
National Park Service
Cultural Landscapes Inventory

2009

Revised: 7/2025



Battery Weed Headland
Gateway National Recreation Area

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Introduction

The Cultural Landscape Inventory (CLI)

The Cultural Landscape Inventory (CLI) is a comprehensive inventory of all cultural landscapes in the National Park System. Landscapes that are listed, or eligible for listing, on the National Register of Historic Places, or are otherwise managed as cultural resources and in which the National Park Service has, or plans to acquire, legal interest are included in the inventory. The CLI identifies and documents each landscape's location, size, physical development, landscape characteristics, character-defining features, and condition. Cultural landscapes have approved CLIs when concurrence with the findings is obtained from the park superintendent and all required data fields are entered into the Cultural Resources Information System (CRIS-CL) database. In addition, for landscapes not currently listed on the National Register and/or without adequate documentation, concurrence is required from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or the Keeper of the National Register.

Scope of the CLI

The information contained within the CLI is compiled from primary and secondary sources and through on-site surveys of the landscape. The level of investigation is dependent upon scoping the need for information. The baseline information collected provides a comprehensive look at the historical development and significance of the landscape. Documentation and analysis of the existing landscape identifies character-defining characteristics and features and allows for an evaluation of the landscape's integrity and an assessment of the landscape's condition. The CLI also includes historic maps, drawings, and images; photographs of existing conditions; and a site plan that indicates major features. The CLI documents the existing condition of park landscape resources and identifies impacts, threats, and measures to stabilize condition. This information can be used to develop strategies for improved stewardship. Unlike a Cultural Landscape Report (CLR), the CLI does not provide management recommendations or treatment guidelines for the cultural landscape, but it may identify stabilization measures.

The Cultural Resources Information System (CRIS)

CRIS is the National Park Service's database of cultural resources on its lands, consisting of archeological sites, historic structures, ethnographic resources, and cultural landscapes. Cultural Resources Inventory System (CRIS) replaces three legacy inventory systems: ASMIS (archeology), CLI (cultural landscapes), and LCS (historic structures); and it reinstates the former ERI (ethnographic resources). This Cultural Landscape Inventory document reflects the information in a corresponding CRIS Cultural Landscape record.

Statutory and Regulatory Foundation

The legislative, regulatory, and policy directives for conducting and maintaining the CLI within CRIS are:

- National Historic Preservation Act (NHPA) of 1966 (16 USC 470h-2(a)(1)) Sec. 110
- Executive Order 13287: Preserve America, 2003. Sec. 3 (a and c)
- Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs
- Pursuant to the National Historic Preservation Act, 1998. Std. 2
- Cultural Resource Management Guideline, 1997, Release No. 5, page 22; issued pursuant to Director's Order #28 (DO-28)

The NHPA requires the identification, evaluation, and nomination of historic properties to the National Register of Historic Places and the maintenance and expansion of an inventory of cultural resources. DO-28 requires a cyclic assessment of the current condition of cultural landscapes based on an assessment interval, with a default of six years.

Use

Beyond fulfilling legal and policy requirements, park staff can use the Cultural Landscape Inventory in the following ways:

- To learn about park cultural landscapes (all staff)
- To inform management decisions (park managers)
- To inform project planning and development (park managers, facility managers, project managers, compliance specialists)
- To monitor the condition of the cultural landscape and take measures to protect its significance and integrity (cultural resource managers, facility managers)
- To recognize the stabilization and treatment needs of landscape features and plan work within cultural landscapes to address the needs (facility managers, cultural resource managers)
- To understand the cultural value of natural systems in a cultural landscape (natural resource managers)
- To create programming and educational materials based on site history (interpretation and education specialists)
- To recognize impacts within cultural landscapes and enforce protection measures (visitor and resources protection staff)

General Information

Property Level and CLI Numbers

Inventory Unit Name:	Battery Weed Headland
Resource Classification:	Component Landscape
CLI Identification Number:	975512
Parent Landscape:	650080
Inventory Status:	Complete

Park Information

Park Name:	Gateway National Recreation Area
Alpha Code:	GATE
Park Organization Code:	1773
Park District:	GATE
Region:	Northeast
Restricted:	No

Landscape Description:

The Battery Weed headland is part of Fort Wadsworth, a former military reservation that was transferred to the Department of the Interior in 1995 as part of the Staten Island Unit of Gateway National Recreation Area (NRA) in New York. Gateway NRA, which encompasses numerous former military and city park lands in lower New York Harbor and adjoining coastal areas, was established by Congress in 1972 along with Golden Gate National Recreation Area in San Francisco as the first park system specifically for urban recreation. The primary purpose of Gateway NRA is to preserve and protect, for the use and enjoyment of present and future generations, an area possessing outstanding natural, historic, and recreational features.

In addition to the Battery Weed headland, Fort Wadsworth includes another other major fortification, Fort Tompkins. The reservation's shoreline is lined by earthen batteries, most of which are hidden beneath vegetation, while the interior or upland portions historically contained support facilities such as housing and mess halls. Much of this area was redeveloped during the 1980s. Today, facilities in this area are used by the park for offices, staff housing, and a visitor center, and by other agencies including the U. S. Coast Guard and Army Reserve.

