

H30

Region Five
143 South Third Street
Philadelphia 6, Pa.

May 10, 1960

Memorandum

To: Director
From: Acting Regional Director

Subject: Historic Structures Report, Part I, Castle Clinton

Attached for your consideration is the subject report, consisting of three sections: Administrative Data, Historical Data and Architectural Data. By copy of this memorandum, we are also requesting EODC to submit comments.

Comments should be submitted no later than May 20.

(Sgd.) George A. Palmer

Acting Regional Director

In duplicate

Attachments - 2

Copy to: Chief, EODC, w/copy of report ✓
Supt., Statue of Liberty, w/copy of report

EASTERN OFFICE	
Division of Design & Construction	
MAY 11 1960	
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<input type="checkbox"/>	Architect
<input type="checkbox"/>	Landscape Architect
<input type="checkbox"/>	Engineer
<input checked="" type="checkbox"/>	Hist. Architect <i>Geo</i>
<input type="checkbox"/>	Proj. Coordinator
<input type="checkbox"/>	Adm. Officer
<input type="checkbox"/>	Personnel Officer

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ATTENTION:

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HISTORIC STRUCTURES REPORT

Part I

CASTLE CLINTON

CASTLE CLINTON NATIONAL MONUMENT

Prepared by

Thomas M. Pitkin
Supervisory park Historian

Statue of Liberty National Monument
May 6, 1960

APPROVAL SHEET

RECOMMENDED

Director Date _____

Regional Director Date _____

Chief, EODC Date _____

APPROVED

Superintendent Date _____

TABLE OF CONTENTS

Subject	Page
1. Administrative Data	1
2. Historical Data	4
Early Military History of the Battery	5
Origin of the West Battery (Castle Clinton)	8
Military History of Castle Clinton	10
Construction History of Castle Clinton	14
Recommendations for Restoration	36
Notes	40
3. Archeological Data	53
<u>Illustrations</u>	
1. "Map of Land under water ceded by the Corporation of New York to the United States for Fortifications, 1807." . .	9
2. "Plan of the Lower Battery" (McComb Plan 151)	14
3. Plan of fortifications at the Battery (McComb Plan 152) . .	14
4. "Gateway for Battery" (McComb Plan 153)	14
5. "Plan of the Tower-Battery for the South-West Point of the City of New York" (Archives Plan 36-14)	16
6. "Castle Clinton, New York" (Archives Plan 36-27).	17
7. "A Plan of Castle Clinton, New York." (Archives Plan 36-31)	17
8. "Plan of Castle Clinton, Harbour of New York" (Archives Plan 36-32)	18
9. Plan of West Battery (Archives Plan 36-11).	19
10. "View of the Battery Looking North from the Churn" (Stokes)	19
11. "Historical Base Map, Castle Clinton National Monument". .	36
12. "Archeological Research, Castle Clinton National Monument"	56

1. Administrative Data

a. Name and number of building:

Castle Clinton (no number assigned).

b. Proposed use and justification:

This historic fort in Battery Park became a National Monument on July 13, 1950 and was partially restored by the National Park Service during the ensuing three years. It was built in the years 1808-1811, the last of the forts on the lower end of Manhattan Island beginning with the Dutch Fort Amsterdam in 1626. It helped to ward off British attack during the War of 1812 and later had a varied and significant history as an open-air entertainment center, concert hall, immigration station, and aquarium. Completion of its restoration as a fort has been approved as part of the MISSION 66 program.

Current planning visualizes one-half the cost of restoration as local contribution, under the provisions of the New York City National Shrines Advisory Board act of 1955. Active interest on the part of influential groups in New York City in completing Castle Clinton National Monument, as well as other areas in the city under National Park Service administration, in time for the opening of the World's Fair in 1964, has met with cordial response on the part of the Secretary of the Interior. Speaking in New York City on April 19, Secretary Seaton stated, in this connection: "I pledge you the Department of the Interior

is prepared to accomplish its share of the task." Early completion of the restoration of Castle Clinton is therefore now Departmental policy.

c. Provisions for operating:

Funds are being sought from interested New York groups, to be matched by appropriated funds, for the restoration and rehabilitation of Castle Clinton. On completion of the structure and its equipment as a fort of the period of 1812, together with exhibits illustrating other periods of its history, the fort will be operated under the administration of the Superintendent, Statue of Liberty National Monument, as a unit of the New York City areas of the National Park Service.

A private organization based on interest in Castle Clinton because of its War of 1812 associations is now forming in New York City, under the sponsorship of the New York City National Shrines Advisory Board. Negotiation of a cooperative agreement with this organization, when it has been developed, is recommended. Such cooperative agreement should look toward assistance in the cost of development and furnishing, and aid in operating the structure to the extent of sponsoring suitable commemorative observances.

Castle Clinton will be a day use area, and will be open to the public daily to conform with the operation of Statue of Liberty National Monument. Visitation will be heavy, judged by

the experience of the New York Zoological Society in operating the New York Aquarium on this site, probably running to 1,000,000 or more annually. A substantial year-round staff will be required, even though administrative supervision and heavy maintenance will be provided by Statue of Liberty National Monument. Operating costs are estimated at \$50,000 annually for management and protection, and \$20,000 annually for maintenance and rehabilitation. Operation will be by appropriated funds.

d. Preliminary estimate of cost for rehabilitating structure:

Current estimate of the cost of restoration and rehabilitation of the structure, as revised in the Eastern Office of Design and Construction April 1, 1960, is \$700,000. This cost is tabulated as follows:

Utilities -- water, electric, telephone	\$ 13,100
Utilities -- sewer.	9,000
Reconstruct and rehabilitate.	520,000
" " " hot shot oven	15,000
Museum equipment.	50,000
Historic ordnance	46,400
Grade and resurface parade.	25,000
Fence	21,500
	<hr/>
Total	\$700,000

A large part of the research necessary for restoration has been completed. Some study of period ordnance will be necessary, but the cost can probably be absorbed by the allotment for "Historic ordnance" listed above. For full exhibit development covering all periods of the structure's history, additional

research estimated at a cost of \$5,500 will be needed.

No funds are currently programmed for the restoration and rehabilitation of Castle Clinton. It is recommended, however, that the entire program be approved for execution during the Fiscal Year 1962. This is in line with the Tentative Program Goals, New York Shrines, recently prepared in the Regional Office, approved by the New York City National Shrines Advisory Board, and endorsed, in general terms, by the Secretary of the Interior.

2. Historical Data

Castle Clinton National Monument is both a link with our colonial past and a symbol of the growing new nation. It was the last of a series of forts on the Battery which, from the Dutch settlement of 1626, guarded Manhattan Island from attack by sea. As such, it is one of the last surviving links with the early history of our greatest commercial city. Castle Clinton, completed in 1811, was an important element in the defenses of New York City during the War of 1812, after which it served as Third Military District Headquarters until 1821.

The structure was later converted to uses which symbolize significant phases of the development of a city and a nation rising to greatness. Reverted by the Federal Government to the city in 1823, the fort became Castle Garden, famed as a theater and entertainment center until 1855. In that year Castle Garden

was acquired by the New York State Commissioners of Emigration, serving for the next 35 years as the nation's principal reception center for millions of immigrants to our shores. From 1896 to 1941 it was well known as the New York Aquarium.

Early Military History of the Battery

For nearly 200 years after the first European settlement the southern tip of Manhattan Island, long known as the Battery, was an important, if not the principal, defense point for New York City. In 1626, when Dutch colonial government was first established in New Netherland, a fort was built on high ground above the point of the island. Fort Amsterdam, as it was named, was originally a crude fortification, consisting of a log blockhouse surrounded by wooden palisades and sodded earthen walls. During the ensuing four decades, although the fort was repaired and rebuilt several times, being strengthened by the construction of stone-faced bastions, it was never an effective fortification. For this reason, the Dutch under Peter Stuyvesant made no attempt to defend their settlement in 1664, when a British fleet appeared to take possession of the colony in the name of the Duke of York.

The British made few changes in the principal defense of the city, other than changing its name to Fort James. As a result, the fort was easily recaptured by a Dutch fleet nine

years later, despite an exchange of fire between fleet and fort for almost an hour — the first occasion on which an attempt was made to defend the city.² Dutch control was only temporary, New York being returned to England by treaty in the following year. The British apparently learned little from past experience, for the defenses of the city were not materially improved.³

Early in 1689, following the abdication of James II in the Glorious Revolution, the fort was seized by Jacob Leisler and his supporters, and its name changed to Fort William in honor of the newly crowned king. During the two years in which he held the city, Leisler not only repaired and rebuilt the fort but constructed a half-moon battery in front of it. Early in 1691 he fired from the fort upon royal troops attempting to dislodge him, but finally surrendered to the new governor, and was tried and executed for treason.⁴

No further shots, other than saluting volleys, were fired from the Battery until 85 years had passed. In the meantime, the old defensive work — known successively as Fort William Henry, Fort Anne, and Fort George — was becoming increasingly dilapidated and outmoded. The outbreak of the American Revolution found the fort in its usual state of military unpreparedness. Early in 1776 the American forces had occupied it and erected several supporting batteries, but the difficulty, if not the impossibility, of defending New York against the British naval and

military forces soon became apparent.⁵

On July 12, 1776, two British warships sailed up the North River in daylight, past the batteries that were supposed to prevent their passage; six days later they returned, running the same gauntlet, practically unharmed. Following the Battle of Long Island, shots were exchanged with British ships sailing up the East River and with British troops who had occupied Governor's Island, but when the British landed in New York on September 15 the fortifications on the Battery were of necessity abandoned.⁶ While it proved of no particular military value to them, Fort George was garrisoned by the British until their evacuation of New York on November 25, 1783.⁷

With the coming of peace the Battery fortifications were once again allowed to deteriorate, and the area became a popular promenade. After considerable agitation to remove the dilapidated fort completely, its demolition was authorized in 1790 by the New York legislature, which declared that "Fort George . . . and the battery adjacent thereto are at present useless for the purpose of defense." The site was, however, "forever reserved for the purpose of erecting public buildings, and . . . works of defense." Within a year a "government house" had been erected there, planned originally as the President's official residence but used instead first as the Governor's residence and then as a custom house. Meanwhile, the site of the former water battery had been converted into a

pleasant park with thirteen guns mounted as a saluting battery.⁸
 By 1793, ten years after the British evacuation of the city,
 New York was probably more defenseless than at any previous time
 in her history.

Origin of the West Battery (Castle Clinton)

The increasing international rivalry of England and
 France during the ensuing fifteen years brought war scare after
 war scare, and the "fortification fever" seized the people of
 New York. The first instance was in 1794, when England was feared
 as the potential aggressor. Both the Federal and the state govern-
 ments passed legislation to improve the defenses of New York harbor,
 and fortifications were begun on Governor's, Ellis and Bedloe's
 Islands, much of the work being done by civilian volunteers.⁹ In
 1798, when France was regarded as the enemy, efforts to defend the
 harbor were revived. Again, Federal and state appropriations were
 made for this purpose, supplemented by money from the city treasury,
 and private citizens furnished much of the labor to erect earth-
 works on the Battery. But in both instances the initial fervor was
 quickly dissipated, and the fortifications soon fell into disrepair.¹⁰

In 1805 relations with England, now fighting for her life
 against Napoleonic France, again became strained as American shipping
 was seized and American sailors were impressed. This crisis situa-
 tion continued, and worsened, throughout the next seven years, cul-
 minating in an American declaration of war. During this period the

continual agitation in New York and other coastal cities for more effective harbor defenses gradually overcame the Jeffersonian preference for gunboats over fortifications, and more attention was soon given to the problem of defending New York City.¹¹

The first step was a survey of the harbor and its defenses, begun late in 1805 by Lt. Col. Jonathan Williams of the United States Army Engineers. Two years later Williams was named one of three United States Commissioners, along with Vice President George Clinton and Secretary of War Henry Dearborn, who were instructed to make a detailed study and report on the best means of fortifying New York harbor.¹² Their "Outlines of a Plan of Defence," submitted in July, 1807, called for the construction or completion of five fortifications or batteries on the three islands of the Upper Bay and two casemated batteries in the water off Manhattan Island, one about 50 feet from the west head of the Battery and the other in the Hudson River a short distance to the north.¹³ The latter part of this plan was contingent upon cession to the Federal Government of the required water lots; this was finally accomplished by the city with state approval. Cession was followed by the appropriation of Federal funds, and by the summer of 1808 construction of the West Battery, later named Castle Clinton, was underway.¹⁴

1. "Map of Land under water ceded by the Corporation of New York to the United States for Fortifications, 1807." Map no. 49, Fortifications File, Office of the Chief of Engineers. War Records Branch, National Archives.

Military History of Castle Clinton

The West Battery was not completed until the fall of 1811, a salute being fired from the new fort on November 25, Evacuation Day.¹⁵ The fort was not garrisoned until June 2, 1812, when a light artillery company was sent to man the new battery, a few days after General Joseph Bloomfield had been given command in New York, and only a few weeks before his General Order of June 20¹⁶ was issued to announce the declaration of war with Great Britain.

The garrison spent the summer mainly in "exercising the guns" and in practice firing at a target, an old hulk anchored in the harbor off the Battery.¹⁷ The advent of autumn brought fear of a British naval attack on New York, six frigates being reported cruising off Sandy Hook, but this threat temporarily disappeared during the winter.¹⁸ Early in 1813 the British declared a "strict and rigorous Blockade" of the port, which caused further panic in the city. The Common Council petitioned the legislature and the Congress for funds to build additional defenses, and breastworks¹⁹ were thrown up on the Battery behind the fort.

In the summer of 1814 the British, whose defeat of Napoleon had released their full military force for the American war, sent a large fleet to American waters. Lying off Sandy Hook during most of the summer, it posed the strongest threat of the war to the city and created widespread panic. This alarm was intensified after news of the burning of Washington reached New York

late in August; more militia were called out to defend the city, and volunteer groups of citizens helped build breastworks and fortifications at various points around the harbor.²⁰ By November fear of an attack had abated, and early in February, 1815, New York received the welcome news that a treaty of peace had been signed.²¹ The city had been saved from bombardment and invasion, whether because the strength of its defenses had deterred an enemy attack, or because the British were content merely to cripple the port by a blockade.²²

Throughout this period confusion generally characterized the military administration of "New York City and its Dependencies." General Bloomfield had been in command for less than three months when, because of popular criticism of his lack of energy, he was replaced by General John Armstrong.²³ Armstrong remained in command for only five months, being chosen by President Madison to be Secretary of War, and was succeeded by Henry Burbeck. Then in rapid succession during 1813-1814 came George Izard, Henry Dearborn, Morgan Lewis,²⁴ and finally New York Governor Daniel D. Tompkins.

