, but perhaps most clearly on Daniel Ewen's 1827 hand-colored manuscript map where it was reconstructed from Bernard Ratzer's 1767 survey (Ewen 1827-1830:I; Figure 3). The year before Ratzer's survey, however, the battery guns were described as "mostly old and honeycomb," the carriages rotten, the platforms "totally out of order...the Log work...decayed and ill tired" (Huey 2006:18).

By the beginning of the Revolutionary War, "Fort George [stood] immediately above the 'Grand Battery' and Whitehall Battery [was]...immediately on the left of the Grand Battery..." (Huey 2006:19). In 1786, three years after the war ended, the Common Council approved construction of a wharf at the Battery. Ten years later, a visitor to New York wrote, "the most agreeable part of town is in the neighborhood of the battery." He went on to say, "when New York was in possession of the English, this battery consisted of two or more tiers of guns, one above the other, but it is now cut down, and affords a most charming walk, and, on a summer's evening, is crowded with people as it is open to the breezes from the sea, which render it

particularly agreeable at that season” (Huey 2006:20). In other words, it was by then essentially a park.

In 1807, with the threat of war with the British recurring, construction of what is now Castle Clinton began (Berger 2003:24). Located offshore, the fort was connected by a bridge to Battery grounds. In 1820, the battery grounds were again expanded through land reclamation (Ewen 1827-1830:1; Figure 4), and, in 1848, plans were made and ultimately carried out to create more land and to incorporate Fort Clinton into the expanding park (Ewen 1848; Figure 5). At about the same time, increasing development and congestion in the area prompted the widening of Battery Place (once known as Kennedy Lane after Archibald Kennedy, a wealthy local landowner), a move that encroached on the northern part of the park (Board of Assistant Aldermen 1853b:142; Figure 6).

Documents associated with the park’s proposed extension in 1848, an enlargement completed six years later, indicate that the 1820s expansion of the 7-acre Battery grounds had added a little over 3 acres and created 1,620 feet of shoreline. With the “Castle,” it was a little over 12 acres. The 1848 enlargement, which was to extend the shoreline to 2,120 feet, was estimated to require 70,000 cubic yards of riprap wall, 1,280 cubic yards of parapet wall, 2,120 lineal “measure” of granite coping, and 212 granite posts (Board of Assistant Aldermen 1853a: 70-71). This suggests what the earlier bulkheads, such as those shown on the 1827 Ewen map, would be like. In addition, it reveals that the fill-retaining features that created the Battery Grounds were a far cry from the log cribbing and sunken “blocks” or rafts associated with the 18th- and early-19th-century land reclamation documented archaeologically along the East River and elsewhere along the Hudson shore in the 1980s (e.g., Geismar 1983, 1986). Or, for that matter, the log constructions encountered on Greenwich Street during the 1940s excavations for the Brooklyn/Battery Tunnel’s Blower Building (Geismar 1987:38).

These mid-19th-century documents also estimate that 435,000 cubic yards of fill were needed for the enlargement. The fill was said to be available from demolished buildings and excavation sites in the “lower part of the city” and also from sewer construction, Russ pavement [blocks of granite set in stone and cement], street rubbish, and coal ashes, and it was thought by some to be virtually cost free. In fact, since the city charged for the privilege of dumping this material, it was thought it might be a money-making venture, one that would almost cover the cost of the enlargement (Board of Assistant Aldermen 1853a:68-78), but others disagreed (Board of Assistant Aldermen 1849).

As noted previously, in the early years of the 20th century, subway construction along the park’s eastern boundary undoubtedly impacted any buried remnants of the 18th-century fortifications and late 18th- and early-19th-century stone bulkheads. This was also true of the mid-20th-century construction of the two vehicular tunnels that not only disturbed the park (Photos 2 and 3), but must have also impacted sections of all the stone bulkheads that structured the landfill. It is impossible to imagine that the tunnel excavations that crossed the park failed to encounter evidence of these massive stone bulkheads, yet there is no mention in daily records kept during construction of the Brooklyn/Battery Tunnel of finding these constructions, nor are they recorded in the extensive photo collection of the MTA Bridges and Tunnel archives that document the tunnel’s construction. However, remnants of these constructions cannot be dismissed as potential archaeological features. This has been highlighted by the four wall segments uncovered during construction of the South Ferry project’s new subway tunnel now identified as remnants of the 1755 battery walls.