The Battery Weed headland area is at the eastern edge of Fort Wadsworth and is situated below Fort Tompkins, along the western shore of the Narrows, the water passage to New York Harbor where the landforms of Staten Island and Long Island lie closest together. Here, a massive granite fort named Battery Weed built between 1847 and 1864 holds a commanding position below a 125-foot high bluff, although now greatly overshadowed by the adjoining Verrazano-Narrows Bridge completed in 1964. Battery Weed was once part of a system of fortifications protecting the Narrows that included, among others, Fort Tompkins on the bluff above, and Forts Hamilton and Lafayette on the eastern or Long Island side. The Battery Weed headland area is open to the public from dawn to dusk, and tours of the fort are available by appointment.

HISTORICAL OVERVIEW

Human settlement on Staten Island dates back to the Paleo-Indian period 10,000 years ago. Prior to the late seventeenth century, Staten Island was home to the Lenape people, also known as the Delaware, who were part of

the larger Algonquian linguistic group that occupied the East Coast from the Chesapeake Bay to Maine. European colonial settlement of the land began in c.1662 with the Dutch, followed by the British with English Crown land grants for agricultural settlement later in the century. Sometime between 1776 and 1783, the British constructed an artillery post near the present site of Battery Weed. By 1794, following American independence, the State of New York began to acquire lands at the Narrows for defensive works, though none was constructed during the period from 1794 to 1807 that military historians identify as the First American System of coastal fortifications (CLR 2008:5).

During the period between 1809 and 1846 corresponding with the Second American System of coastal fortifications, the Battery Weed headland witnessed its first substantial military fortification. By 1809, a new fort in a half circle of solid masonry, along with a cluster of buildings and a new wharf (dock) north of the fort, was under construction by the State of New York along the shoreline of the Narrows. The second system fort, on the present site of Battery Weed, was named Fort Richmond, for Richmond County (Staten Island), and was also known as the Water Battery (CLR 2008:6).

The federal government undertook a new program of coastal defense between 1846 and 1867, known as the Third American System. By February of 1847, the forty-seven acre state military reservation at the Narrows passed to federal ownership. The U.S. Army almost immediately began construction of the new Fort Richmond, following the Third American System, but the structure would not be complete for nearly another two decades. By the Civil War, the fort was substantially complete and readied for protection of New York Harbor. In 1865, the War Department officially changed the name of Fort Richmond to Fort Wadsworth in honor of Brevet Major General James S. Wadsworth of New York, who died from wounds he received during the Battle of the Wilderness in Virginia (CLR 2008:6).

In 1876, the new Fort Tompkins was completed on the bluff above Battery Weed, marking nearly three decades of continuous construction activity at the federal military reservation. However, by this time both forts had become in large part militarily obsolete due to technological advances in heavy ordnance. Although no longer used, the armaments remained in place on site. With the heavy construction finally complete and peacetime conditions prevailing, the Battery Weed headland became a favorite spot for informal public use, functioning effectively as a public park. Visitors picnicked along the top of the slope and strolled along its walks and on the seawall around Battery Weed, enjoying the unsurpassed panoramic views of New York Harbor (CLR 2008:6).

Beginning in 1887, the modernization of the harbor defenses brought extensive changes to the landscape of the Battery Weed headland. The assembly of a special board by President Cleveland, chaired by Secretary of War William C. Endicott, to address the state of the nation's military readiness resulted in what is known as the Endicott Era in coastal defense. The Endicott Era brought changes to the Battery Weed headland including the addition of new concrete and earthen batteries, a lighthouse on Battery Weed; and cable tanks, storage buildings, and railways associated with a submarine mine (torpedo) defense system. In 1902, the name of the Fort Wadsworth was changed once again, this time to Battery Weed in honor of Brigadier General Steven H. Weed, killed at Gettysburg. The name Fort Wadsworth was reassigned to the entire military reservation (CLR 2008:6-7).

With the end of World War I in 1918, the garrison at the Fort Wadsworth reservation diminished dramatically. In 1919, command of the post was transferred from the Coast Artillery Corps to the Infantry and by 1927, only fourteen enlisted men resided on site. In the mid-1930s, the Works Progress Administration (WPA) began a series of projects at Fort Wadsworth. These may have included construction of a concrete seawall and construction of a stone wall along the overlook where visitors often came to admire the panoramic view of the harbor. With the onset of World War II, Fort Wadsworth again prepared for military action. Between 1942 and 1944, the Army made plans to deploy a series of submarine mines (torpedoes) across the Narrows by vessels operating from the site of Battery Weed, although it is not known if this ever occurred. In 1942, the last manned battery, Battery Catlin located north of Battery Weed, was taken out of service. Until 1945, Fort Wadsworth was home to the Harbor Entrance Control Post (HECP) with an observation tower located on top of Fort Tompkins (CLR 2008:7).

Fort Wadsworth remained militarily active during the postwar period, but Battery Weed and its surrounding headland were largely abandoned. Along with lack of use came marked changes in the character of the landscape, notably the growth of trees on formerly maintained open ground and deterioration of buildings and structures. Between 1959 and 1964, the Verrazano-Narrows Bridge was constructed across the Narrows with its approach crossing the center of Fort Wadsworth south of Battery Weed. The construction of the bridge resulted in a major change to the setting of the Battery Weed headland, looming high to its south and obstructing the once panoramic views. While the bridge was under construction, all wood buildings were removed from the headland, and in 1965, the lighthouse on the top of Battery Weed was decommissioned (CLR 2008:7).

While Fort Wadsworth was home to the radar control center for the area's NIKE Missile System until the 1970s, no features were within the Battery Weed headland, which remained at most a storage area. In 1972 federal legislation was drafted to establish Gateway National Recreation Area, and Fort Wadsworth was included as a future recreation area, but remained under military administration and use. Around this time, overgrowth was removed from the area within and immediately surrounding Battery Weed, but the rest of the headland continued to become overgrown. From 1979 to 1994, Fort Wadsworth served as the headquarters of the New York Navy Yard and was extensively redeveloped with new facilities. However, the Navy made little use of the Battery Weed headland, which suffered fire damage to two buildings and continued to become overgrown with woods (CLR 2008:7).