Meanwhile, on May 1, 1813, New York from the sea to the Highlands and part of New Jersey had been designated the Third Military District.²⁵ The West Battery, contrary to the assertions of later writers, did not at this time serve as headquarters for the military commanders of the district; this was located throughout most of the war in a building near Government House and the

arsenal, just south of Bowling Green.²⁶ With the ending of the war, the city began negotiations with the Federal Government for cession of this valuable property; by the end of May, 1815, the land had been divided into lots which were sold at public auction, and demolition of the buildings had been started.²⁷ Concurrent with this action, General Alexander Macomb assumed command of the District, and effective May 30 established his headquarters at "Castle Clinton, heretofore designated West Battery." This is the first known use of the name, probably chosen to honor DeWitt Clinton, who had just retired as Mayor of New York.²⁸

Agitation had begun in the meantime for restoration of the Battery to its pre-war beauty, and its improvement as a park and public promenade.²⁹ This issue was revived in 1817, when General Winfield Scott, who had been military commander in New York since June, 1816, began the construction of two small office buildings on the Battery at the head of the Castle Clinton causeway; the popular outcry was so strong that Scott was finally ordered to abandon the project.³⁰ The situation remained dormant for nearly three years, until May, 1820, when the Common Council began a campaign to obtain Castle Clinton "for the public use of this City." Although President Monroe and the War Department were agreeable, Congress failed to pass the necessary legislation and recession of the land to the city was delayed.³¹

During this period the military usefulness of the fort,

even as an administrative headquarters, had decreased. In February, 1821, the Third Military District was apparently abolished at the time that headquarters of the Eastern Department of the Army was moved to Fort Columbus on Governor's Island, with Winfield Scott as Commanding General. By July Castle Clinton was serving as quarters for the Army Paymaster and a Surgeon, and on November 18 it was turned over to the Quartermaster Department for storage of military equipment.³²

Ignoring the arguments of Quartermaster Bender, who found it convenient and inexpensive for this purpose, Congress on March 30, 1822, authorized the reconveyance to the city of the land on which Castle Clinton stood, whenever it was no longer required "as a military position for the defence of the Harbor."³³ Nearly a year passed before the Army took action, requesting General Scott to report on the military value of the fort. Colonel Joseph G. Totten of the Engineers, who made the survey, concluded that "Castle Clinton may be struck out of the present system of defence without essentially weakening it," a view in which Scott concurred while emphasizing that the structure was still "useful" as a quartermaster depot. As a result of this report, the War Department on February 18, 1823, ordered that Castle Clinton be evacuated and turned over to the city; all quartermaster and ordnance supplies were removed by April 19, and on June 23, 1823, the fort was officially reconveyed to a committee of the Common

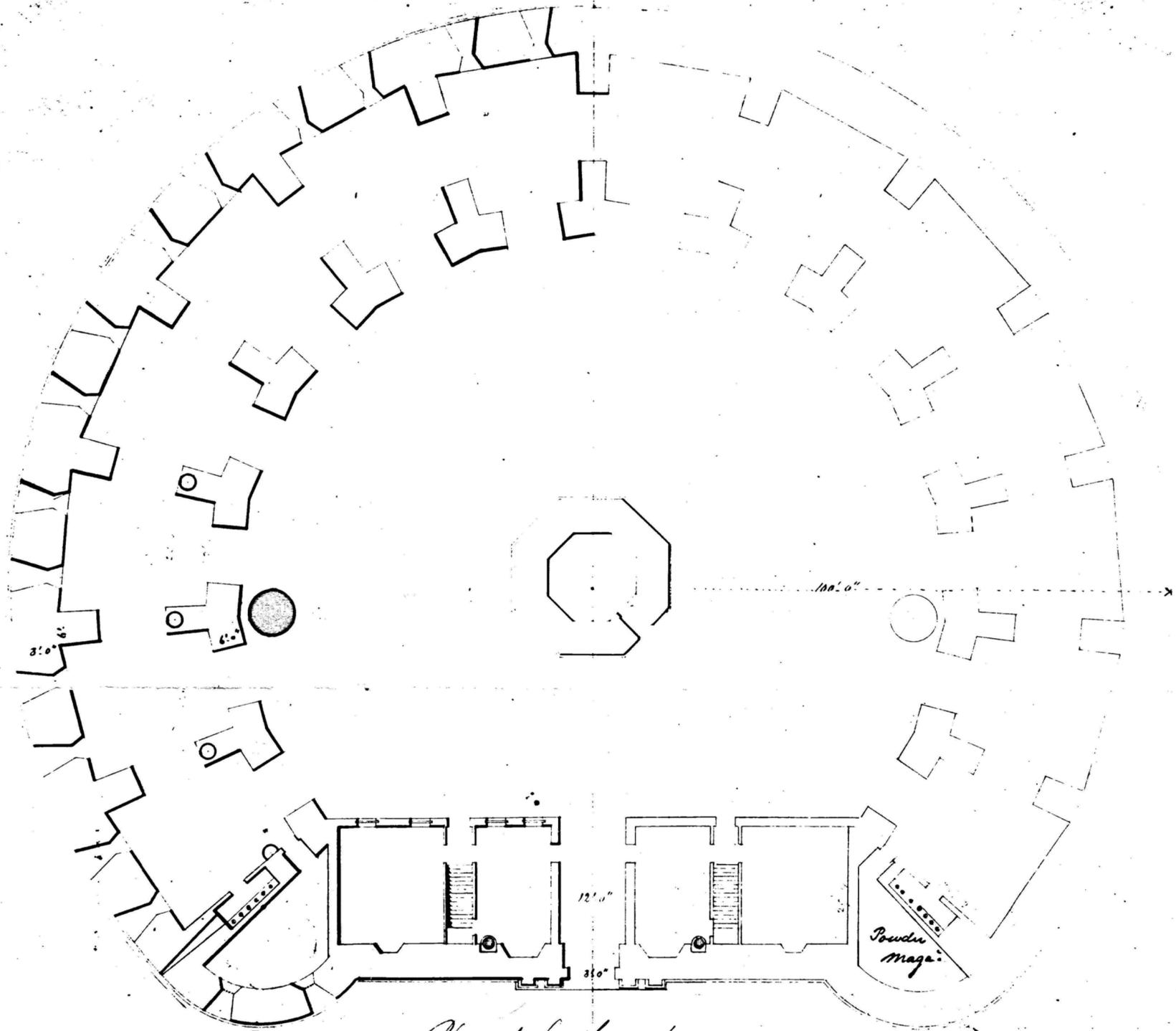
Council.³⁴ Thus ended the military history of Castle Clinton.

Construction History of Castle Clinton³⁵

Although Colonel Jonathan Williams was the Army Engineer in charge of all fortification construction in New York harbor during the years immediately preceding the War of 1812, the evidence is not conclusive that he actually designed and superintended the construction of Castle Clinton. It has been claimed, for example, that John McComb, Jr., builder of the New York City Hall, was the architect. His account books and several plans of the fortification bearing his name prove that he was associated with the construction work, at least in the role of contractor, and it seems to be established that the monumental gateway at the sallyport was his work.³⁶ It also appears from other data that a Captain Whiley was in charge of laying the foundation of the fort, and construction of the fort itself was supervised at times by Major Joseph G. Totten and Captain George Bomford.³⁷ Upon being criticized by his superiors in Washington in June, 1810, because the cost of constructing the fort was considerably more than his original estimate, Williams asked to be relieved from his position as Engineer-in-charge in New York harbor. Colonel Henry Burbeck apparently succeeded him, at least for a time, but by the following year Williams was back in a position of authority.³⁸ On his death, a few months after the end of the war, the

2. "Plan of the Lower Battery," by John McComb, Jr. c. 1810.
Plan 151, John McComb, Jr., Papers, The New-York Historical
Society.

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*Plan of the Lower Battery.
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3. Plan of fortifications at the Battery, probably by John McComb, Jr. c. 1810. Plan 152, John McComb, Jr., Papers, The New-York Historical Society.

4. "Gateway for Battery," by John McComb, Jr. c. 1810.
Plan No. 153, John McComb, Jr., Papers, The New-York
Historical Society.

New York Common Council saluted him for "planning the defenses of this City and Harbour,"³⁹ Without detracting from the contributions of others, it seems apparent that Williams should receive credit as the designer and builder of Castle Clinton.

Castle Clinton's construction history does not end in 1811, with the completion of the fort, but continues until almost 1823, when its military history was terminated. While the most significant changes were made after the war in 1815, when General Macomb established his headquarters there, other minor construction work was undertaken almost annually from 1813 to 1818. Because of these continual repairs, modifications, and additions, the fort of 1823 differed in many respects from the West Battery as originally planned and built. Moreover, as the record, including plans of the fort, is most complete for the later years (ca. 1817-23), the appearance of the structure in 1812 must in large part be deduced.

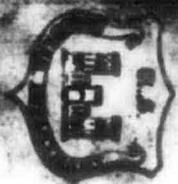
Castle Clinton was a one-tier open casemated fort of brownstone, mounting 28 guns. Circular in design (a segment of a circle greater than a semi-circle), the fort had an inner radius of 92 feet. The unfinished segment of the circle was rounded off and cut by the straight line of the Gorge, or rear wall of the fort, at the center of which was the sallyport. The fort was built on a man-made "island" of stone about 200 feet off the "west head" of the Battery, to which it was connected by a wooden causeway with a drawbridge.⁴⁰

Williams originally visualized a circular fort about 50 feet off the Battery, mounting 30 to 50 guns in two or three tiers and "with ample accommodations for a garrison," similar to Castle Williams on Governor's Island.⁴¹ His first change of plans came when he discovered that because of proposed dock construction the fort would have to be out at least 200 feet from the Battery to command the North River.⁴² Later, because of the high cost of building the foundation, Williams was directed to build the fort with one tier of guns only, which he described as "an imperfect work of 28 guns, without any accommodations for the men when not on duty"; the expectation was that other tiers could be added subsequently if additional funds became available. The foundation, therefore, was massive in proportion to the superstructure, since it had been designed to support a multi-tiered "tower" fort.⁴³

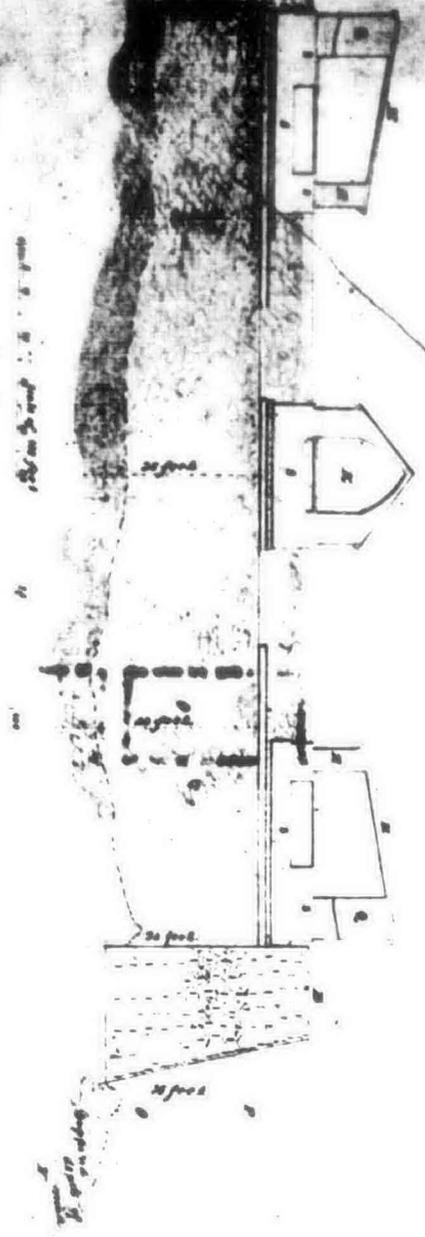
Foundation, counterguard, and bridge:

The rough stone foundation of the fort was laid in 35 feet of water "and an uncertain depth of mud" within a "counterguard" or wharf of stone blocks; these blocks were described as forming "seven sides of an octagon, two sides on the town side being made into one." As indicated on National Archives Plan 36-14 (1810), the counterguard was 39 feet wide at the base and 20 feet wide at the top, surfaced with a framework of "connected logs." In the words of Captain Whiley, "never before was there such a mass of stone and timber for the foundation of any work or building since the creation of the world."⁴⁴

5. "Plan of the Tower-Battery for the South-West Point of the City of New York." c. 1810. Plan 36-14, Fortifications File, Office of the Chief of Engineers. War Records Branch, National Archives.



Drawer 36.
Sheet 14.



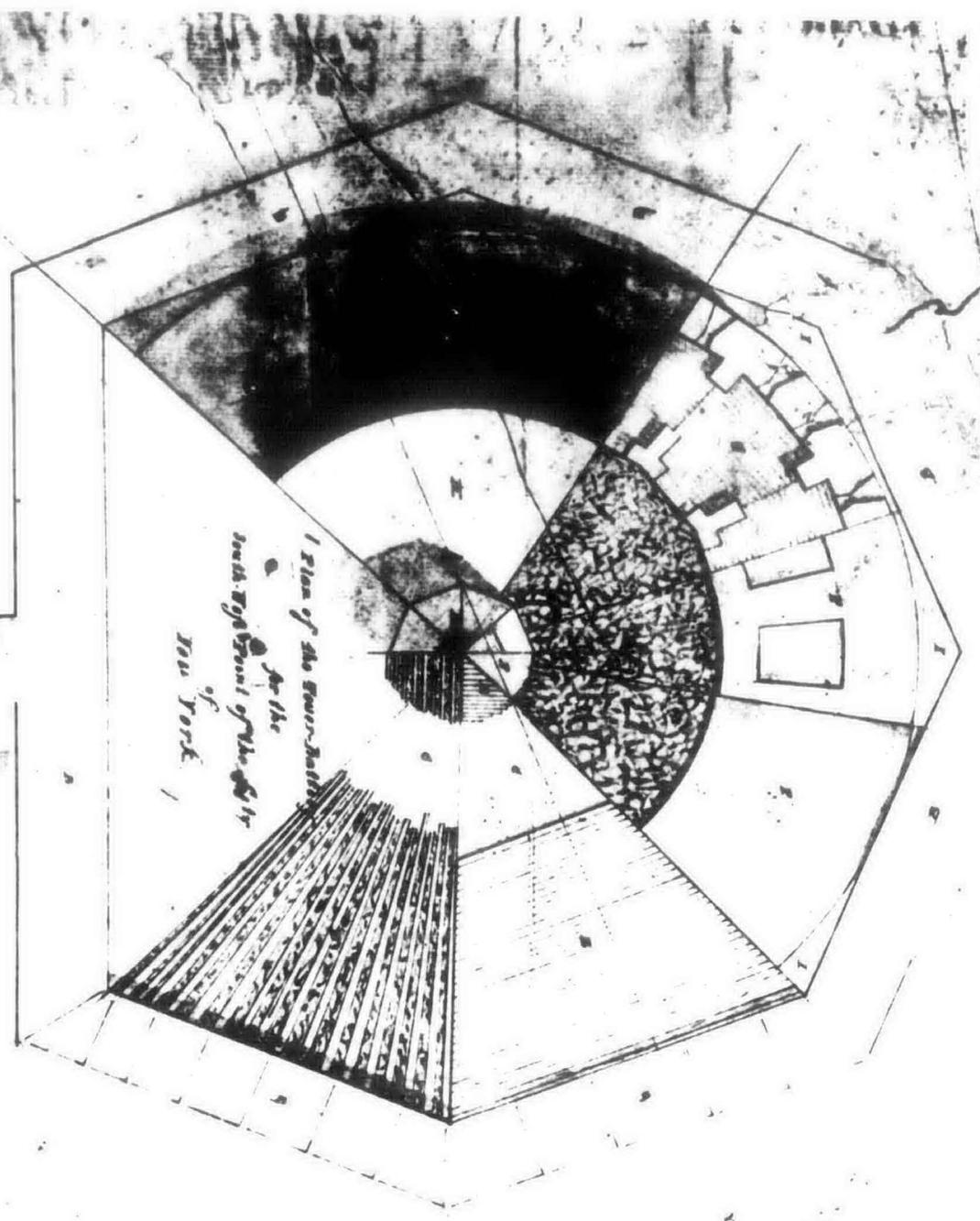
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Plan of the Bastion
of the
Fort of
New York



36-14

NM-CAS-9006
SHT 6 OF 9

Williams' belief that there was no danger of "the works Spreading by the Superincumbent weight" seemed borne out by the appearance of the counterguard after a year had passed; as Captain Bemford reported to him, "notwithstanding the depth of the water and the irregularity of the bottom the whole pile has settled with such regularity as not to show the smallest differences of levels." But within the space of four years it was noted that the foundation had settled further on the water side, causing several large cracks in the wall and other damage. Two years later, in 1817, the counterguard was strengthened with large iron straps at each angle to counteract damage from freezing, and oak fenders 6 inches thick were spiked 4 feet apart around the block to secure the foundation; in addition, large stones were placed around it to give additional support to the fenders.⁴⁵

While there is no written evidence as to its actual length, the bridge connecting the fort and the Battery was about 200 feet long. Comparing Archives Plans 36-27 (1819) and 36-31 (ca. 1817), the only plans showing the bridge, it appears that the causeway was from 222 to 224 feet long and 26 to 30 feet wide; the drawbridge section, located about 20 feet from the counterguard end of the bridge, was approximately 14 feet square.