The location of these recent finds is shown in a graphic generously made available by AKRF and the MTA (Photo 4). Here it was found that, despite the extensive disturbance caused by 20th-century subway excavations, remnants of these historical features remain. Moreover, the most southerly and shallowest of these features (Wall 3 and the log Feature shown in Photo 4) was encountered at depths of 4.4 to 8.2 feet below the ground surface, or 3.6 to -3.9 feet above sea level (the other segments range from 8.2 to 16.0 feet below the ground surface) (AKRF et al. 2010:Table 5).

## RECOMMENDATIONS

Based on the park's development history, archaeological monitoring is recommended in selected areas where no disturbance is documented. The archaeological potential includes additional evidence of colonial fortifications and of the massive stone bulkheads related to episodes of 19th-century land reclamation. This potential is suggested by the extraordinary finds of segments of stone fortifications made during recent construction of the new South Ferry subway tunnel, the shallowest at 4.4 feet below the current ground surface. Consequently, a monitoring plan should be in place for those areas where excavation will extend 3.5 feet or more below the surface where no disturbance is documented and where historical maps indicate there may be evidence of colonial fortifications or what are expected to be massive, early- and mid-19th-century stone bulkhead/landfill constructions. Figure 7 illustrates the location of these historical features and of subsequent disturbance. To address the archaeological potential, the monitoring plan should be developed based on final construction plans, and in consultation with the NYSHPO and/or the NYCLPC.

Please do not hesitate to contact me with any questions or concerns.