In 1995, the administration of the Battery Weed headland, as a part of Fort Wadsworth, was transferred to the National Park Service within the Department of the Interior. In the years following this transfer, the park cleared away some of the woods to reestablish the view of New York Harbor, stabilized buildings and structures, and installed interpretive waysides and benches (CLR 2008:8).

SIGNIFICANCE SUMMARY

The Battery Weed fort continues to meet National Register criteria A and C in the areas of military history and architecture, as documented in the 1972 National Register nomination form. Battery Weed derives significance within the national context of coastal defense, and specifically for its central role in the defense of New York Harbor during the nineteenth and twentieth centuries. The architectural significance of Battery Weed, with its granite block construction in three casemated tiers and former moat bounded by a granite seawall, is an excellent example of the Third System period (1847 to 1861) in coastal defense.

Based on the 2008 findings of the "Cultural Landscape Report (CLR) for the Battery Weed Headland, Fort Wadsworth, Gateway National Recreation Area," the landscape of the Battery Weed headland is also significant under criteria A and C in the areas of military history, architecture, and engineering. The Battery Weed headland, including the steep slope rising 120 feet above the Narrows that is one of the highest points along the shoreline of New York Harbor, provided an ideal strategic location for over two centuries of military development. Although its most active period was from the Civil War through World War I, the Battery Weed headland, as a component of Fort Wadsworth, remained an active military site into World War II. The Battery Weed headland is also significant as a strategic component in the development of American coastal defense systems. Aside from the fort, contributing resources remaining today include portions of the Endicott-era batteries Catlin and Bacon that were built on the site of earlier batteries flanking the fort; several buildings and structures associated with the Endicott mine defense system, including the north dock; and grading and earthworks associated with the engineered slope and the overlook area. These features represent components of the outwardly expanding New York Harbor system of defenses, and evidence the progression over time of coastal military architecture and engineering technologies.

Based on the extant landscape resources that retain integrity, the period of significance for the landscape at Battery Weed headland extends from the beginning of construction of the Third System fort in 1847 through the end of World War II in 1945. There may be potential for archeological significance prior to 1847, but such investigation and evaluation is beyond the scope of the CLI program. After 1945, there was no substantial new construction, and the site deteriorated from lack of active military use, although other areas of Fort Wadsworth remained under military jurisdiction until 1995 (CLR 2008:140).

ANALYSIS AND EVALUATION SUMMARY AND CONDITION ASSESSMENT

Significant landscape characteristics and features from the period of significance remain today at Battery Weed headland, and are important to its historic character and unique identity. Spatial features include the moat space, the parade ground within Battery Weed, and the overlook space. Circulation features include the mine railway, overlook promenade, Battery Weed Road, and the dock road. Panoramic views from the overlook and waterfront are also contributing features. Buildings and structures include Battery Weed, the Torpedo Storage Building, the second mine casemate, Battery Catlin parados (magazine), the overlook stone wall, concrete block garage, small concrete shed, north dock, seawall, Battery Bacon north gun emplacement, the Coincident Range-Finder station, and slope retaining wall. Topographic features that define the historic character of the landscape include the engineered slope above Battery Weed, and the earthworks of Batteries Catlin and Bacon. Contributing vegetation features include the specimen trees along Battery Weed Road and Hudson Road, and the parade ground lawn. Small-scale features include the parade ground munitions pads, cable testing trough, parade ground flagpole, dock bollards, and dock utility

pole (CLR 2008:8).

Although many features have been altered since 1945, there have been relatively few lost altogether. These include six cable tank buildings, a testing tank, and a torpedo loading room building used in the mining defense complex, and three buildings on the north stone dock. There are several non-historic features that detract from the historic character of the landscape, most notably successional woods and invasive vines that cover formerly open ground and batteries, and chain-link fencing that closes off historic circulation patterns. Major condition issues that detract from the historic character of the landscape include fire damage to the Torpedo Storage Building, loss of the roofs on the Battery Weed magazines, removal of sections of mine railway, collapse of the second mine casemate, loss of the wood extension on the north stone dock, and probable loss of sections of the slope walks (CLR 2008:8-9).

Overall, the landscape of the Battery Weed headland retains historic integrity and still clearly conveys its historic significance through existing resources. Integrity of setting and feeling has been diminished, but is in part reversible (CLR 2008:141). The condition of the landscape at the time of this report's completion is evaluated as "fair." The site's major resources – the Battery Weed fort, parade ground, and overlook – are in good condition, but there is deterioration of secondary resources such as the batteries and mine casemate buildings & structures. Additionally, the growth of invasive vines on the slope has limited some of the site's key views and spatial relationships.

Landscape Hierarchy Description:

Battery Weed Headland is a component landscape of Fort Wadsworth, which is part of Gateway National Recreation Area – Staten Island District. There are two other landscapes at Staten Island: Miller Field and Great Kills.

Landscapes identified at the Jamaica Bay Unit include Breezy Point, Floyd Bennett Field, Jacob Riis Park, and Floyd Bennett Field. The landscape identified at the Sandy Hook Unit is Fort Hancock Military Reservation with two component landscapes: Fort Hancock Post Grounds and the Fort Hancock Coastal Defense Batteries and Proving Ground.