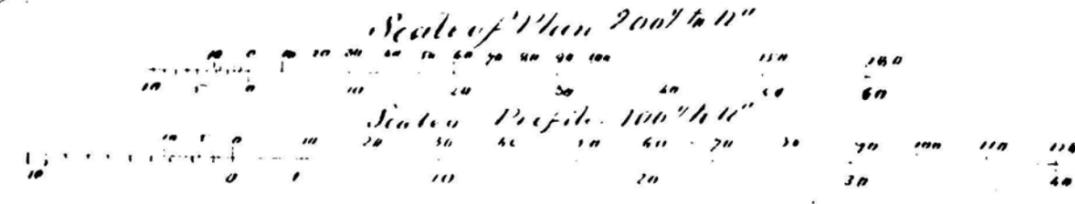
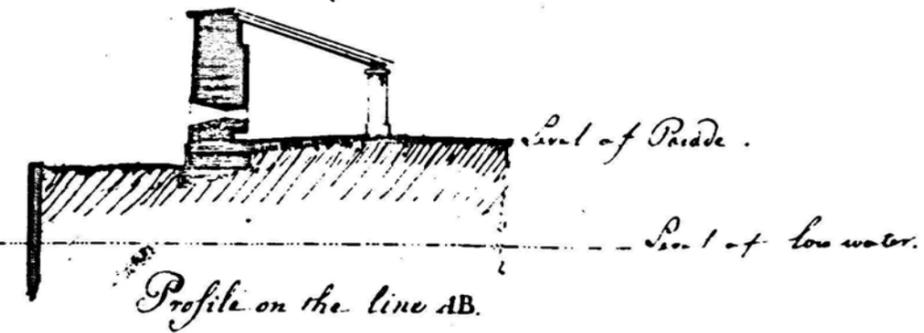
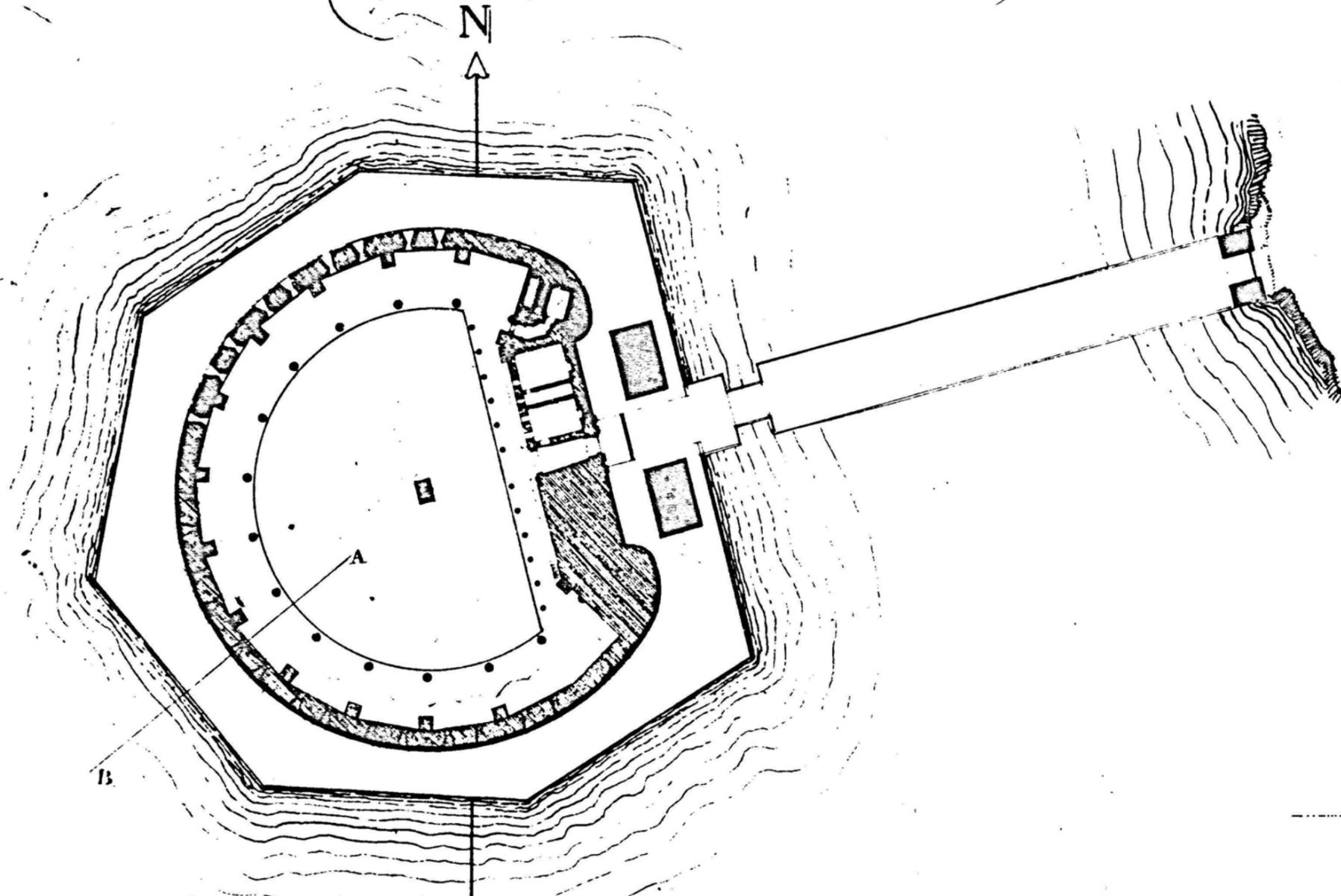
Between September, 1815, and March, 1816, some minor repairs were made to the bridge and counterguard, principally stabilization with iron straps and bolts.⁴⁶ In 1817 because of serious

6. "Castle Clinton, New York." 1819. Plan 36-27, Fortifications File, Office of the Chief of Engineers. War Records Branch, National Archives.

Drawer 36.
Sheet 27.

State of

Castle Clinton New York



Drawn by Capt. Pascoe

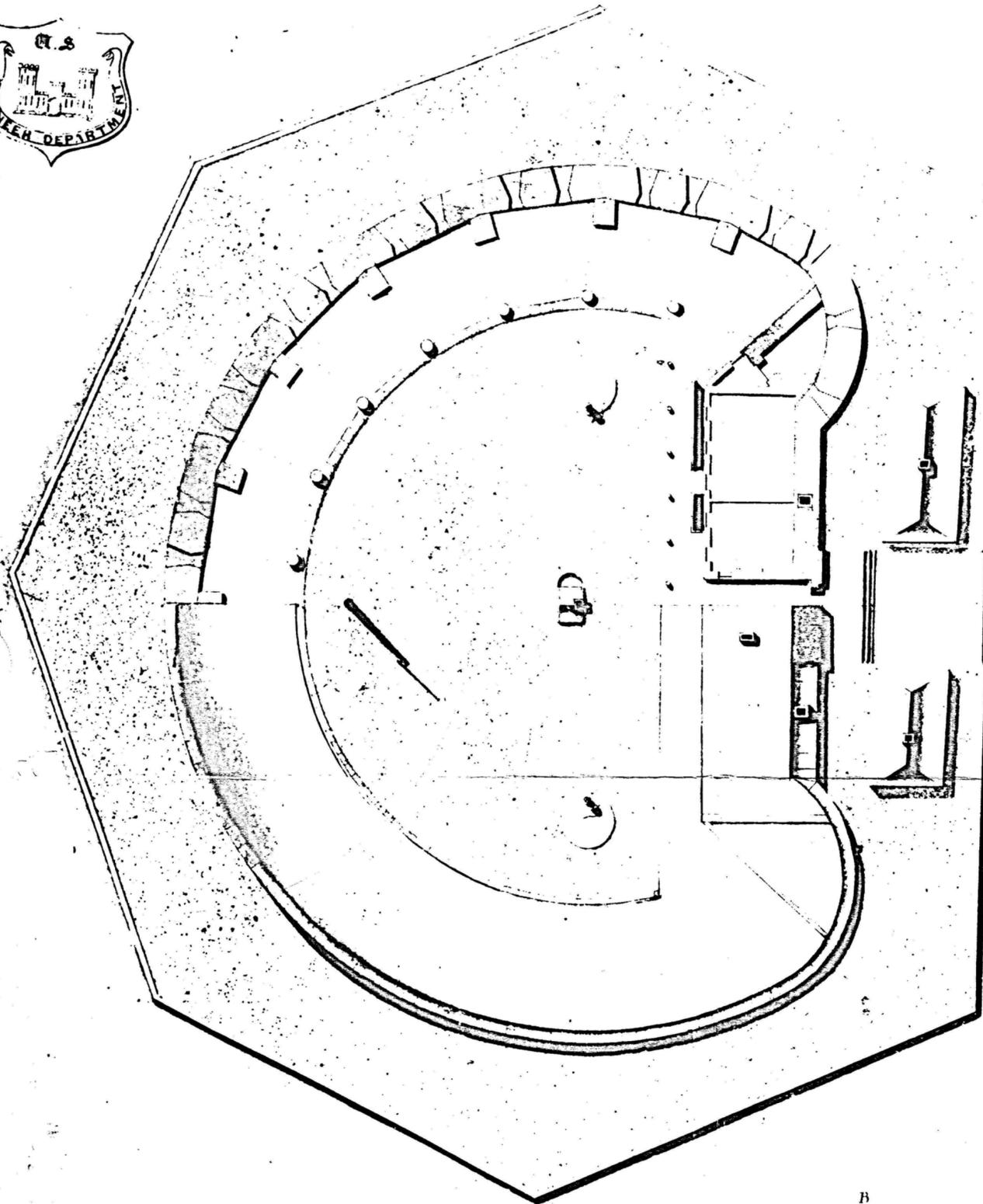
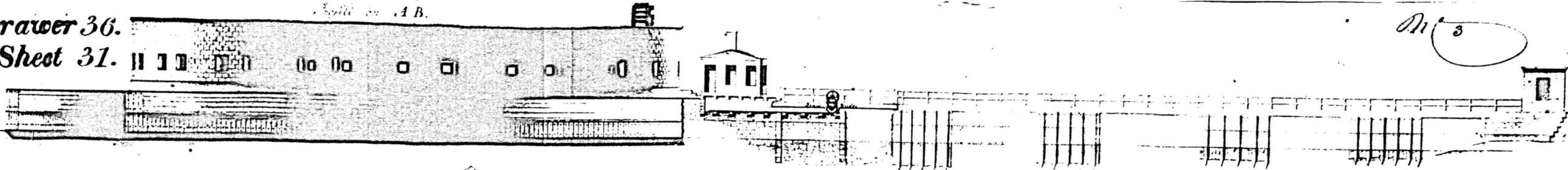
1819
36-27

7. "A Plan of Castle Clinton, New York." c. 1817. Plan 36-31, Fortifications File, Office of the Chief of Engineers. War Records Branch, National Archives.

Drawer 36.
Sheet 31.

Scale 1/4" = 10'

No. 3



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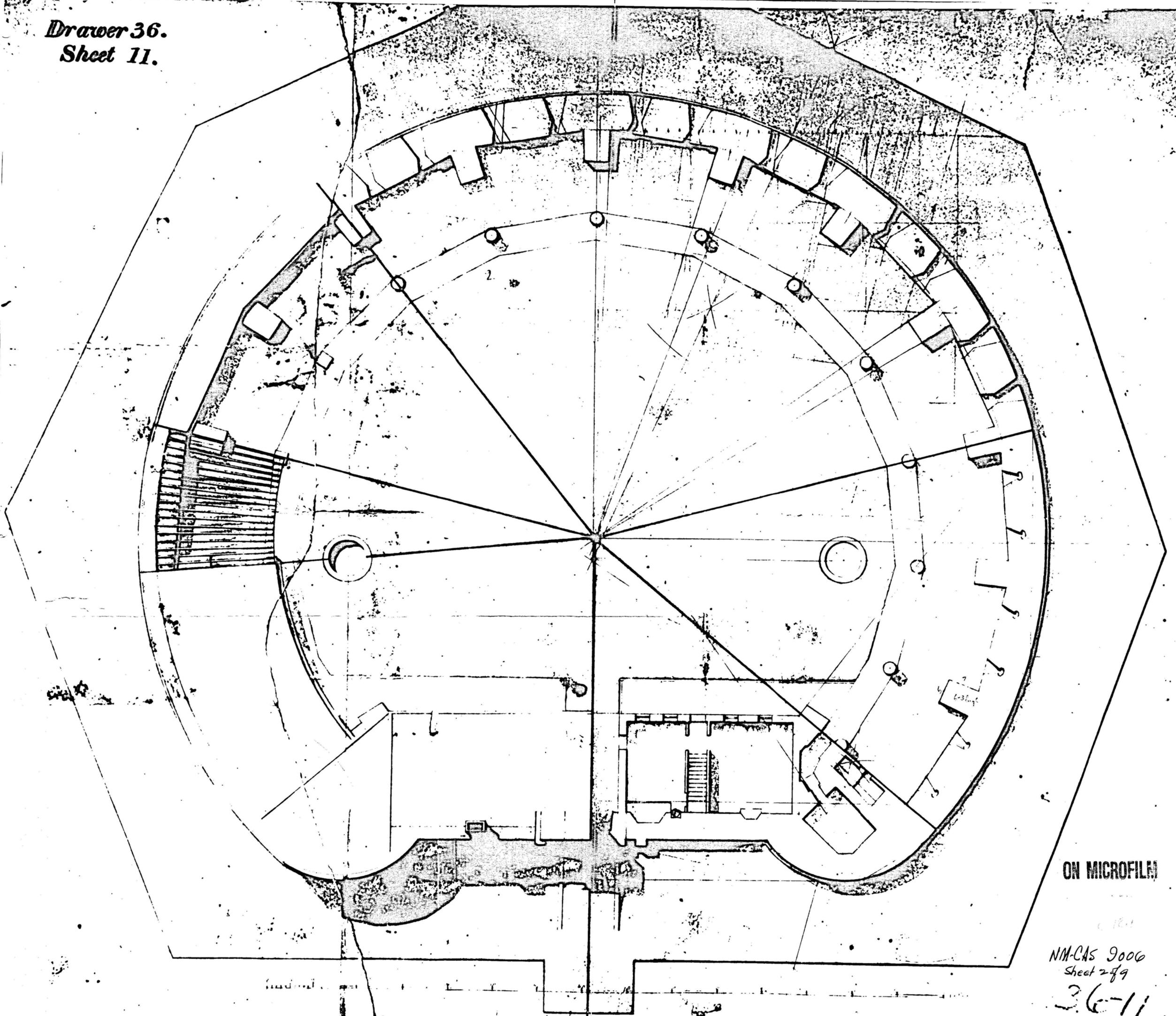
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9. Plan of West Battery. c. 1811. Plan 36-11, Fortifications File, Office of the Chief of Engineers. War Records Branch, National Archives.