Sincerely,



Joan H. Geismar  
Joan H. Geismar, Ph.D., LLC

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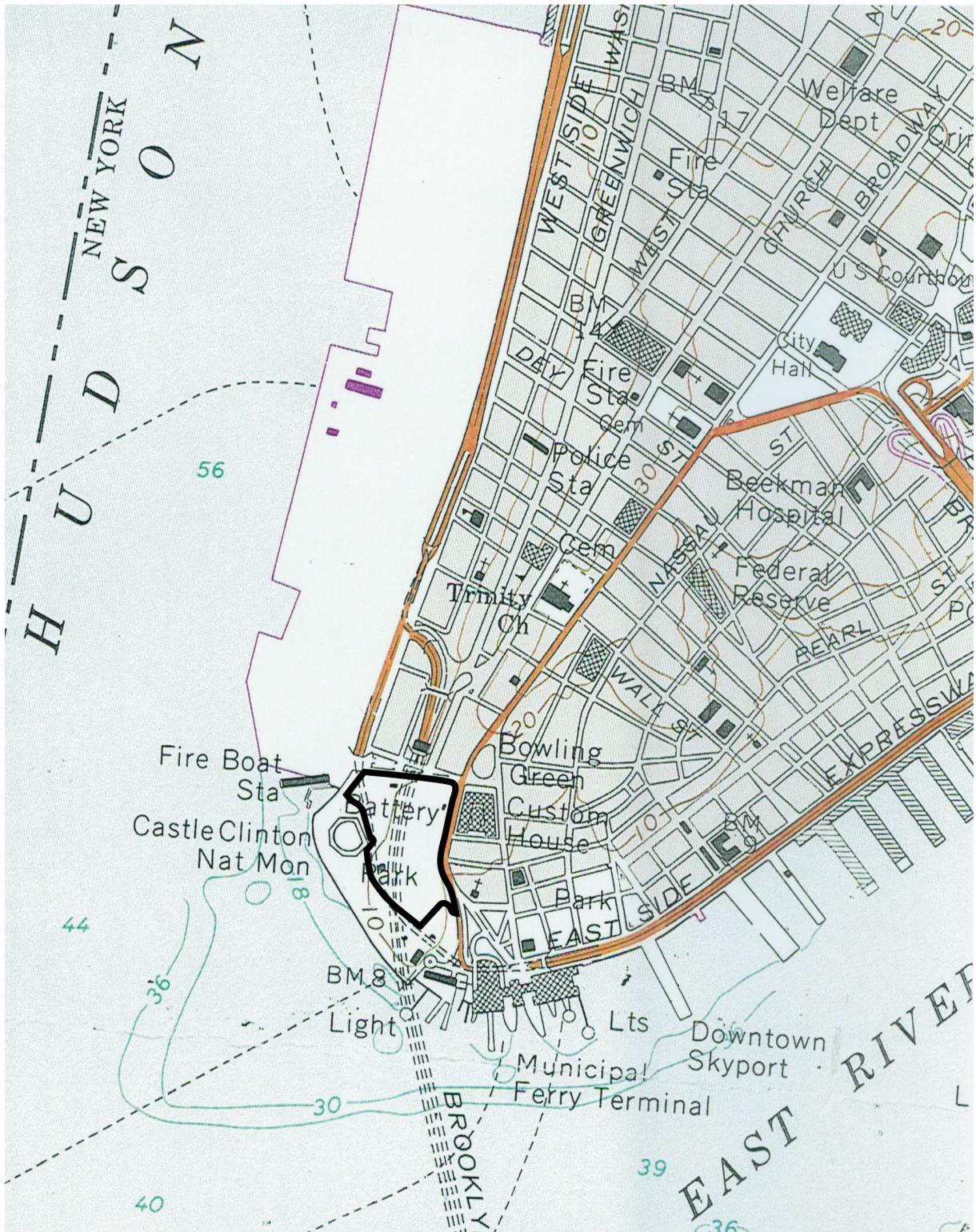
NYC, 1948. Map Showing a Change in the City Map by Laying Out the Lines and Grades for a Street Designated as Battery Park Underpass and Ramps Thereto In, Under and Through Battery Park and for a Street Designated as Plaza Underpass in and Under the Manhattan Approaches to Brooklyn-Battery Tunnel... Together with a Change in the Lines of Battery Park between State Street and South Street. June 7, 1948. File Map M-RW-2000-3. Topographic Bureau, Manhattan Borough President's Office, Municipal Building, New York.

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## FIGURES and PHOTOGRAPHS



— project site/APE

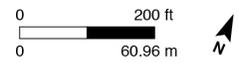






aerial photo 2009 courtesy of Quennell Rothschild

----- project site/APE



**Photo 1.** Project site/APE superimposed on aerial photo.



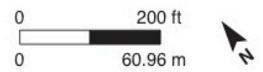
- Battery line re 1767 Ratzen [Ratzer] map
- - - - Battery grounds 1820 (bulkhead)