Landscape Type:

Historic Designed Landscape

Other Names:

Other Name:	Battery Weed	Other Name Type:	Both Current And Historic
Other Name:	Fort Wadsworth	Other Name Type:	Both Current And Historic
Other Name:	Fort Richmond	Other Name Type:	Historic
Other Name:	Water Battery	Other Name Type:	Historic
Other Name:	Gateway National Recreation Area, Staten Island Unit	Other Name Type:	Current

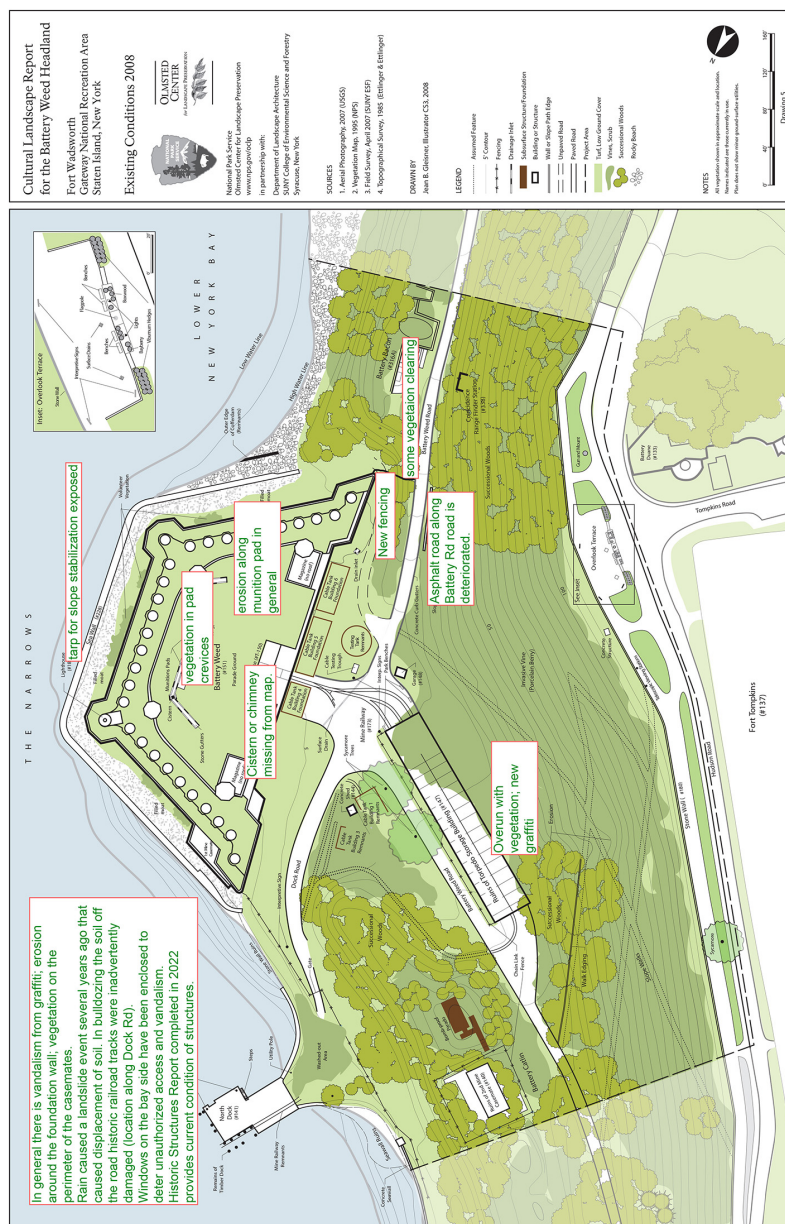
Cultural Landscapes Inventory

Battery Weed Headland
Gateway National Recreation Area



Site Plan. Map 2 of 2 for Battery Weed Headland. (SUNY ESF, 2007)

Site map, 2025 edits



Concurrence Information

Concurrence Status:

Park Superintendent Concurrence: Yes

Park Superintendent Date of Concurrence: 08/19/2009

Completion Status Explanatory Narrative:

Information for this CLI is taken directly from the 2008 report, "Cultural Landscape Report [CLR] for the Battery Weed Headland, Fort Wadsworth, Gateway National Recreation Area," by Jean B. Gleisner and John Auwaerter, State University of New York, College of Environmental Science and Forestry, Syracuse, New York, in cooperation with the National Park Service, Olmsted Center for Landscape Preservation, Boston, Massachusetts. Existing conditions fieldwork for the CLR was completed in November of 2006 and 2007, and also based on discussions with Phil Melfi, Site Manager at Gateway National Recreation Area, Staten Island Unit, Fort Wadsworth.

Concurrence Graphic Information:

Battery Weed Headland
Gateway National Recreation Area

Attachment File Path



"Howe, Kathy (PEB)"
<Kathy.Howe@oprhp.state.ny.us>
09/21/2009 02:58 PM

To: "Jeff_Killion@nps.gov" <Jeff_Killion@nps.gov>
cc: "Capella-Peters, Christine (CEN)"
<Christine.Capella-Peters@oprhp.state.ny.us>, "Mackey,
Douglas (PEB)" <Douglas.Mackey@oprhp.state.ny.us>,
bcc:

Subject: RE: Comments from SHPO on the Battery Weed CLI

History:

✉ This message has been replied to.

Hi Jeff,

Thank you, again. Yes, the changes you've suggested to the text of the CLI are acceptable to the NY SHPO.