Drawer 36.
Sheet 11.

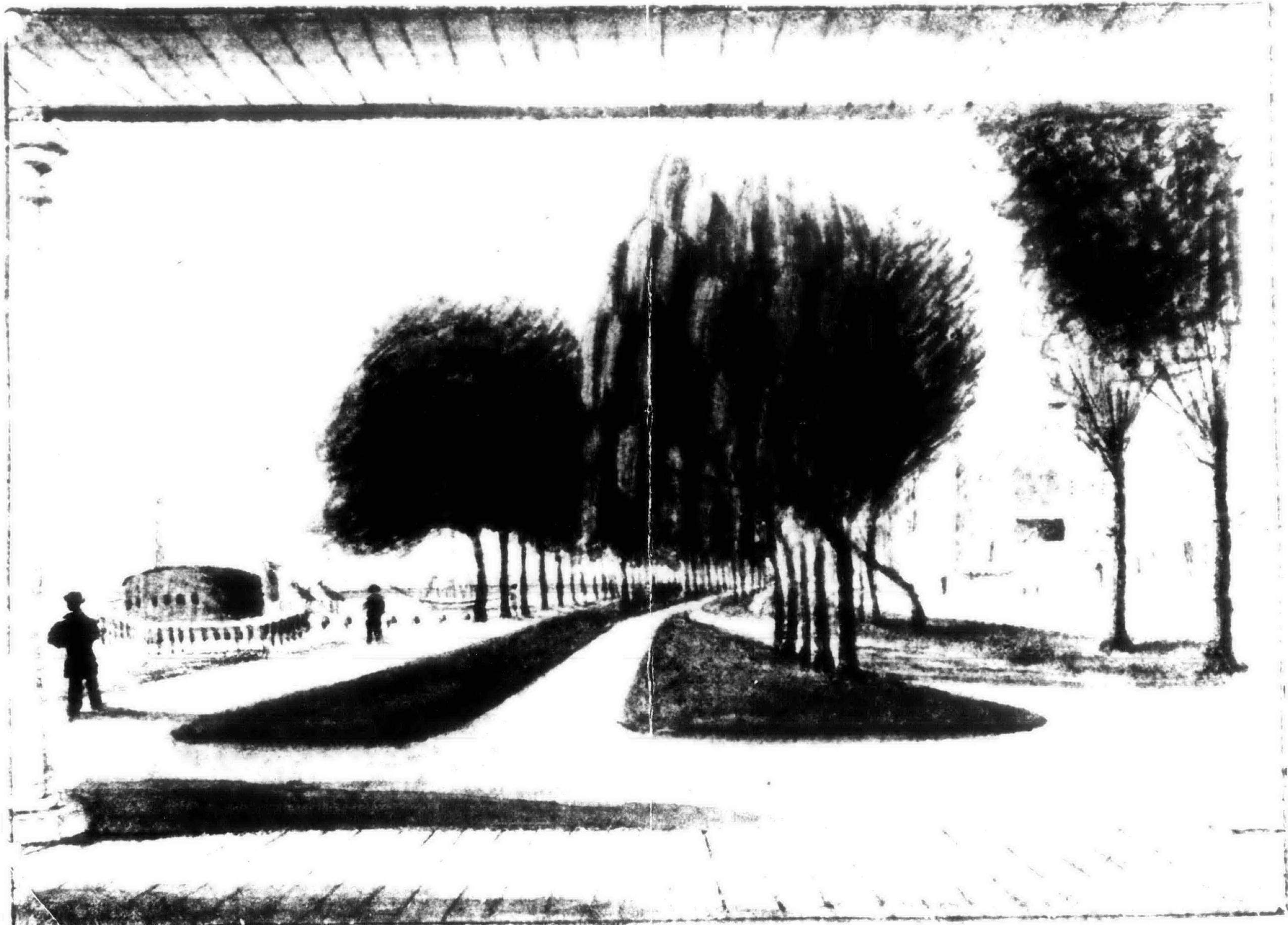


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Sheet 2 of 9

36-11

10. "View of the Battery Looking North from the Churn."
c. 1817. I. N. Phelps Stokes, The Iconography of
Manhattan Island, Vol. VI, Plate 93B.



deterioration the bridge and three of the piers supporting it were almost completely rebuilt. All the sleepers and piers lying above low water mark were replaced, and piles were driven against each pier about 4 feet apart; in addition, 6-inch oak fenders were placed between the piles so as to provide further stability. Since the drawbridge would not operate, a new set of wheels was cast with "double power" for ease of operation, and a low protective wall was built to keep the wheels free from dirt and gravel. Finally, a new railing was built, the entire bridge was painted (probably white), and the counterguard was surfaced with "gravel of the best quality."⁴⁷

Outbuildings:

Archives Plans 36-27 and 36-31 show two guardhouses at the Battery end of the causeway and two larger outbuildings at the fort end, on the counterguard at each side of the sallyport entrance. The guardhouses measure approximately 8 by 12 feet and 10 feet high; the dimensions of the outbuildings, as shown in Archives Plan 36-32 and listed in an 1823 inventory of the materials in Castle Clinton, were 27' 2" by 17' 2" and 10 feet in height. Each of the latter had two rooms, two entrance doors and eight windows.⁴⁸

The date at which these buildings were constructed cannot be definitely established. McComb's Account Book refers to work done in 1810-11 at the Guard Rooms and the Guard House, but

there is no further identification. ⁴⁹ Neither Archives Plan 36-11 (ca. 1811) nor the early McComb Plans have any indication of outbuildings, and there is no mention of them in Williams' correspondence. The two buildings on the counterguard are shown in a watercolor painting entitled "View of the Battery Locking North from the Churn," reproduced in Stokes' Iconography. Stokes dated this picture ca. 1812, but since fenders are indicated around the counterguard it probably could not have been painted prior to the extensive 1815-17 repair work. ⁵⁰

It seems likely that the outbuildings adjacent to the fort entrance were built after the War of 1812, as part of the headquarters establishment, for no mention has been found of the existence of soldiers' barracks in or near the fort during the war. In the period September, 1815, to March, 1816, a considerable quantity of lime, sand and bricks, as well as building hardware, was purchased "for office at Castle Clinton," indicating considerable building activity; although the outbuildings were later described as wooden, they could have been partly of brick construction. Unfortunately, no bills for carpentry work have been found for this period, even though we know such work was done when the officers' quarters were repaired and remodeled in 1815. Based both on evidence and logic, we can assume that the two outbuildings were probably constructed at about the same time. ⁵¹

Walls:

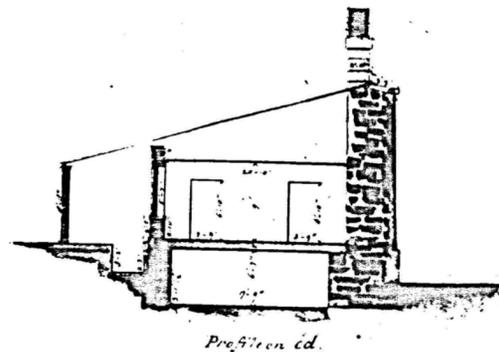
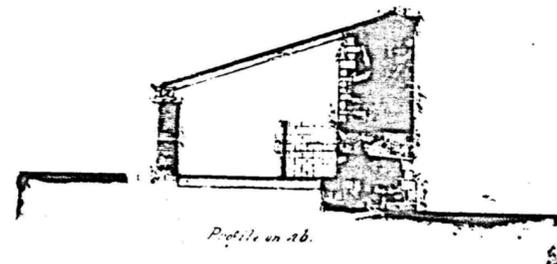
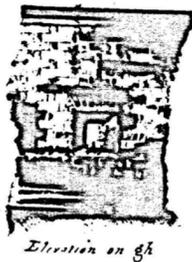
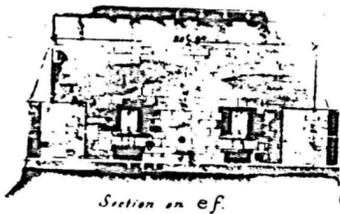
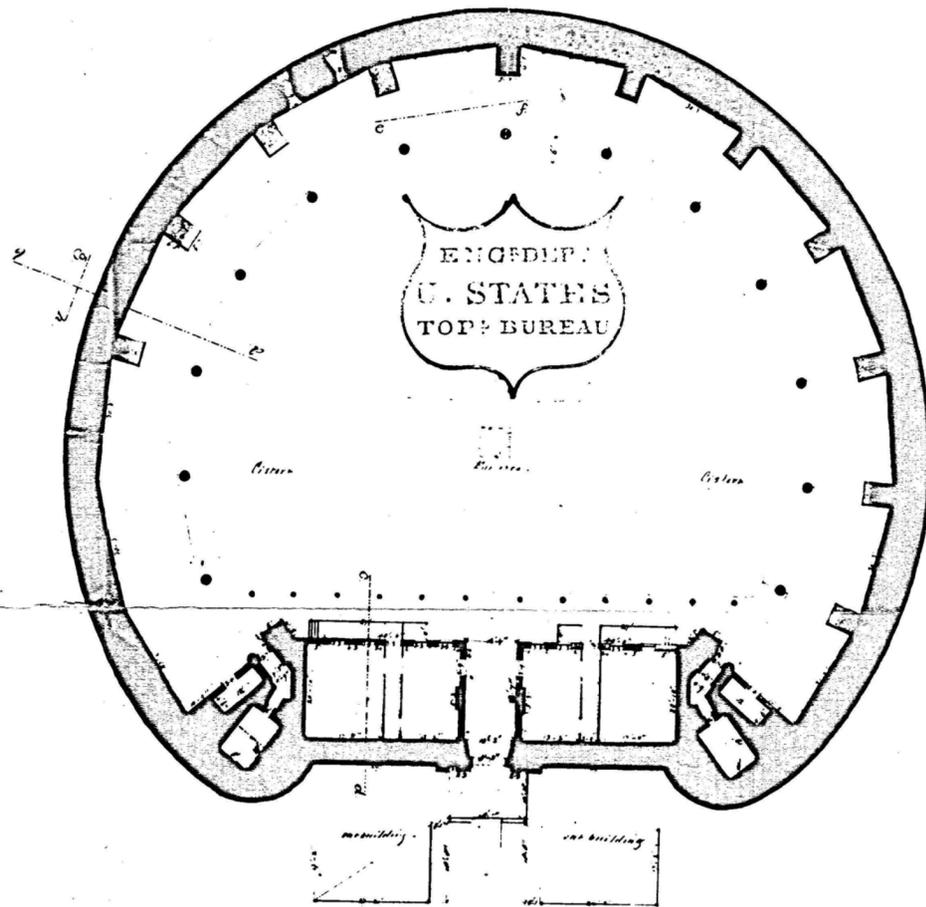
The outer walls of the fort were 8 feet in thickness,

11. "Historical Base Map, Castle Clinton National Monument,"
1956. Drawing No. NM/CAS 3001, National Park Service,
revised and annotated by Walter E. Hugins, Historian.

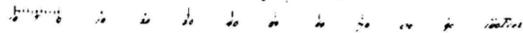


Drawer 36.
Sheet 32.

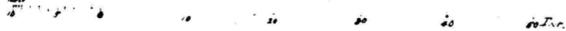
Plan of Castle Clinton Harbour of New York.
Surveyed in October 1823, for the purpose of estimating the value
of its materials.



Scale of the Plan.



Scale of the Profiles.



W. H. Rouse
Capt. U.S. Army



NM 645-7000
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36-32

ON MICROFILM

narrowing to 6 feet at the Gorge. They consisted of exterior and interior facings of brownstone ashlar laid in Flemish bond over a core of irregular rubble fill of various types of stone. Much of the brownstone came from a quarry in Newark, New Jersey, but there is evidence that some of it, perhaps only that for the gateway, came from a quarry in Chatham (present-day Portland),
 52
 Connecticut.

Aside from the sallyport gateway, the walls of the fort were pierced for 28 open embrasures, 4 false embrasures and several narrow ventilation slits. These embrasures were paired and "keyhole-angled" two to a casemate. Above the lintel of each embrasure was a jack arch, with a round brick relieving arch not visible behind this facing. A larger brick relieving arch, also non-visible, was located immediately behind the interior wall facing, spanning each set of two embrasures. The
 53
 coping and soles of the embrasures were also of brownstone.

Sallyport entrance:

Castle Clinton was entered through a massive brownstone gateway, probably designed by John McComb. Paired double pilasters of ashlar blocks, alternately outcropped, framed bolt-studded wooden doors opening beneath a plain jack arch, strengthened by an outcropped discharging arch above. The pilasters extended almost the height of the fort wall, with the gateway capping 5 or 6 feet higher. The stone in the gateway appears somewhat

lighter in color and finer in texture than that in the fort walls,⁵⁴
and probably came from a different quarry.