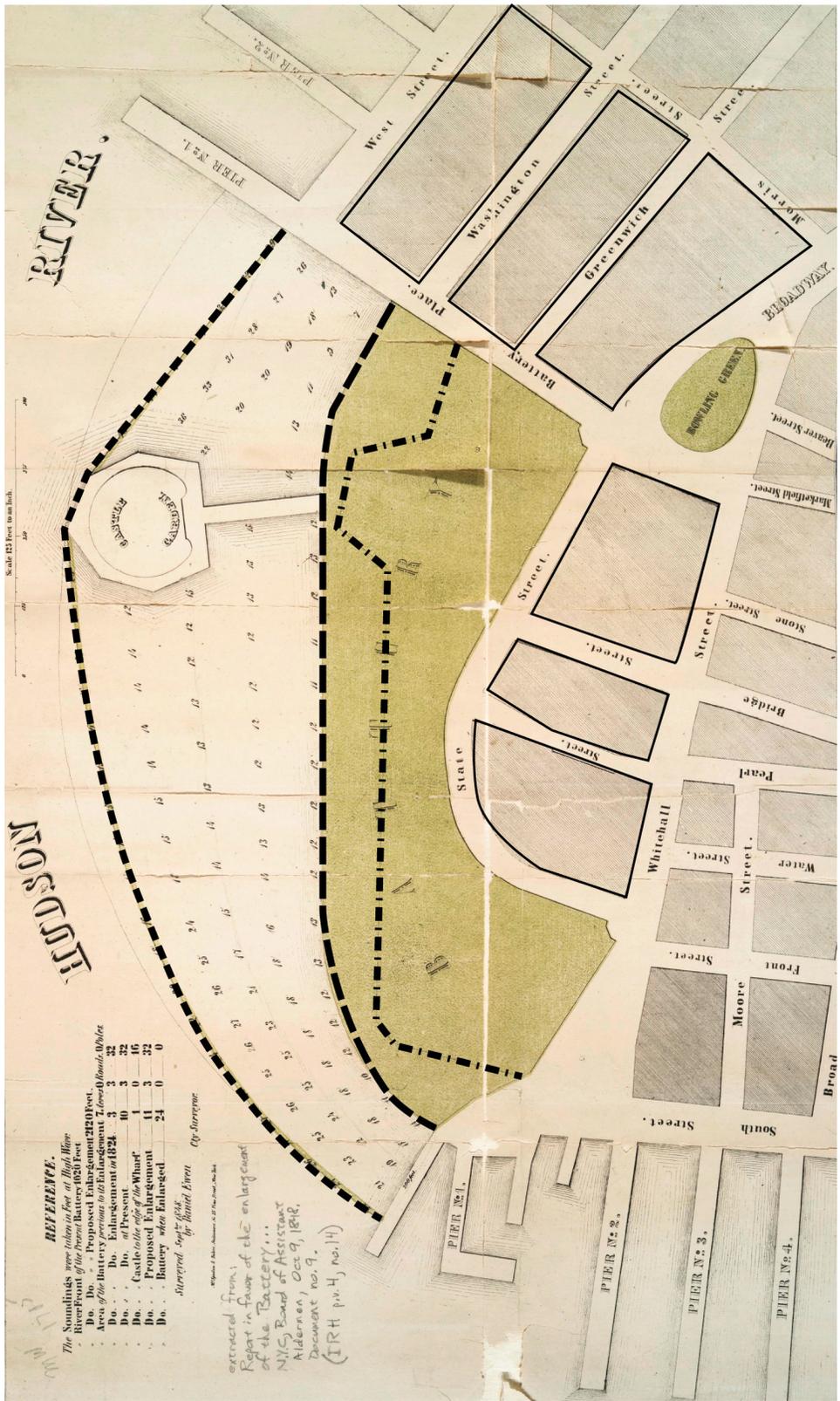
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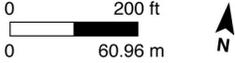