Best,

Kathleen A. Howe
Historic Preservation Program Analyst
NYS Office of Parks, Recreation & Historic Preservation
Field Services Bureau
Peebles Island
P.O. Box 189
Waterford, NY 12188-0189
ph. 518-237-8643 ext. 3266
fax 518-233-9049
kathy.howe@oprhp.state.ny.us

-----Original Message-----

From: Jeff_Killion@nps.gov [mailto:Jeff_Killion@nps.gov]
Sent: Friday, September 18, 2009 10:42 AM
To: Howe, Kathy (PEB)
Cc: Capella-Peters, Christine (CEN); Mackey, Douglas (PEB); Peckham, Mark (PEB)
Subject: RE: Comments from SHPO on the Battery Weed CLI

Hi Kathy,

Chris is satisfied with our solution regarding the three resources in question, so that part of the issue is resolved.

Regarding the period of significance, the CLI is documenting the landscape, which is what the period of significance refers to. Since we agree that the landscape retains integrity to the period 1847-1945, we will clarify sections in the report (p.11 and p.25) that speak of the period of significance as follows:

Based on the extant landscape resources that retain integrity, the period of significance for the landscape at Battery Weed headland extends from the beginning of construction of the Third System fort in 1847 through the end of World War II in 1945. There may be potential for archeological significance prior to 1847, but such investigation and

SHPO concurrence correspondences, September 21, 2009 (email, 1 page) and September 17, 2009 (letter, 7 pages).



H30 (NER-HPPC-OCLP)

United States Department of the Interior

NATIONAL PARK SERVICE
Northeast Region
United States Custom House
200 Chestnut Street
Philadelphia, PA 19106

AUG 07 2009

Ruth Pierpont
Director
New York State Historic Preservation Office
P.O. Box 189
Waterford, NY 12188-0189

Dear Ms. Pierpont:

Enclosed you will find a copy of the Cultural Landscape Inventory (CLI) for the Battery Weed Headland, located within Gateway National Recreation Area consisting of the Battery Weed fort and surrounding landscape that includes adjoining batteries, slope, and overlook. We seek your confirmation on previously evaluated resources and concurrence on the status of resources and features identified in this CLI that contribute to the Fort Wadsworth historic district and are previously unevaluated for listing in the National Register of Historic Places. The report has been prepared by a team of historical landscape architects with the National Park Service (NPS) Olmsted Center for Landscape Preservation. The CLI program and the enclosed report continue the NPS efforts to update our cultural resource inventories.

Through the CLI program, the NPS is currently in the midst of a nationwide effort to inventory its cultural landscapes. The CLI is conducted in accordance with Section 110 of the National Historic Preservation Act of 1966 (as amended). It is an inventory of baseline information for all historically significant cultural landscapes within the National Park System, and it examines multiple landscape features that contribute to the significance of historic properties. The CLI process includes gathering information from existing secondary sources and conducting on-site reconnaissance of the existing landscape. The information collected provides a comprehensive look at the historical development and significance of the landscape, placing it in context of the property's overall significance. For landscapes found potentially eligible for the National Register of Historic Places, the evaluation describes their character-defining features and assesses the landscape's overall historical integrity. It also raises questions about the landscape that need further study.

It is important to note that the CLI reports are not intended as comprehensive inventory reports for any one property, although for some properties they provide fuller documentation than for others. For example, the reports do not include a full architectural description of structures, but document structures as elements of the overall landscape, and similarly documents other characteristics such as vegetation, spatial organization, and views and vistas. The CLI is one component of the NPS inventory effort that also includes cultural resource inventories for

historic structures, archeological sites, ethnographic resources, and museum objects. For example, the NPS List of Classified Structures inventory includes structural features of cultural landscapes, but the CLI takes a more encompassing approach to the properties, inventorying all above-ground features in each park in which the NPS has a legal or mandated interest.

The Battery Weed headland landscape includes two National Register properties. Battery Weed was listed in the National Register of Historic Places on January 20, 1972 as a structure for significance in the areas of "Military" and "Architecture," in the context of Third System coastal fortifications. The 1972 documentation is limited to the granite structure itself, with a period of significance given as 1847 to 1861. The documentation does not discuss contributing resources and associated features of the Battery Weed headland that also includes the Endicott batteries (c.1898 to 1905), mine defense system (c.1887 to 1921), the north dock (c.1858 to c.1907), and the engineered slope (c.1847 to c.1873) and overlook (c.1873 to c.1938) above Battery Weed.

Battery Weed headland is part of Fort Wadsworth, which includes a number of individually listed or eligible properties. On July 30, 1974, Fort Tompkins (Fort Tompkins Quadrangle), just beyond the CLI boundary, was listed in the National Register for significance as an example of nineteenth-century historic military architecture. On July 5, 1985, the Endicott-period batteries at Fort Wadsworth, including their magazines, casements, emplacements, and earthworks, were determined eligible for listing by the Keeper of the National Register through the Determination of Eligibility process, and nationally significant in the areas of "Military" and "Architecture." Portions of Battery Bacon (Building #316A) and Battery Catlin (155,182) are within the CLI boundary. On November 18, 1996, additional resources at the Battery Weed headland were determined eligible for listing by your office as part of an update to the park's List of Classified Structures for Fort Wadsworth, including the seawall (228), light station (181), torpedo storage (147), warehouse (148), north dock (141), and B.C and C.R.F. Station (South) (338). In 1997, documentation of the entire 247-acre Fort Wadsworth reservation, including Battery Weed, Fort Tompkins, and fifty-seven other resources, was prepared and submitted for listing in the National Register as an historic district for national significance in areas of military, social history, architecture, engineering, and archeology (historic non-aboriginal), with the period of significance of 1755 to 1945. An additional resource identified in the 1997 documentation for the Battery Weed headland was the rail tracks (173). Although signed by your office on August 3, 1998, the 1997 nomination was not accepted by the Keeper for technical reasons and a substantive question concerning an archeological site.