The two doors, each 11 feet high and 4 feet wide, were apparently constructed of three layers of heavy cross-planking with a total thickness of about 7 inches. They were studded with 768 iron bolts, the heads of which were over 2 inches in diameter, and had three large triangular-shaped iron hinges on each side. One door probably contained a small door or "wicket gate" which was 57 inches high and 21 inches wide.⁵⁵

The flooring of the sallyport passageway was originally wood, with brownstone sills at either end, the wooden planks probably resting on beams similar to the flooring of the casemates and quarters. Below this was a stone and rubble fill about 18 feet wide, separating the two cellars under the officers' quarters.⁵⁶ In 1817-18, in connection with the repair and refurbishing of the bridge, flagstones were laid from the bridge to the sallyport entrance and through the passageway, replacing the wooden flooring. At the same time, two brownstone steps approximately 25 feet in width were built about 10 feet in front of the gateway. Previous to this addition, logical for a "headquarters" fort, the 3-foot difference in elevation between the counterguard and the sallyport passageway was apparently bridged by an earthen ramp, more suitable for wheeling in artillery pieces and other heavy equipment.⁵⁷

Officers' quarters:

The four rooms in the Gorge, two on each side of the sallyport passageway, were used as officers' quarters throughout the military history of the fort. The four rooms were arranged symmetrically, each set of rooms being identical but in reverse. The two rooms adjacent to the passageway, with interior dimensions of 13' 2" by 20' 10", were slightly smaller than the other two, with interior dimensions of 17' 11" by 20' 10". Each set of two rooms was divided by an entryway and stairwell 3' 9" wide, with a 6-inch wooden partition on each side. The sallyport passageway between each set of rooms was probably a lintelled opening 12' 4" wide, with brownstone jambs supporting a brownstone lintel at the elevation of the base of the outside jack arch, just beneath the sloping roof.⁵⁸

The brownstone Gorge wall of the fort formed one wall of each set of rooms; another brownstone ashlar wall with a rubble core, about 4 to 6 feet thick, formed another, separating the quarters from the magazines. The other two walls, facing the sallyport passageway and the fort Parade, were brick with a brownstone base course, and contained the only openings into the rooms. Each set of rooms had four windows on the parade side, two to each room, with 24 panes of glass, and with brownstone sills and lintels. The windows, 3' 3" wide by 5' 7" high, were 2' 10" above the floor and extended within a few inches of the

9-foot ceiling; the sills were 3' 8" wide by 4" thick, and the lintels 3' 5½" wide by 10½" thick. The windows were fitted with Venetian blinds, at least after 1815. Each set of rooms also had two wooden entrance doors, one opening onto the sallyport passageway 4' 6" from the corner, and the other on the parade side about 15 feet from the corner, opening into the quarters entryway. Each door was 3' 9" wide by 6' 10" high with brownstone jambs and lintels, but apparently no sills.

The interior walls of the quarters were probably plastered. The flooring consisted of wood planks laid over beams (15 for each set of rooms) which rested on the brownstone cellar walls. The ceiling, containing the same number of beams, supported the board flooring of a "dark" garret overhead. The stairwell dividing each pair of rooms apparently contained two wooden staircases, one leading up to the garret and the other leading down to the cellar. The garret stairway rose from the quarters entryway about 6 feet inside the parade-side entrance door; between the stairs and the entrance were two doors, 3' 3" by 6' 10", leading from the entryway into the two rooms on each side. Access to the cellar stairway could apparently be gained only from the smaller of the two rooms, through a door (3' 3" x 6' 10") under the garret stairway near the back wall of the quarters.

The two smaller rooms, adjacent to the sallyport

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passageway, may have served as kitchens during the war. This seems to be the only explanation for the large fireplaces with great hearths (10 feet wide by 4' deep) in the rear corner of these rooms, as shown in Archives Plan 36-11. These fireplaces also appear on McComb Plan 151, but are not shown on any of the postwar plans,⁶² leading to the conclusion that they may have been eliminated during the 1815 quarters renovation. Two other fireplaces (with hearths 5' 3" wide) probably replaced these large kitchen hearths, as shown on Archives Plans 36-31 and 36-32, along the sidewalls of the smaller rooms between the sallyport passageway door and the rear corner.⁶³

Each of the two larger rooms also had a fireplace, somewhat smaller and located against the rear wall (the Gorge wall of the fort) about midway between the two corners of the room; these are also shown on McComb Plan 151, indicated on Archives Plan 36-27, and penciled in on Archives Plan 36-32. The two rear-wall fireplaces in each set of quarters were apparently served by a single brownstone chimney about 2' 10" square, located midway on the Gorge wall about 10 feet from the edge of the gateway. These chimneys extended 5 feet above the parapet and, in the later period at least, were capped by 3-foot brick extensions, possibly added in 1815 or later to provide a better draft. Another chimney, on the passageway side of the quarters, was added for each of the sidewall fireplaces, probably,

although this is not known definitely, the same height as the
⁶⁴
 others.

The roofing of the quarters, like that of the casemates, consisted of wooden shingles resting on 4" x 12" rafters 23 feet long, slanting down from the Gorge wall to the brick front wall of the quarters.
⁶⁵ A change was made in 1815, a piazza or portico being built "to keep off rain and snow." The roof was extended an additional 10 feet, and 12 wooden columns 8 feet high and 5 inches in diameter were erected to support it; these columns were placed 10 feet apart, except for the two center ones which were placed about 12 feet apart. There was apparently no rain gutter, like that on the casemate roof. The upper ridge of the roof, where it joined the top of the Gorge wall, was covered with sheet lead.
⁶⁶

Cellars and cellarway:

Beneath the officers' quarters were two non-connecting cellar rooms, one on each side of the sallyport passageway. Although these are shown in profile only in the 1823 plan (36-32), it is probable that they had been part of the fort since its construction, for cellar steps were laid and cellar window sills were cut by McComb in 1810. It seems logical that the cellars were used during the war as guardrooms and/or prisons, for such facilities are known to have existed. McComb's work in 1810 also included "Letting in Grating in the Guard Rooms" and "Letting

in 3 Hooks in doors of Guard Rooms." Three years later General Dearborn ordered his Quartermaster to

furnish the necessary Caboozes and Stove, with Pipes, for the West Battery and Gov- Island, and . . . erect in the Guard Cook Room of the West Battery an apparatus for cooking—Also, render warm and comfortable the Guard House, and Guard Cook Room, and secure the Prisoners apartments with necessary fastenings. . . .67

It is also known that soldiers guilty of military infractions were imprisoned at the fort during the war, one Officer of the Day report referring to "ll in a prison not large enough for 6." Moreover, carpentry work performed in 1814 included "Repairing ⁶⁸ Black hole W Battery," probably another reference to the cellars. With the end of the war and the establishment of military headquarters at Castle Clinton, the cellars were presumably converted into kitchens; it is known that they had this function from 1821-23, ⁶⁹ and it seems logical that the change was made earlier.

Each cellar room was 17' 9" from front to back (about 3 feet smaller than the quarters upstairs because the back or Gorge wall was thicker at that level), probably about 35 feet wide, with little likelihood of any interior partitions, and 6' 3" in height. Although Archives Plan 36-32, the only one showing the cellars, has no indication of fireplaces, other indirect evidence cited above shows that they must have existed, probably along the back wall of each room. As indicated previously, a wooden staircase provided access to each cellar room from the quarters above;

although there is no direct evidence, this is the deduced arrangement as early as 1811. Additional access was provided by a sunken cellarway immediately in front of the quarters; this was 27 feet long, 4 feet wide (3' 7" interior dimension from brick retaining wall to front wall of quarters), and 3' 2" deep. Each cellarway was entered by three masonry steps at the magazine end. Opening off each cellarway was a 16-pane window (2' 8" x 3' 5") and a half-windowed door 6' 3" high by 5' wide; the door window also had 16 panes, probably with the same measurement. Because of the known height of the door, steps must have led from the cellarway down to the doorsill, although they are not indicated on any available plan.

Magazines and "privies":

In the rounded ends of the circular part of the fort walls, at each end of the Gorge, were two non-connecting chambers. The larger inside chambers, adjacent to the officers' quarters, were the fort magazines, while the smaller outside chambers, opening onto the casemates, were probably privies. It was originally planned to build one large octagonal magazine in the center of the fort Parade, equidistant from all the casemates, but after some discussion Colonel Williams decided to utilize the space available at each end of the casemated battery.

The use made of the smaller chambers is more questionable. McComb Plan 151 appears to give a schematic representation

of privies with a row of six circles or holes in each chamber; while this is not repeated in any later plans, no other identification is given to these chambers, and they seem to be in a logical position for latrines. This assumption is verified further by the 1823 Estimate, which lists "2 privydoors, with locks." Nevertheless these rooms may not have always had this function, possibly serving as storehouses for a time. In 1813 General Izard ordered the Quartermaster to "cause two privies to be erected over the water on the outside of the West Battery." At the same time a bill was rendered for "2 Barrels Lime for cleansing the Vaults of W. Battery, converted into Store Houses," followed by a carpenter's bill "for making necessaries [an early synonym for privies] and repairing and fixing Store Houses." ⁷² These are the only architectural features of the fort, with the exception of the magazines, which could be called vaults, and the necessity of cleaning them with lime is obvious if they had formerly served as privies.

Each magazine was 8 by 13 feet, arched transversely with brick above 5-foot brownstone walls to a height of 12 feet above the floor. The privies, measuring 12' by 4' 6", were arched longitudinally in brick. Over this brickwork were irregularly-shaped brownstone blocks laid to slope downward into the fort; there was apparently no continuation of the sloping shingled roof which covered the quarters on one side and the

casemates on the other. Access to each magazine was through a narrow winding passageway about 15 feet in length and ranging from 2 feet to 4' 9" in width. A wooden door 3 inches thick was placed over brownstone sills at each end of the passageway; the outer door measured 4 by 7 feet and the inner, furnished with a brass lock, was 2' 10" wide by 7' 9" high. Each privy had a wooden door with a lock set in a doorway 3' 4" wide.⁷³

The front walls as well as the inner walls of the privies were brick, while the jambs of the magazine passageway entrances were brownstone. Although present evidence indicates that the brownstone passageway walls from the entrance to the first bend were faced with brick, this is not confirmed by Archives Plan 36-32 and may be a post-fort addition. The passageway walls, and probably the magazine and privy walls as well, were whitewashed, and the chambers most likely had wooden floors. There were, of course, no windows in these chambers, ventilation being provided by vents through the outer walls of the fort. On the wall outside each magazine were paired false embrasures through each of which was a vent at sill level, apparently 3 inches wide by 14 inches high at the outside opening. Similarly, a triangular-shaped air vent about 15 feet long led through the fort wall to each privy; on the outside this was a narrow vertical slit 2 inches wide by 2 feet long widening to 2' 4" by 3' on the inside.⁷⁴

Casemates and ordnance:

The inner circumference of the fort from magazine to magazine was divided into fourteen casemates. Separating the casemates, about 23 feet apart, were thirteen brownstone traverses 6' 3" high by 5' 7" thick, jutting out 6' 5" from the inside face of the fort wall. In 1815, in connection with the conversion of the fort into the military headquarters and residence of the commander, General Macomb proposed that the two casemates adjacent to the east magazine be converted into rooms to supplement the existing rooms in the Gorge. Although this expenditure was not allowed by the War Department, it appears that the first step, removal of the casemate traverse, was accomplished, as shown on Archives Plan 36-27 (1819). By 1823, on the evidence of Plan 36-32, a second traverse had been removed, possibly in connection with storage of quartermaster and ordnance supplies after 1821. The casemate modifications in the headquarters period may also have included the addition of shutters over the embrasures, on the basis of the present visual evidence of small slits on each side of each embrasure and an item in an 1815 bill for "52 Hooks to Ambrasures"; no evidence of such shutters can be found, however, in any of the available plans or in the 1823 inventory.

75

The flooring or gun platform of the casemates was 4" x 12" wood planking, 24 feet long, laid over 1" x 6" beams 18 feet

long. Below this were radially-laid logs, two levels separated by stone fill, over the stone sub-foundation. The flooring had a slight downward slope towards the wall, desirable both for absorbing some of the recoil and for ease in moving the gun back into battery. Extending 18 feet inward from the fort wall, the wooden gun platform was bounded by a 6-foot wide flagstone walk which circled the parade ground, widening to 12 feet in front of the officers' quarters.⁷⁶ Along the outside edge of this walk, directly opposite the casemate traverses 12 feet away, were 13 cylindrical brick columns about 25 feet apart supporting the casemate roof; two half-columns, in addition, were built against the magazine walls beside the passageway entrances. These columns, about 2' 6" in diameter, were capped with brownstone blocks 2' 9" square by 6½" thick and set on circular brownstone bases 2' 8" in diameter (two halves set together) by 7 inches thick; their overall height was 8' 8". Running from capstone to capstone were 24-foot beams (1' x 1' 6") which supported the lower end of the casemate roof. Although there is evidence that Colonel Williams originally intended to use slate for fire protection, the roof consisted of wooden shingles laid on 4" x 12" rafters 23 feet long, the upper ends resting on the irregularly sloped rubble at the top of the fort walls, just behind the coping stones. The upper ridge was covered with sheet lead, and a rain gutter projected from the lower edge of the roof.⁷⁷

Each casemate was armed with two 32-pound battering cannon, cast iron with a 6-inch bore, mounted on wooden carriages, a total of 28 guns. For a time during the war the fort's ordnance also included 4 iron 18-pound field pieces, probably placed on wooden platforms on the counterguard; early in 1815 they were removed and placed on the bridge leading to the Battery. When Castle Clinton became Third Military District headquarters, the armament had been reduced to 24 cannon and 4 spare carriages, probably a result of the proposed conversion of two casemates into quarters. By 1821, when it was transferred to the Quartermaster Department, the fort contained 20 mounted cannon and 13 unassembled field pieces, most of the latter having been moved there from the Battery and nearby points. A year later, all guns had been moved to Fort Diamond,⁷⁸ a new defense point in the Narrows.

Few details are known about the gun carriages. They were constructed, principally of hickory and white oak with basswood scantling, at the West Battery Arsenal near the Custom House. Most casemate carriages of this period consisted of two parts, a top-carriage which supported the gun and a chassis along which it moved on wheels to and from firing position. A wooden tongue ran from the chassis into an aperture under the throat of the embrasure where it was secured by an iron pintle; at Castle Clinton this tongue-hole was just above floor level, about 1 foot

square, extending 4 feet into the wall to a brick backwall, the pintle running up through the embrasure sill. The chassis was traversed around the pintle by a rear wheel running on a circular iron rail ($5\frac{1}{2}$ " wide by $\frac{1}{2}$ " thick at Castle Clinton) set in the floor.⁷⁹ Further research on gun carriages of this period will undoubtedly reveal more construction details.