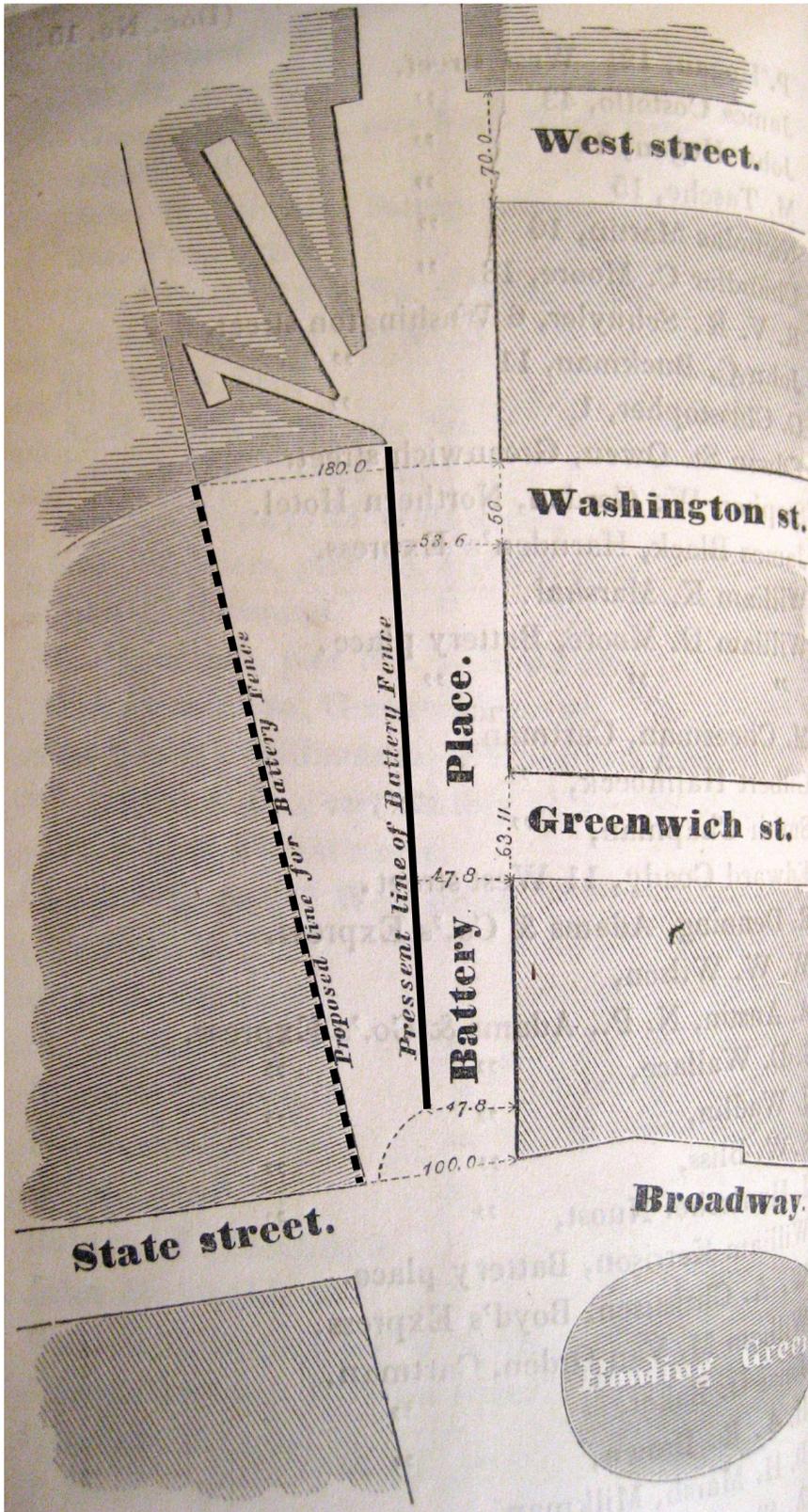
- Battery grounds 1820 (bulkhead)
- Battery grounds 1828 (bulkhead)





- Battery grounds 1820 (bulkhead)
- Battery grounds 1828 (bulkhead)
- 1848 proposed bulkhead