The findings of this CLI indicate that the Battery Weed fort continues to meet National Register criteria A and C in the areas of military history and architecture, as documented in the 1972 National Register nomination form. Battery Weed derives significance within the national context of coastal defense, and specifically for its central role in the defense of New York Harbor during the nineteenth and twentieth centuries. The architectural significance of Battery Weed, with its granite block construction in three casemated tiers and former moat bounded by a granite seawall, is an excellent example of the Third System period (1847 to 1861) in coastal defense.

Archeological Sites

Cable Tanks 1 and 2 Foundations
Cable Tank 3 Foundation
Cable Tanks 4,5 and 6 Foundations
Cable Testing Tank Foundations
Cofferdam Remnants

Aug 21 09 08:35a

P.

CULTURAL LANDSCAPES INVENTORY
CONCURRENCE FORM

Battery Weed Headland
Gateway National Recreation Area

Gateway National Recreation Area concurs with the findings of the Cultural Landscape Inventory (CLI) for Battery Weed Headland including the following specific components:

MANAGEMENT CATEGORY: Must Be Preserved and Maintained

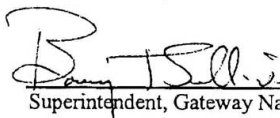
CONDITION ASSESSMENT: Fair

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The Cultural Landscape Inventory for Battery Weed Headland is hereby approved and accepted.



Superintendent, Gateway National Recreation Area

8/19/09
Date

Park concurrence form, August 19, 2009.

North Dock (141)
Mining Casement (140)
Battery Catlin Magazine (182)
Battery Bacon (portion) (316A)
Hudson Road Wall (180)
Parade Ground Stone Gutters
Concrete Seawall
Slope Retaining Wall
B.C. and C.R.F. Station (338)

Views and Vistas

Overlook View
Water-Level Views

Small-scale Features

Cable Testing Trough
Parade Ground Munitions Pads
Parade Ground Flagpole
Dock Utility Pole
North Dock Bollards

Non-Contributing Landscape Characteristics & Associated Features

Natural Systems and Features,

Successional Woods and Vines

Building and Structures

Surface Drain

Small-scale Features

Chain Link Fencing
Overlook Telescopic Viewing Stations
Overlook Flagpole
Overlook Gun
Park Benches
Interpretive Waysides

Undetermined Landscape Characteristics & Associated Features

Circulation

Slope Walks

Building and Structures

Overlook Concrete Structure

Battery Weed Headland
Gateway National Recreation Area



New York State Office of Parks,
Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peabees Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643
www.nysparks.com

David A. Paterson
Governor

Carol Ash
Commissioner

September 17, 2009

Jeff Killion
CLI Coordinator
National Park Service
Olmsted Center for Landscape Preservation
15 State Street, 6th Floor
Boston, MA 02109

Re: NPS
Battery Weed Cultural Landscape Inventory
Staten Island, Richmond County
09PR04861

Dear Mr. Killion:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO) on the Cultural Landscape Inventory (CLI) for the Battery Weed Headland in Gateway National Recreation Area. We have reviewed the CLI in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to the Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

The report was reviewed by National Register, Archeology, and Landscape staff. While the SHPO concurs with many of the conclusions of the CLI, we cannot concur with the beginning date of 1845 for the period of significance without archeological investigation of the Battery Weed fort and headland. The year 1775 is recommended in the National Register nomination (1997) as the beginning date for Fort Wadsworth. The nomination notes that "a systematic archeological inventory of Fort Wadsworth is planned by the National Park Service." It is our opinion that an archeological inventory would help clarify the archeological potential of the Battery Weed Fort and headland, and Fort Wadsworth.

Specifically, it is the opinion of the SHPO that:

- The Battery Weed fort is significant under criterion A in the area of military history and criterion C in the area of architecture. The fort may also possess significance under criterion D.
- The end date for the period of significance for the Battery Weed fort is 1861. The beginning date for the period of significance cannot be fully established without further archeological investigation.

The landscape of the Battery Weed headland is also significant under criteria A and C in the areas of military history, architecture, and engineering. The Battery Weed headland, including the steep slope rising 120 feet above the Narrows that is one of the highest points along the shoreline of New York Harbor, provided an ideal strategic location for over two centuries of military development. Although its most active period was from the Civil War through World War I, the Battery Weed headland remained an active military site into World War II. The Battery Weed headland, as a component of Fort Wadsworth, is also significant as a strategic component in the development of American coastal defense systems. Aside from the fort, contributing resources remaining today include portions of the Endicott-era batteries Catlin and Bacon that were built on the site of earlier batteries flanking the fort; several buildings and structures associated with the Endicott mine defense system, including the north dock; and grading and earthworks associated with the engineered slope and the overlook area. These features represent components of the outwardly expanding New York Harbor system of defenses, and evidence the progression over time of coastal military architecture and engineering technologies.

The period of significance for the Battery Weed headland, as reflected in its landscape resources, extend from the beginning of construction of the Third System fort in 1847 through the end of World War II in 1945. The period prior to 1847 has not been included because there are no physical resources from that time, as the first fort was removed and the landscape was largely reformed. After 1945, there was no substantial new construction, and the site deteriorated from lack of active military use, although other areas of Fort Wadsworth remained under military jurisdiction until 1995.