Parade, cisterns, and hot-shot furnace:

The parade in the center of the fort, enclosed by the flagstone walk, was probably graveled, on the basis of coloration and representation of texture on several Archives Plans. A flagstaff stood in the rear of the parade, directly opposite the sallyport entrance about 35 feet in from the opposite fort wall, or 10 feet from the edge of the flagstone walk; this was in existence in 1814, and probably before, and is shown on Archives Plans as late as 1819. The staff, about 32 feet high, was composed of two tapering and overlapping sections, the lower one about 21 feet long and the upper one about 12 feet long, and possibly a cross-mast.⁸⁰

Also located there were two circular cisterns of unknown depth and capacity, one on each side of the parade. Although they are shown on two McComb Plans and three Archives Plans of the fort, many differences in detail make the exact dimensions impossible to ascertain. The cisterns are in approximately the same position on all plans, about 9 feet inside the parade from the edge of the

flagstone walk and almost directly opposite the second casemate traverse from the magazine. On McComb's two plans they are 8 feet in diameter, the same as the inner diameter given on Archives Plan 36-11; the outer diameter on this plan is 10 feet, indicating a 2-foot thick lining. Archives Plans 36-31 and 36-32 show the cisterns covered, with a diameter of 12 to 14 feet. They were apparently lined with stone and cement to make them water-tight reservoirs. According to Plan 36-31 and other evidence, the cisterns (at least after early 1814) were covered by wooden platforms on which were mounted two pumps about 5 feet in height with long curved handles. Fresh water, supplied by the Manhattan Water Company, was piped to the fort in wooden pipes laid along the causeway from the Battery.⁸¹

In the center of the parade, equidistant from the cisterns and about 30 feet from the edge of the flagstone walk in front of the quarters, was the hot-shot furnace. Although a furnace had been planned for the fort from the beginning, shot for practice firing during the early years of the war was apparently heated at a "traveling forge" obtained from the arsenal; it was not until April, 1814, that the ordnance returns listed a shot furnace for the West Battery. It was, moreover, in that month that considerable brick and masonry work was performed "to render the West Battery Shot Furnace fit for use"; from the work accomplished, this was construction rather than repair. The Archives

Plans, especially Plan 36-31, indicate that it measured about 6 by 8 feet, with the broadest side, which contained the only opening, facing the sallyport; although the height cannot be determined from available evidence, it was apparently a relatively low structure set in an oval-shaped depression. It had a ridged roof, the ridge line running towards the sallyport, and a chimney centered above the furnace opening. Considerable study of other shot furnaces of the period will have to be made before other details and measurements can be known.

82

Summary:

As emphasized in the preceding construction history, Castle Clinton of 1821 differed in many respects from the West Battery of 1811, most of the modifications coming after the war's end early in 1815. It was during this period from 1815 to 1821 that fenders were added to the counterguard, the bridge was rebuilt, and the outbuildings probably constructed. Moreover, the sallyport passageway was changed by the addition of steps and flagging, the piazza built in front of the officers' quarters, the fireplaces modified and additional chimneys erected (brick extensions probably being added to the old chimneys at the same time), and two traverses as well as some of the guns removed from the casemates. Most of these modifications, it is apparent, reflected Castle Clinton's changed status from a defensive fortification to a military headquarters.

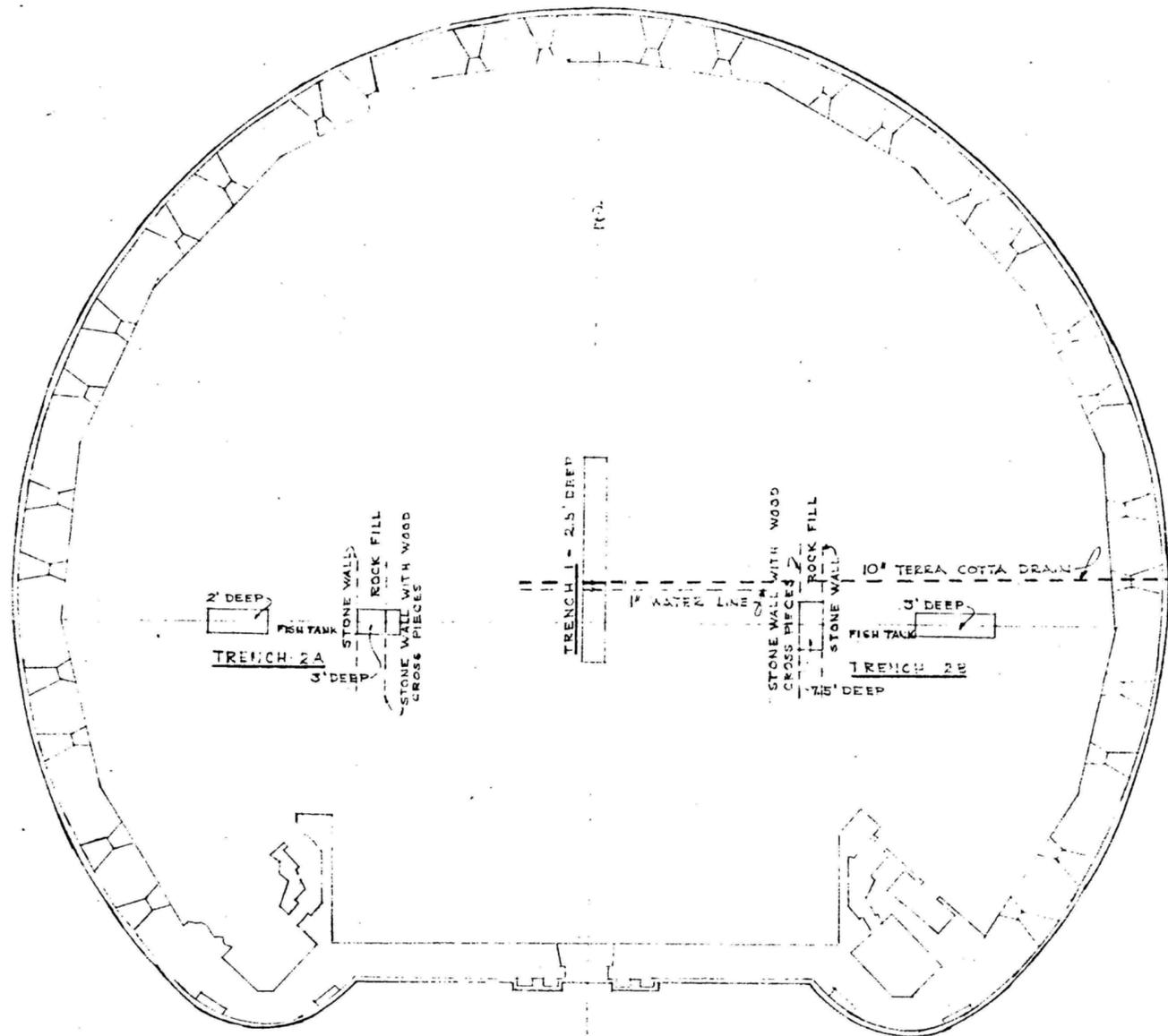
Nevertheless, the fort remained essentially unchanged, for these were not major architectural modifications. Furthermore, few structural changes resulted from the 1821 conversion of the fort into a quartermaster depot. The structure depicted on the final Plan of 1823 (36-32) was in all significant respects the same as the battery which had aided in the defense of New York during the War of 1812. That plan, therefore, has been adopted, with a few minor corrections and notations, as the Castle Clinton Historical Base Map for the 1811-1821 period.

Recommendations for Restoration

It is recommended that Castle Clinton be restored as far as possible to its appearance at the close of the War of 1812, with such additional features of a military nature added later as will be of material assistance in telling the story of the fort. Such features should, for instance, include the portico placed in front of the officers' quarters just after the end of the war. This portico would, with the roof over the casemates, complete a convenient covered circuit of the fort's interior, and it is authentic for the period if not for the actual duration of hostilities.

All 28 guns originally placed in the fort (presumably replicas will have to be used) should be mounted in battery, and the modified casemate partitions and casemate roof should be reconstructed. The hotshot furnace in the middle of the parade ground, apparently built toward the end of the war, should also

12. "Archeological Research, Castle Clinton National Monument."
1955. Drawing No. NM/CAS 3000, National Park Service,
revised and annotated by Paul J. F. Schumacher, Archeologist.



CASTLE CLINTON

PLAN
SCALE 1" = 20'



ORIENTATION

REVIEWED

OPERATIONS
REGION

WASHINGTON

INTERP.
REGION

WASHINGTON

COOP. ACTV.
REGION

WASHINGTON

DES. & CONST.
STERN

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OTHER

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SHEET 1 OF 1

DRAWING NO.
NM/CAS

3000-

DATE 30 JUNE 55

ON MICROFILM

SCALE: 1" = 20'

RECOMMENDED	<i>Paul J. Schumacher</i>	DATE 6-17-55
APPROVED		

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE DESIGN & CONSTRUCTION DIVISION PREPARED BY FIELD OFFICE OFFICE
ARCHEOLOGICAL RESEARCH TITLE OF DRAWING BATTERY PARK-NEW YORK CITY LOCATION WITHIN AREA CASTLE CLINTON NATIONAL MONUMENT NAME OF AREA

be reconstructed. There seems no compelling need to reconstruct the two cisterns on the parade ground. These structures were not of distinctively military character and would add little to interpretation.

The officers' quarters, the two buildings that stood on either side of the entrance to the fort, should be reconstructed with some modification. Modification seems imperative in order to facilitate circulation. These two small buildings will be used for visitor contact purposes and must also house the greater part of any created exhibits. Stairways and partitions, which originally divided both buildings in the middle, should be eliminated in order to add exhibit and visitor circulation space. If there is not the freest possible flow of visitors through these buildings they are likely to become badly crowded at times.

No interpretive or utilitarian use is seen for the low, dark garrets in both sets of officers' quarters. The use of the cellars for exhibit purposes seems a highly dubious objective. The problem of control of visitor traffic up and down narrow stairs would alone make exhibits in either garrets or cellars something of a problem. There is relatively little information at hand on the use of the cellars during the war -- they seem to have housed prisoners at times, and at times to have served as kitchens -- and their furnishing as exhibits in place would have to be highly

conjectural. It would be greatly preferable to have the garrets closed off entirely and the cellars devoted to storage, work-room, or other utilitarian purposes, with outside access only.

The reconstructed set of officers' quarters at the right of the gateway should serve as the contact station and house exhibits on the military phase of Castle Clinton. The reconstructed building at the left of the gateway should house exhibits on later phases of Castle Clinton's history. The circulation of visitors between these points would naturally be in the form of a self-guided tour following the circuit of the guns in battery.

One of the magazines should be restored as an exhibit in place. The other should be restored for the use of the staff as needed, including toilet facilities. Flatwork exhibits illustrating the artillery uniforms and drill of the period of 1812 should be installed in some of the casemates. The hotshot furnace in the center of the parade ground would be an isolated exhibit, but would probably attract considerable attention and should be an effective interpretive unit.

For orientation purposes the military phase exhibits should include a scale model of Castle Clinton (West Battery) during the War of 1812, showing its physical relation to the Battery. A further orientation exhibit in the form of a trailside case on the counterguard in rear of the fort is recommended. This

should assist the visitor, either before or after seeing the interior of the fort, in visualizing the original terrain and the relationship of Castle Clinton to other defenses of New York in 1812.

A considerable amount of research will be necessary in connection with the preparation of all the exhibits. Much material is on hand for all periods of the Monument's history. For the most part, except for the construction history of the fort, it has not been followed up to the point of definitive research.

NOTES

1. Rogers W. Young, Site of the Dutch Fort Amsterdam, New York City (National Park Service Sites Survey Report), June 14, 1940, 9-17 (Hereafter cited as Young).
2. I. N. Phelps Stokes, Iconography of Manhattan Island, 1498-1909 (New York, 1928), IV, 287-289 (hereafter cited as Stokes).
3. Young, 18-19.
4. Stokes, IV, 348-364.
5. Young, 20-21; Stokes, IV, 929.
6. Christopher Ward, The War of the Revolution (New York, 1952), I, 210; see also Stokes, V, 993-994, 1007, 1010-1012.
7. Young, 22; Stokes, V, 1174.
8. Young, 22-24; Stokes, V, 1203, 1219-1220, 1252-1253, 1263-1264, 1267, 1297.
9. *Ibid*, V, 1305-1307, 1314-1315, 1318. Apparently, no works were constructed on the Battery at this time.
10. *Ibid*, V, 1351-1358, 1424, 1427. See also Report of the Secretary of War, February 18, 1806, in American State Papers, Military Affairs, I, 192-193.
11. Stokes, V, 1440-1442, 1444-1446, 1452-1456. See also the changed views of the President as reflected in his annual messages to Congress, in Paul L. Ford, ed., Writings of Thomas Jefferson, VIII, 331, 391-392, 490.
12. American State Papers, Military Affairs, I, 193-194; Stokes, V, 1429, 1450; Jonathan Williams to his Wife, February 17, 1807 (Jonathan Williams Letters, Franklin Collection, Yale University); Henry Dearborn to Jefferson, July 17, 1807 (Jefferson Papers, Library of Congress).
13. Report, dated July 21, 1807, enclosed in letter, Jonathan Williams to Secretary of War, June 7, 1810 (Secretary of War, Letters Received, War Records Branch, National Archives). Unless otherwise indicated, all military correspondence hereafter cited is in the War Records Branch, National Archives.

14. Stokes, V, 1452-1453, 1463-1467, 1470-1471, 1474, 1483, 1488; see also Conveyances Recorded in the Office of the Register of the County of New York, Liber 79, p. 79, Hall of Records, New York City. The exact date on which construction was begun cannot be determined, but it was between May 13 and October 9; see Stokes, V, 1491, 1496.
15. New York Evening Post, November 26, 1811. The exact date of its completion cannot be found, but it was reported "completed to the Cisterns and furnace" on November 1, and a report dated December 10 described it as complete "with 28 heavy guns mounted, with two magazines, and barracks for officers." See Williams to Secretary of War, November 10, 1811, with letter attached from George Bomford to Williams dated November 1 (Engineer Correspondence, Bulky Package File 58510-279); American State Papers, Military Affairs, I, 307.
16. New York Columbian, June 3, 1812; Adjutant General to Joseph Bloomfield, May 26, 1812 (Adjutant General's Office, Letters Sent); New York Commercial Advertiser, June 20, 1812. Earlier, after New York citizens had complained of the unguarded state of the new fort, a subaltern guard was stationed there for a time; see letter from "C" in New York Columbian, February 13, 1812; Thomas R. Gold to Secretary of War, April 1, 1812 (Secretary of War, Register of Letters Received); Henry Burbeck to Stoddard, April 2, 18, and 23, 1812 (I. N. P. Stokes, Military Notes, Museum of the City of New York, cited hereafter as Military Notes).
17. General Order, June 27, 1812 (Orderly Book No. 52, Third Military District, AGO, Post-Revolutionary War Papers); New York Columbian, July 14-17, 1812; Diary of Aeneas Mackay, August 14, 1812 (New York Historical Society); New York Commercial Advertiser, August 18, 1812.
18. John Armstrong to Secretary of War, September 16, 1812 (Secretary of War, Letters Received); Armstrong to Albert Gallatin, October 4 and November 16, 1812 (Gallatin Papers, New York Historical Society); Secretary of War William Eustis to Armstrong, November 20, 1812 (Adjutant General's Office, Miscellaneous War of 1812 Records, #7517).
19. New York Commercial Advertiser, January 19, March 26, May 26, 1813; Minutes of the Common Council of the City of New York, VII, 368-370 (February 8, 1813), hereafter cited as Minutes; Stokes, V, 1562, 1564.
20. R. S. Guernsey, New York City and Vicinity During the War of 1812-15 (New York, 1889-95), II, 133, 140-141, cited hereafter as Guernsey; Stokes, V, 1571-1575; New York Columbian, July 11-12,

August 12-13, October 27, 1814; Minutes, VIII, 6-11 (July 14, 1814), 46-48 (August 29, 1814). See also Tompkins to Jacob Brown, August 13, 1814, Tompkins to Morgan Lewis, August 27, 1814, Tompkins to Nicholas Fish, August 29, 1814, in Public Papers of Daniel D. Tompkins, III, 497-498, 509-511, 513-514; Joseph G. Swift to Secretary of War, November 14, 1814 (Engineer Correspondence, Bulky Package File 58510-214).