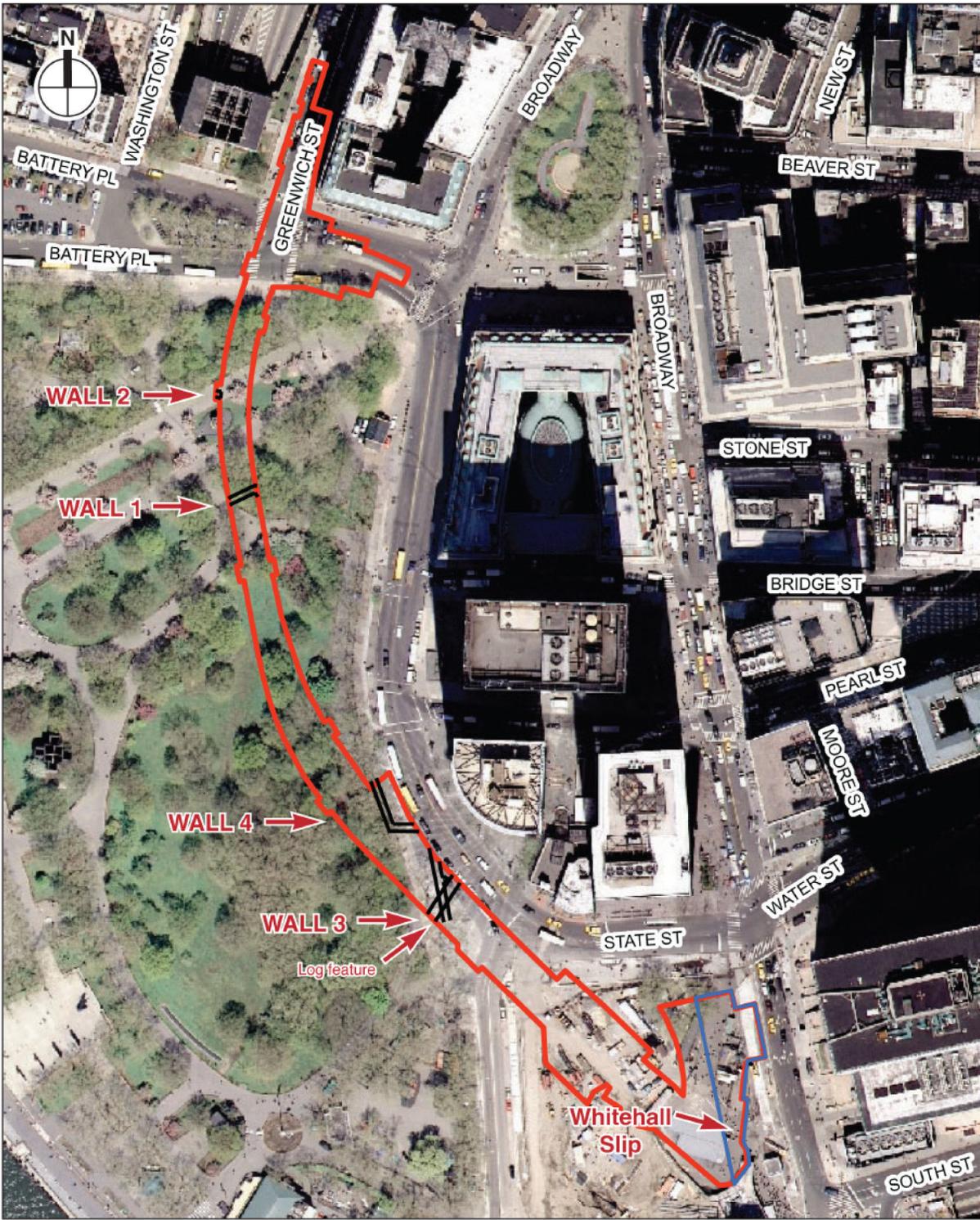




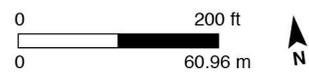
**Photo 2.** Cut-and-cover-construction activities in 1947 at the site of the "Blower Building" for the Brooklyn/Battery Tunnel located north of Battery Place between Greenwich and Washington Streets. (courtesy of MTA Bridges & Tunnels, Contract 6, Photo No. 2205-April 24, 1947)



**Photo 3.** View of a staging area for the Brooklyn/Battery Tunnel in 1942. View is looking southeast toward the Narrows. (courtesy of MTA Bridges & Tunnels, Contract 6, Photo No. 955-February 25, 1942)