The CLI fully evaluates the cultural landscape, particularly the associated landscape characteristics and features, and finds that overall the Battery Weed headland landscape retains sufficient integrity to convey its significance in the areas of military history, architecture, and engineering. The landscape characteristics and features that date to the period of significance should be preserved since they contribute to the historic character of the property. As noted previously, thirteen of the resources and features on the enclosed lists have already been evaluated. There are twenty-five additional features related to spatial organization, circulation, topography, vegetation, buildings and structures, views and vistas, and small-scale features that also contribute to the significance and historic character of Battery Weed headland.

We call your particular attention to the Landscape Description, the National Register Information and the statement of significance, and the Analysis and Evaluation Summary in the enclosed CLI.

Based on the CLI, we are confirming the following:

- The Battery Weed fort is significant under criteria A in the area of military history and criteria C in the area of architecture.
- The existing period of significance for the Battery Weed fort is 1847-1861.

Battery Weed Headland

Gateway National Recreation Area

- The Battery Weed headland contributes to the significance of Fort Wadsworth under criterion A in the area of military history and criterion C in the areas of architecture and engineering. The headland may also possess significance under criterion D.
- The end date for the period of significance of the Battery Weed headland, as part of Fort Wadsworth, is 1945. The beginning date of the period of significance cannot be fully established without further archeological investigation.
- The property retains landscape characteristics and associated features that contribute to the site's historic character.
- The cultural landscape retains substantial integrity from 1847 to 1945.

Historic Sites Restoration Coordinator Christine Capella Peters concurs with the CLI's identification of specific contributing, non-contributing and undetermined status landscape features with three exceptions, specifically:

1. Hudson Road [portion] [176]: Of the noted 2,000 linear ft. within the property, it is unclear what percentage of this road retains integrity to 1945 or earlier and therefore which section should be designated contributing.
2. Overlook Promenade: It is unclear whether the majority of this feature retains integrity to 1945 or earlier and can be considered contributing.
3. Fortress Grounds & Slope Turf: Because the document states "most of the slope and fortress grounds turf (approximately eighty percent) has been lost" it appears there is too little of this vegetation extant to demonstrate integrity and subsequently justify designating the feature contributing. It should be noted, however, that re-establishing this turf on the slope and grounds through appropriate restoration could reverse this determination in the future.

If you have any questions, I can be reached at (518) 237-8643, ext. 3266. Please refer to the Project Review (PR) number in any future correspondences regarding this project.

Sincerely,



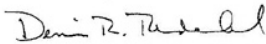
Kathleen A. Howe
Historic Preservation Program Analyst

We also seek your concurrence on the following:

- The Battery Weed headland landscape, which includes the Endicott batteries, mine defense system, the north dock, and the engineered slope and overlook above Battery Weed, contributes to the significance of Fort Wadsworth under criteria A in the area of military history and criteria C in the areas of architecture and engineering.
- The period of significance for the Battery Weed headland landscape, as part of Fort Wadsworth, is 1847-1945.
- The property retains landscape characteristics and associated features that contribute to the sites' historic character (see enclosed lists).
- The cultural landscape retains integrity to the period of significance.

If you concur with our categorization of the landscape resources and features at Battery Weed headland at Gateway National Recreation Area, as contributing, noncontributing, and undetermined, enumerated on the enclosed list, we ask that you please sign on the space provided and return this letter to Jeff Killion, CLI Coordinator, National Park Service, Olmsted Center for Landscape Preservation, 15 State Street, 6th Floor, Boston, MA 02109. We would appreciate your response within thirty days. Thank you for your attention to this inventory. Should you have any questions, please feel free to contact Mr. Killion at 617-223-5053, or by email at jeff_killion@nps.gov.

Sincerely,



Dennis R. Reidenbach
Regional Director
Northeast Region

Enclosures

cc:
Superintendent, Gateway National Recreation Area
Christine Capella-Peters

I concur with the National Park Service categorizations of the Battery Weed headland landscape resources and features at Gateway National Recreation Area as contributing, noncontributing, or undetermined.

New York State Historic Preservation Officer

Date

NPS Cultural Landscapes Inventory – Battery Weed Headland
Gateway National recreation Area
List of Contributing and Non-Contributing Landscape Features
July 2009

Contributing Landscape Characteristics & Associated Features

The following landscape characteristics and associated features contribute to the property's historic character, though not all are considered countable resources according to the National Register of Historic Places. Those marked with an * have been documented on the National Register (1972). Those marked with a # have been determined eligible for listing by the Keeper of the National Register (1985) or by the New York State Historic Preservation Office (1996, 1998).

Spatial Organization

- Parade Ground
- Moat Space
- Overlook Space
- Slope Space

Circulation

- Battery Weed Road (portion) (174)
- Hudson Road (portion) (176)
- Overlook Promenade
- Waterfront Promenade
- # Rail Tracks (173)
- Dock Road (175)

Topography

- Engineered Slope
- # Battery Catlin Earthwork (South End) (155)
- # Battery Bacon Earthwork (North End) (316A)

Vegetation

- Parade Ground Lawn
- Fortress Grounds & Slope Turf
- Specimen Roadside Trees

Buildings and Structures

- * Battery Weed (150,151)
- # Light Station (181)
- # Seawall (228)
- # Torpedo Storage (147)
- # Warehouse (148)
- Concrete Shed (144)

**Cultural Landscapes Inventory
CLI Update Certification Form
2025**

Gateway National Recreation Area
Battery Weed Headland, Floyd Bennett Field,
Fort Hancock Post Grounds, Fort Tilden

Gateway National Recreation Area concurs with the updates for the following CLIs,
including:

CONDITION ASSESSMENT: Fair – Battery Weed Headland
 Fair – Floyd Bennett Field
 Fair – Fort Hancock Post Grounds
 Poor – Fort Tilden

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements, will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The CLI Updates at Gateway National Recreation Area are hereby approved and accepted.