21. New York Evening Post, November 28, 1814, February 13, 1815.

22. Secretary of State James Monroe received a confidential letter, dated June 2, 1814, from William Dawson of New York, who had just returned from Bermuda where he learned that the British Admiral Cochrane's plans included an attack on New York by way of Long Island Sound (see Monroe Papers, New York Public Library, cited in Stokes, V, 1571). This is the only evidence discovered thus far which sheds light on the British intentions regarding New York.

23. General Order, August 3, 1812 (Orderly Books, Third Military District, AGO, Post-Revolutionary War Papers); Armstrong to James Madison, August 3, 1812 (Madison Papers, Library of Congress). For criticisms of Bloomfield, see John Montgomery to Albert Gallatin, June 21, July 1 and 3, 1812, John Jacob Astor to Gallatin, June 27, 1812 (Gallatin Papers, New York Historical Society); New York Evening Post, July 22, 1812.

24. New York Columbian, January 11, 1813; General Orders of February 8, March 19, October 25, 1813, June 14, 1814 (Orderly Books, Third Military District, AGO, Post-Revolutionary War Papers). See also James Monroe to Tompkins, October 14, 1814, and General Order of October 23, 1814, in Public Papers of Daniel D. Tompkins, I, 699-700.

25. American State Papers, Military Affairs, I, 425.

26. Guernsey, I, 69, states that the fort, later known as Castle Clinton, "was the headquarters of the military commanders of this district from the time of its completion as a fort," a statement which has been copied by other writers. This assertion has been effectively disproved, and the actual location of military headquarters established, by the research of National Park Service Historian Frank Barnes; see, for a summary of his findings, his Monthly Narrative Report for November, 1950, dated December 4, 1950.

27. Stokes, V, 1581-1583; New York Evening Post, May 25, 1815.

28. General Order, May 30, 1815 (Orderly Books, Third Military District, AGO, Post-Revolutionary War Papers); Stokes, V, 1579-1581. Macomb, in a letter to Secretary of War Dallas dated May 31, 1815 (Secretary of War, Letters Received), wrote: "In consequence of the Commanding officers House being sold by the United States to the Corporation of this City great difficulty has arisen in finding suitable Quarters for the commanding General. I therefore have concluded to make the West Battery a Work adjoining the city my New Quarters. . . ."

29. New York Evening Post, March 14, 1815; Minutes, VIII, 170-171 (March 20, 1815).

30. New York Evening Post, October 4, 1817; Scott to Mayor of New York, October 6, 1817 (Minutes, IX, 259); Scott to Mayor, October 8, 1817 (Adjutant General's Office, Correspondence); New York Columbian, October 9, 1817; Chief Clerk George Graham to Scott, October 11 and 24, 1817 (War Office Military Book 9); Scott to Secretary of War, October 25, 1817 (Secretary of War, Register of Letters Received).

31. Minutes, XI, 168 (May 29, 1820), 352-353 (October 16, 1820), 420 (December 18, 1820), 503 (February 19, 1821), 521-524 (February 26, 1821), 543 (March 19, 1821). See also Secretary of War John Calhoun to President Monroe, July 14, 1820 (Calhoun Papers, Library of Congress); Calhoun to Samuel Tooker, August 7, 1820 (War Office Military Book II); New York Gazette & General Advertiser, February 9, 10, March 6, 1821.

32. Order, February 20, 1821, and Assistant Adjutant General, Eastern Department, to Major N. A. Burron, Quartermaster General Department, July 21, 1821 (Letters Sent, Eastern Department, AGO, Post-Revolutionary War Papers); Scott to Adjutant General, November 9, 1821 (Adjutant General's Office, Correspondence); Special Order 69, November 10, 1821 (Orderly Book, Eastern Department, AGO, Post-Revolutionary War Papers).

33. George Bender to Truman Crass, November 30, December 31, 1821 (Castle Clinton folder, Quartermaster Records); Stokes, V, 1622.

34. Stephen Allen to C. C. Cambreleng, January 30, 1823 (Allen Papers, New York Historical Society); Adjutant General to Scott, February 5, 18, 1823 (Adjutant General's Office, Letters Sent); Totten to Scott, February 12, 1823, Scott to Adjutant General, February 12, 1823 (Adjutant General's Office, Register of Letters Received); Bender to Quartermaster General, April 19, 1823 (Castle Clinton folder, Quartermaster Records); New York Evening Post, June 23, 1823.

35. This section is largely based upon National Park Service Historian Frank Barnes' report, "Castle Clinton; 1812," Castle Clinton National Monument, September 20, 1951. Subsequent research has discovered little data on the construction history of the fort that was not included in Mr. Barnes' excellent research study.
36. Stokes, V, 1496, 1849; Edward S. Wilde, "John McComb, Jr., Architect," American Architect, Vol. 94 (1908), pp. 49-63; Dictionary of American Biography (New York, 1943), XI, 599. McComb's "Account Book for Work Done at the Lower Battery" (hereafter cited as McComb's Account Book) and the plans (150, 151, 152, 153) are at the New York Historical Society.
37. Williams to Secretary of War, December 3, 1808 (Engineer Correspondence, Bulky Package File 58510-188), and September 13, 1809 (Secretary of War, Letters Received); Capt. Whiley to Henry Burbeck, May 14, 1810 (Military Notes); Williams to Secretary of War, May 14, 1810, and March 31, 1811, enclosing letter from Bomford dated March 29 (Secretary of War, Letters Received).
38. Williams to Secretary of War, June 7, 27, 1810; Burbeck to Secretary of War, June 24, October 31, 1810; Williams to Secretary of War, April 22, 1811 (Secretary of War, Letters Received).
39. Minutes, VIII, 215 (May 22, 1815).
40. The best written description of the fort is contained in R. E. DeRussy, "A description and General Report of the Fortifications in the Harbor of New York from 1815 to 1820," November 5, 1820 (Corps of Engineers, Reports Received, 1812-23). See also National Archives Plans 36-27 (1819), 36-30 (1820), 36-31 (ca. 1817), and 36-32 (1823).
41. Minutes, IV, 545 (August 24, 1807); Williams to Tompkins, December --, 1807, January 19, 1810 (Public Papers of Daniel D. Tompkins, II, 29-30, 250-252); Report of Secretary of War, December 21, 1809 (American State Papers, Military Affairs, I, 245).
42. Williams to Secretary of War, August 28, 1807 (Engineer Correspondence, Bulky Package File 58510-119).
43. Williams to Secretary of War, February 1, 1810 (Secretary of War, Letters Received); Secretary of War to Williams, February 5, 1810 (War Office Military Book 4); War Department to George Bomford, March 26, 1811 (Engineer Correspondence, Bulky Package File 58510-267).

See also Williams to Secretary of War, December 29, 1810, in pamphlet, Letter from the Secretary of War to the Committee Appointed on That Part of the Message of the President . . . Relating to Land Forces and Fortifications Transmitting an Estimate of Monies Required on Account of Fortifications for the Year 1811 (Washington, 1810), in New York Public Library.

44. Williams to Secretary of War, June 7, 1810 (Secretary of War, Letters Received); Samuel L. Mitchell to Ambrose Spencer, October 9, 1808, quoted in Stokes, V, 1496; Whiley to Burbeck, May 14, 1810 (Military Notes). Plan 36-14 is probably the one forwarded to the Secretary of War by Williams on June 9, 1810 (Secretary of War, Letters Received), shortly before the foundation was completed.

45. Williams to Secretary of War, March 31, 1811, enclosing letter from Bonford dated March 29 (Secretary of War, Letters Received). For the settlement and repairs, see Lieutenants George Trescot and I. L. Smith to Chief of Engineers, September 12, 1815, and Capt. R. E. DeRussy to Chief of Engineers, October—, 1817 (Corps of Engineers, Reports Received, 1812-23).

46. Itemized bill from Birdsall & Heafield in Settlement 656, Account of C. Vandevanter, Agent for Fortifications (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives).

47. Capt. R. E. DeRussy to Chief of Engineers, October —, 1817; and DeRussy's "A descriptive and General Report of the Fortifications in the Harbor of New York from 1815 to 1820," November 5, 1820 (Corps of Engineers, Reports Received, 1812-23). See also Settlements 1757 and 2320, Ab. A, Account of Robert E. DeRussy (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives). Plan 36-31, prepared by DeRussy, contains a fairly detailed drawing of the bridge, both in plan and elevation.

48. Major Joseph G. Totten to General Macomb, November 2, 1823, with attached "Estimate of the value of the materials in Castle Clinton" (Office of Chief of Engineers, Letters Received), hereafter cited as 1823 Estimate.

49. McComb's Account Book; this may have referred to the officers' quarters in the fort and/or the outbuildings at the Battery end of the causeway.

50. This painting is in the Stokes Collection, New York Public Library, and has been reproduced in Stokes, VI, Plate 93-b.

51. Bills of Birdsall & Heafield, Daniel Nolton, and Caleb Crane, Settlement 656, Account of C. Vandeventer (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives); the bills included 13 loads of sand and about 5,500 bricks. The buildings were described as wooden in Winfield Scott to Colonel Gadsden, Adjutant General, November 9, 1821 (Adjutant General's Office, Correspondence). See below for a discussion of the 1815 repairs to the officers' quarters.
52. See especially Archives Plan 36-32 (original in the Archives is colored to indicate different types of stone and masonry); the 1823 Estimate and present visual evidence confirm this. For the source of the brownstone, see Guernsey, I, 74; and Barnes, "Castle Clinton: 1812," p. 4, note 9.
53. Compare Archives Plan 36-32 and present visual evidence; see also 1823 Estimate.
54. See McComb Plan 153, elevation of gateway in Archives Plan 36-32, and present visual evidence. For the source of the brownstone, see note 52 above; notations, evidently in McComb's handwriting, on the back page of a printed pamphlet entitled List of the Different Kinds of Masons' Bricklayers' and Plasterers' Work (McComb Papers, New York Historical Society) include the following: "Stone delivered at Lower Battery from Chatham Quarry by Shaler and Hall . . . Other large Stone for Gate"
55. McComb Plan 153 and 1823 Estimate; Archives Plan 36-32 indicates a door height of 11' 3" and a total width of 8' 3". See also what purports to be an accurate description and photograph of the original doors as they were in 1920 in Bulletin of the New York Zoological Society, March, 1920; some of the measurements quoted there do not coincide with the measurements in the McComb Plan or the Archives Plan, so the 1920 doors may not have been the originals. For a reference to the "wicker gate" during the War of 1812, see Guernsey, II, 344.
56. McComb's Account Book, especially bills of September 30 and October 28, 1811. The width of the rubble fill is based on a New York Aquarium Plan of May 1, 1920; Archives Plan 36-32 (Section c-d) and the 1823 Estimate give no evidence of a connection between the two cellars, indicating solid walls separated probably by a fill of this kind.
57. DeRussy to Chief of Engineers, October --, 1817 (Corps of Engineers, Reports Received, 1812-23); bills of Moriss & Woodruff and John Latoure, dated January and February, 1818, Settlement 4492,

Account of R. E. DeRussy (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives). See also Archives Plans 36-31 (ca. 1817), prepared by DeRussy, and 36-32 (1823). Although no written evidence of an earthen ramp has been found, it appears on McComb Plan 150 and is suggested on Archives Plan 36-11 (ca. 1811).

58. The dimensions are given in Archives Plan 36-32, and scale approximately the same in the other pertinent plans. For the continuous use of these rooms as officers' quarters, see Report of Secretary of War, December 10, 1811, in American State Papers, Military Affairs, I, 307; Guernsey, II, 344; Alexander Macomb to Secretary of War, June 24, 1815 (Secretary of War, Letters Received); Winfield Scott to Adjutant General, November 9, 1821 (Adjutant General's Office, Correspondence). Regarding the sally-port entrance, see sketch attached to letter, Macomb to Secretary of War, June 24, 1815 (cited above), hereafter cited as Macomb profile.

59. See Archives Plan 36-32, 1823 Estimate, and McComb's Account Book; for the Venetian blinds, see 1815 bills of Abraham Leggett and Birdsall & Heafield, Settlement 1830, Vou. 50, Ab. A, and Settlement 656, Account of C. Vandeventer (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives). The width of the doors, as given in the 1823 Estimate, may be in error, since Plan 36-32 shows the parade doorway as 3' 8" and the passage-way doorway as 3' 9"; moreover, the 1823 Estimate lists four door lintels measuring 3' 7½" wide by 10½" thick, an obvious architectural impossibility if the doors were 3' 9" wide.

60. McComb's Account Book; Joseph Totten, "estimate of costs of Lower Battery," April 19, 1810, enclosed with letter, Williams to Secretary of War, May 14, 1810 (Secretary of War, Letters Received). For the flooring and garret, see 1823 Estimate and Archives Plan 36-32 (Profile c-d).

61. These conclusions are based on McComb Plan 151 and Archives Plans 36-11 and 36-32, although only one stairway is actually shown on these plans. The 1823 Estimate lists "2 staircases leading to the Kitchen" and "2 staircases leading up to the garrets"; these may have been added during the 1815 renovation of the quarters to provide easier access to the kitchens of a headquarters fort, especially if, as seems likely, the cellars had formerly been used as prisons. The 1823 Estimate also lists 6 interior doors, the location of which is indicated on the plans cited above. One discrepancy is noted, however, in Profile c-d, Plan 36-32; although

this profile is taken through the larger of the eastern set of rooms, it includes the cellar stairway door which according to the plan was separated from that room by a partition and hence was not visible.

62. Archives Plan 36-27 (1819) has an indication of what may be fireplaces on the rear wall of these rooms, but they are considerably smaller and in a slightly different location.

63. In addition to the plans cited, McComb's Account Book includes the statement, "Cutting 96' 3" of Hearth Stone," but no further mention of fireplaces.

64. For the chimneys, see Archives Plans 36-31 and 36-32 (especially Profile c-d), and the Macomb profile. There is no definite evidence on the brick extensions; McComb's Account Book includes an item for "326 Feet of Chimney Tops & Setting," with no mention of brickwork (usually listed separately and by location in this source). The fort elevation in Archives Plan 36-31 (ca. 1817) shows a chimney on the Gorge wall, scaling about 5' in height and with no brickwork visible.

65. Archives Plan 36-32 is the only one showing the roof in profile, although its dimensions and conformation are suggested in Plans 36-11 and 36-31. For the rafters and shingles, see 1823 Estimate.

66. For the 1815 renovation of the quarters, see Macomb to Secretary of War, May 31 and June 24, 1815 (Secretary of War, Letters Received); George Graham, Chief Clerk War Office, to Macomb, July 19, 1815 (War Office Military Book 8); and C. VanDeVenter to Col. Tobias Lear, October 19, 1815 (Accountant of the War Department, Letters Received, Fiscal Section, National Archives). For the details of the piazza and roof addition, see Macomb profile, Archives Plans 36-31 and 36-32, and 1823 Estimate. The latter source gives 8 feet as the height of the columns, while Plan 36-32 gives 8' 3" (probably including the thickness of the roof).

67. McComb's Account Book, bill rendered November 23, 1810; Dearborn's order was attached to the bill of Blackwell & McFarland, Settlement 1830, Vou. 60, Ab. A, Account of C. VanDeVenter (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives). As evidence that the cellars were non-connecting, see note 56 above.