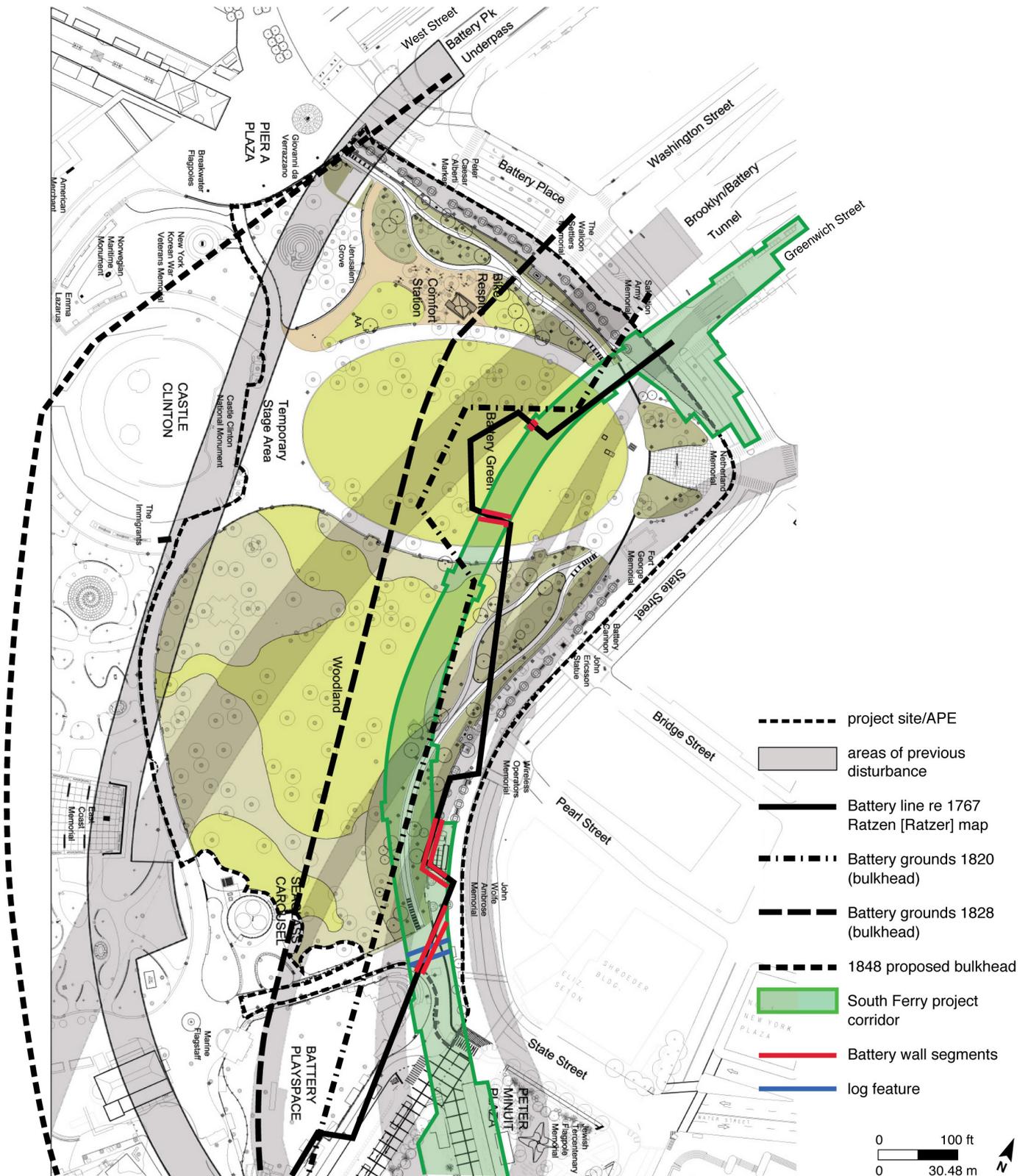


- South Ferry project corridor
- Battery wall segments



**Photo 4.** Locations of Battery wall segments in subway corridor 2005-2006 (adapted from AKRF et al. 2010 Figure 2.3)

# BATTERY PARK Site Plan with Disturbances and Battery and Bulkhead Lines (Base Map Quennell Rothschild 2010)



South Ferry information courtesy of AKRF and the MTA (AKRF et al. 2010: Figure 2.3)