68. For prisoners at West Battery, see General Orders of April 20 and June 4, 1813 (Orderly Book No. 52, Third Military District, Adjutant General's Office, Post-Revolutionary Papers); Adjutant General's Order, June 1, 1813 (Adjutant General's Office, Miscellaneous Manuscript Orders, 1813-15); Guernsey, I, 340-341. For the "Black hole," see bill of Samuel Cheesman, Settlement 1830, Vou. 10, Ab. C, Account of C. Vandeventer (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives).

69. Winfield Scott to Adjutant General, November 9, 1821 (Adjutant General's Office; Correspondence); 1823 Estimate.

70. Profile c-d, Archives Plan 36-32, gives the height and depth of the cellar rooms; the width is assumed to have been the same as the over-all width of the upstairs quarters rooms. For the wooden callar stairs, see note 61 above. For the cellarways, see Archives Plans 36-27, 36-31, and 36-32; they do not appear on McComb Plan 151 or Archives Plan 36-11, but might be deemed suggested in the latter. See 1823 Estimate for the window and door measurements; McComb's Account Book (1810) refers to "Cutting 13' 5" of Cellar Window Sill."

71. McComb Plans 151 and 152; Secretary of War to Williams, June 9, 1810 (War Office Military Book 4); Williams to Secretary of War, April 22, 1811 (Secretary of War, Letters Received). McComb Plan 151 shows both the center magazine and the two wall chambers, one of which is labeled "Powder Maga."; it is almost certain that both these chambers were used as magazines. The design of these chambers as shown in Archives Plan 36-32 is confirmed by Plans 36-11 and 36-27, although Plan 36-31 shows a considerably different layout. See also report of Secretary of War, December 10, 1811 (American State Papers, Military Affairs, I, 309), which lists the West Battery completed with two magazines.

72. Izard's order of May 31, 1813, bill of John B. Dash & Son, of June 28, 1813, and bill of Samuel Cheesman, Master Carpenter, of July, 1813, are all in Settlement 1830, Vou. 35, Ab. A, Account of C. VanDeVenter (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives).

73. For the dimensions, see Archives Plan 36-32, including Section i-k; recent visual evidence is the basis for the conclusions on the privy arches and the outside cover, but see also Archives Plan 36-31 and the Macomb profile. For the passageways and doors, see Plan 36-32, the 1823 Estimate, and McComb's Account Book.

74. Archives Plan 36-32 and visual evidence, as well as measurements by Historian Barnes in 1951; see his "Castle Clinton: 1812," pp. 12-13. See Archives Plan 36-31 on the wood flooring, and McComb's Account Book for the whitewashing.

75. Archives Plans 36-32 (especially Sections a-b and e-f) and 36-11. For the 1815 modification, see Macomb to Secretary of War, June 24, 1815, with attached Macomb profile (Secretary of War, Letters Received); Graham to Macomb, July 19, 1815 (War Office Military Book 8). On the shutters, see Settlement 656, Account of G. Vandevanter (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives); memorandum of April 10, 1951, from Historian Frank Barnes to Regional Director, Region One.

76. 1823 Estimate; Archives Plans 36-11, 36-31, and 36-32 (Sections a-b and e-f). For the log foundation, see Archives Plan 36-14 and McComb Plan 152; see also discussion in Barnes, "Castle Clinton: 1812," pp. 6-7, note 16. Archives Plan 36-27 (Profile AB), dated 1819, is the only evidence for the slope of the flooring; for descriptions of seacoast gun carriages and casemates of the period, see William E. Birkhimer, Historical Sketch of the Organization, Administration, Materiel and Tactics of the Artillery, United States Army (Washington, 1884), 254; and Edward S. Farrow, Farrow's Military Encyclopaedia (New York, 1895), I, 343, III, 36-37. For the flagstone walk, see McComb's Account Book (this contains only quantities with no reference to location of flagging), and Archives Plans 36-11 and 36-32; on Plan 36-11 the walk in front of the quarters is only 8 feet wide, so it was probably widened to 12 feet in 1815 in connection with the piazza construction.

77. Archives Plan 36-32 and 1823 Estimate. For the proposed slate roof, see Williams to Secretary of War, December 29, 1810, in Letter from the Secretary of War, pamphlet cited above; further evidence that slate was considered is the item "218 35/100 squares of slating" in Totten, "estimate of costs of Lower Battery," April 19, 1810, with Williams to Secretary of War, May 14, 1810 (Secretary of War, Letters Received). There is no evidence that slate was actually used, and the roof was definitely shingled in 1823, according to the 1823 Estimate.

78. Ordnance Returns, West Battery, January 1, 1814 - June 30, 1815 (Office of Chief of Ordnance, Statements of Ordnance and Ordnance Stores, 1813-21); Guernsey, I, 75. No earlier returns could be found, and later returns were consolidated for all New York harbor forts; no Columbiads, which were generally 50-pounders,

were used at Castle Clinton. For the field pieces, see General Order of March 1, 1815 (Orderly Book, Third Military District, AGO, Post-Revolutionary War Papers); bill for cartage of two 32-lb. cannon from Custom House yard to West Battery, May, 1815, in Settlement 1830, Vou. 93, Ab. A, Account of Christopher Vandeventer (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives). For the 1821 inventory and the 1822 transfer of ordnance, see Bender to Crass, November 12, 1821 (Castle Clinton Folder, Quartermaster Records); Special Order 62, August 16, 1822 (Orderly Book, Eastern Department, AGO, Post-Revolutionary War Papers); Captain Churchill, Fort Diamond, to Colonel Bomford, Ordnance Department, October 1, 1822 (Office of Chief of Ordnance, Document File, Box 15).

79. For construction of the carriages, see Settlement 1830, Vou. 7, Ab. A, Vou. 65, Ab. A, Vou. 66, Ab. A, Account of C. VanDeVenter (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives). For general descriptions of carriages of the period, see Birkhimer, *op. cit.*, 254, and Farrow, *op. cit.*, I, 343, 799, II, 528, III, 36-37. For the Castle Clinton tongue-hole, pintle, and traverse rails, see Archives Plan 36-32 and 1823 Estimate ("122 running feet of iron bar"); McComb's Account Book has an item, "Cutting 28 Pintle Holes."

80. Archives Plans 36-11, 36-14, and 36-31. The location of the flagstaff is indicated only on Plans 36-27 (1819) and 36-31 (ca. 1817), its representation by shadowing on the latter plan being the basis for the dimensions given; it is also shown (although much out of scale and from a distance) in the watercolor painting, "View of the Battery looking North from the Churn" (ca. 1817), reproduced in Stokes, VI, Plate 93-b. The earliest reference to the flagstaff is in the bill of Samuel Cheesman ("procuring rope . . . to the Flag Staff W Battery"), June 21, 1814, in Settlement 1830, Vou. 10, Ab. G, Account of C. Vandeventer (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives).

81. McComb Plans 151 and 152; Archives Plans 36-11, 36-31, 36-32. See also bill of Samuel Cheesman, June 6, 1814, for "laying platform for 2 pumps W Battery," in Settlement 1830, Vou. 10, Ab. G. Account of C. Vandeventer (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives). McComb's Account Book for October, 1811, has the following two items: "30 blocks in cistern" and "173' cement on cistern." For the water pipes, see Minutes, VI, 96 (March 5, 1810), and McComb Plan 152; this plan, which apparently was preliminary in nature, shows the pipes running from the bridge to a "Well" in front of the officers' quarters to the right of the sallyport. Although

this appears on no other plan, Williams to Secretary of War, May 14, 1810 (Secretary of War, Letters Received), notes "3 stone cisterns" among work yet to be accomplished, indicating that it may have been part of the original plans.

82. Archives Plans 36-27, 36-31, 36-32; the furnace on Plan 36-32 appears to be almost square, but this is contradicted by the other plans. McComb Plan 152 shows a furnace 8' x 14' in the rear section of the fort near the location chosen for the flagstaff. For the use of "traveling forges," see Burbeck to Stoddard, February 19, 1812 (Military Notes). For the West Battery shot furnace, see Ordnance Returns, West Battery, January, 1814 - March, 1815 (Office of Chief of Ordnance, Statements of Ordnance and Ordnance Stores, 1813-21); bill of Abraham Leggett, April, 1814, in Settlement 1830, Vou. 80, Ab. B, Account of C. Vandeventer (Accounts of Third Auditor of the Treasury, Fiscal Section, National Archives). For a general survey of hot-shot furnaces, especially in the South, see Herbert E. Kahler, Hot Shot Furnaces (National Park Service Popular Study Series; History No. 7, Washington, n. d.).

3. Archeological Data

No comprehensive archeological investigation of the interior of Castle Clinton has ever been made. A preliminary dig conducted in 1955 indicated that the debris of later structures was so heavy and concentrated as to make excavation anywhere on the parade ground of the fort an exceedingly arduous and expensive undertaking.

Exploratory trenching at that time also indicated that the likelihood of discovery of significant objects and features of the period of 1812 was limited. Further archeological investigation of the area prior to restoration is not recommended. It would be quite costly and not likely to produce commensurate results.

No complete report of the preliminary investigation was ever submitted, but the field notes compiled at the time are here appended.

Archeological Field Notes

Castle Clinton National Monument

New York City, New York

Paul J. F. Schumacher - Archeologist

- June 6, 1955 - Left Philadelphia, arrived New York City. Made arrangements for laborers and tools, took Photographs. Staked out Center lines and Trench 1 and possible location of Hot Shot Furnace and cisterns. Visited Superintendent, Statue of Liberty and Museum curator at Federal Hall.
- June 7, 1955 - Started excavating Trench 1 - East-West - 3 feet wide on center line of Castle Clinton interior. 3 laborers from Federal Hall. 8 A.M. - 4:30 P.M. working hours. Hit tremendous amount of brick, wood and metal rubble. Difficult to keep trench lines straight. Difficult excavating. Studied maps, plans, two reports and miscellaneous material on Castle Clinton.
- June 8, 1955 - 3 men. Continued excavating in Trench 1 - lots of rubble. No artifacts. Difficult digging. No signs of early 19th century construction. Lots of wood planking coming out could possibly be flooring used in old fort. Doubtful. Measured these pieces. The brick and iron all appear to be mid to late 19th century.
- June 9, 1955 - 2 men. Due to rain we started digging late. Excavated all along Trench 1 - Still all rubble - need hacksaw to cut out iron and tin. The brick are all post 1840 in style. The tin is roofing used in the mid 19th century for Castle Garden. Thick Marble pieces are from the roof copping. Miserable day. Actually Trench 1 runs through the Aquarium Period. Turtle Fish Tank in the center of the building.
- June 10, 1955 - Beautiful Day - 3 men - continued excavating in trench 1 - Still all rubble. Continued to hit water level at 28 inches - 32 inches beneath the surface and have to move on. This water is due to poor drainage of old fish tank floors. Trench is 35 feet long. We intended to keep it 3 feet wide but due to rubble, this was impossible, became 4 feet wide - irregular. Trench 1 crossed over the copper 1 inch water pipe which is 1 1/2 feet below the surface and the 10 inch terra cotta drain pipe which is 1 foot beneath the surface. There is so much wood and metal rubble in amongst the brick (no dirt to speak of), that in

years to come there will be a great deal of uneven settling if some grading is not done before resurfacing the interior parade of the Fort. Abandoned excavating Trench 1. Can not dig below the water and we can not bucket it out. Set out Trench 2 running North-South - 3 feet wide - on a center line with corner of fort between casemates 2-3 and 12-13. The trench is in two Sections - A is the South section and B the north section. Each section begins 25 feet out from the wall and is 30 feet long. The top 8 inches are black dirt with a few stones.

June 13, 1955 - 3 men. Excavating in Trench 2A. Unable to penetrate tile concrete floor of aquarium basin so excavating on both sides of it. Hitting a tremendous amount of rock but no rubble. One section of the rock seems to be former paving - possibly the floor around the casement walk of post 1824 period. The other rock seems to be fill.

June 14, 1955 - 4 men. Due to heavy rock which is impossible to crack, we have abandoned Trench 2A for the present and are excavating in Trench 2B. Here again we have run into a sort of rock and concrete floor near the casement and then an aquarium tank and then a section of rock fill. Have decided to put all our energies on this rock fill. All rock and very minimum of dirt. Huge pieces have to be hoisted out with a rope noose. Dangerous going because of the rock fill not being uniform. Luckily we have two stone and mortar walls on the north and south face 4 feet 4 inches apart to hold the rock fill, but the sides keep slipping in. Very rough. The aquarium tanks base is 1 foot beneath the surface built on top of the stone wall which must have been a footing for the parade. Horizontally we have exposed 7 feet of this stone wall. Have sited water from high tide of the Hudson river. We are told the river level is 7.5 feet beneath top of the catch basin grating or ca. 7.0 feet beneath the present rough surface. The South stone wall has wooden braces (saved several wood sample pieces for identification). A few small pieces of pottery came out of the hole, and a piece of the stem of a clay pipe.

June 15, 1955 - 3 men. Continued to excavate in the hole - Trench 2B - Removing more and more rock. This rock fill between the two walls seems to have been placed rather uniformly. These walls must be of the 1812 period and were used as footings for the parade with rock fill carefully placed in between. Reached the base of the two walls at 6 feet 7 inches beneath the present surface. Excavated a foot beneath

the base of the wall - 7 feet 7 inches beneath the surface - all gray river silt and clay. Water (high tide from Hudson river). These walls have a flat (not curved) surface. Doubtful if they are part of the old cistern which appears to be circular in the old engineers drawings. The cistern is probably directly underneath the aquarium tank floor which is impossible to break up without a compressor and hammer. Too expensive - so will leave it alone. Maybe at some future date this can be done. These two stone walls also appeared in Trench 2A but the working space was narrow and therefore more dangerous and was not attempted. These 4 stone walls run north-south. No excavating during the afternoon because the men were needed elsewhere. Did some research through the fact files on Castle Clinton.

June 16, 1955 - 3 men. Excavated in Trench 2B on North side of the aquarium tank. All cemented rock - seems to have been a solid foundation floor of some sort, probably of Castle Garden or Aquarium Period.

June 17, 1955 - 3 men. Excavated in Trench 2B on North side of Aquarium Tank. Still hard cemented rock. The lime is not of the oyster shell type but it is very soft. Probably mid 19th century lime. Finished the dig. Made final photographs. Measurements and drawings. Trench 2B on the other side of the aquarium Tank is 3 feet deep.

ARTIFACTS - all from the rock fill in between the two stone walls of Trench 2B.

- 3 Pieces of wood from braces from stone Wall - To be identified as to type of wood.
- 5 Pieces of animal bone - poor condition - not saved.
- 1 Glass bottle neck - hand blown - early 19th century.
- 1 Piece of clay pipe stem.
- 1 Black design on white pot sherd - late 19th century.
- 1 Brown and yellow earthen ware sherd - 18th or early 19th century.
- 1 Brown ware sherd - probably a handle of some jug.
- 1 Thick earthen ware sherd with brown glaze.
- 1 Curved iron spike or pintel.

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