EMINA SENDICH  Digitally signed by EMINA
SENDICH
Date: 2025.07.23 16:31:33 -04'00'

Acting Superintendent, Gateway National Recreation Area

Date

Park concurrence form, July 23, 2025.

Revision:

Revised By	Type of Revision	Revision Date	Revision Narrative
Jeff Killion	CLI Update	07/23/2025	Three levels of effort have been developed for CLI Updates: A, B, and C. Level C is limited to a condition reassessment of the landscape; Level B includes C and is a targeted update of select data fields; Level A includes C and is a comprehensive update of all data fields. This 2025 update to the Battery Weed Headland CLI has been conducted at a Level C effort. See Landscape Documents in CRIS-CL for correspondences with park.

Geographic Information

State and County:

State

County

Size (Acres): 3

Land Tract Number(s)

02-103 (portion)

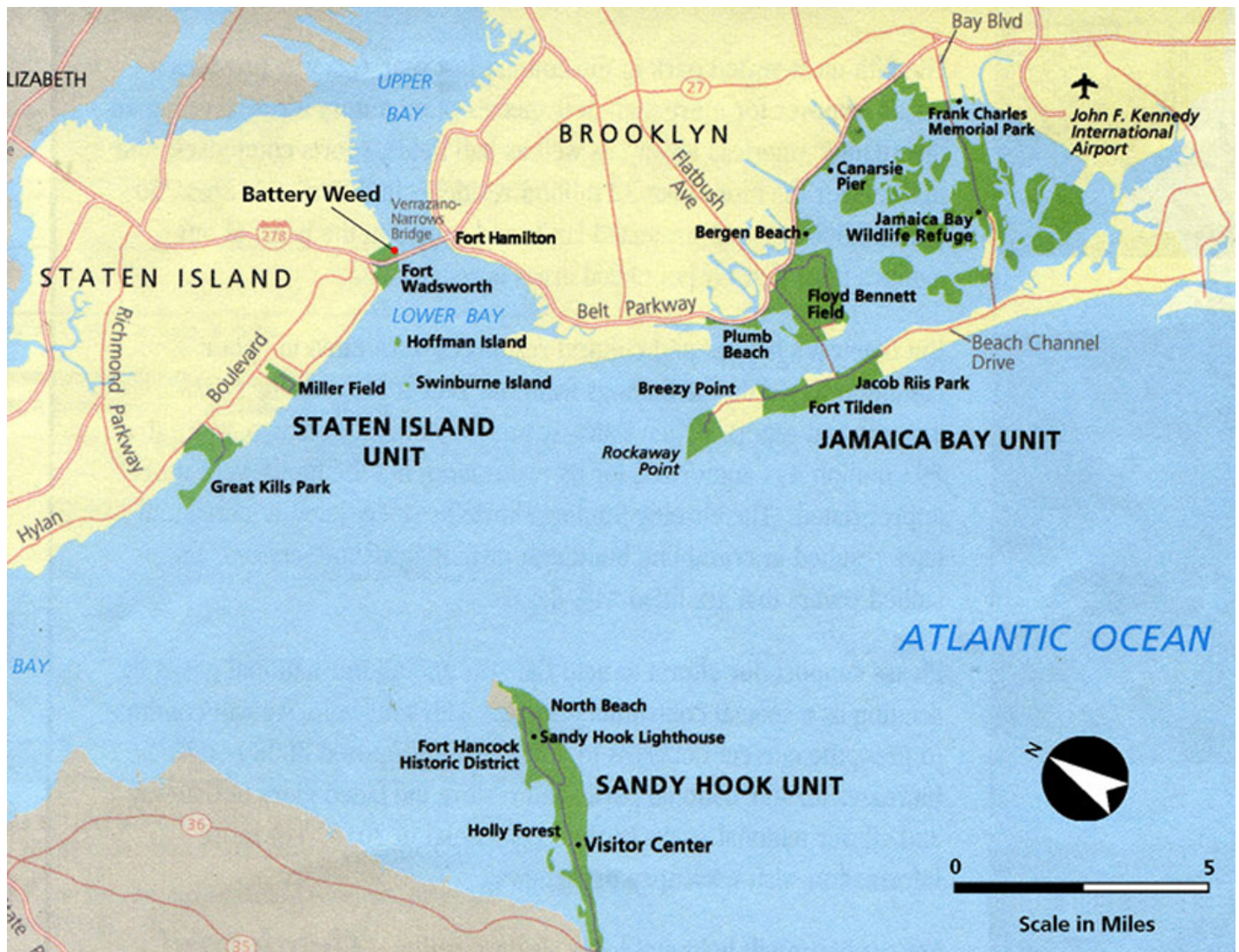
Boundary Description:

The boundaries for the Battery Weed Headland inventory unit include the National Register-listed Battery Weed fort and its immediately surrounding landscape that forms a headland extending into the Narrows of New York Harbor. The boundary includes historically related adjoining property along the shoreline and lower terrace following Battery Weed Road, encompasses portions of Batteries Bacon and Catlin, and includes a now-wooded slope and an overlook terrace bounded on the west by Hudson Road, which borders Fort Tompkins.

Boundary Coordinates

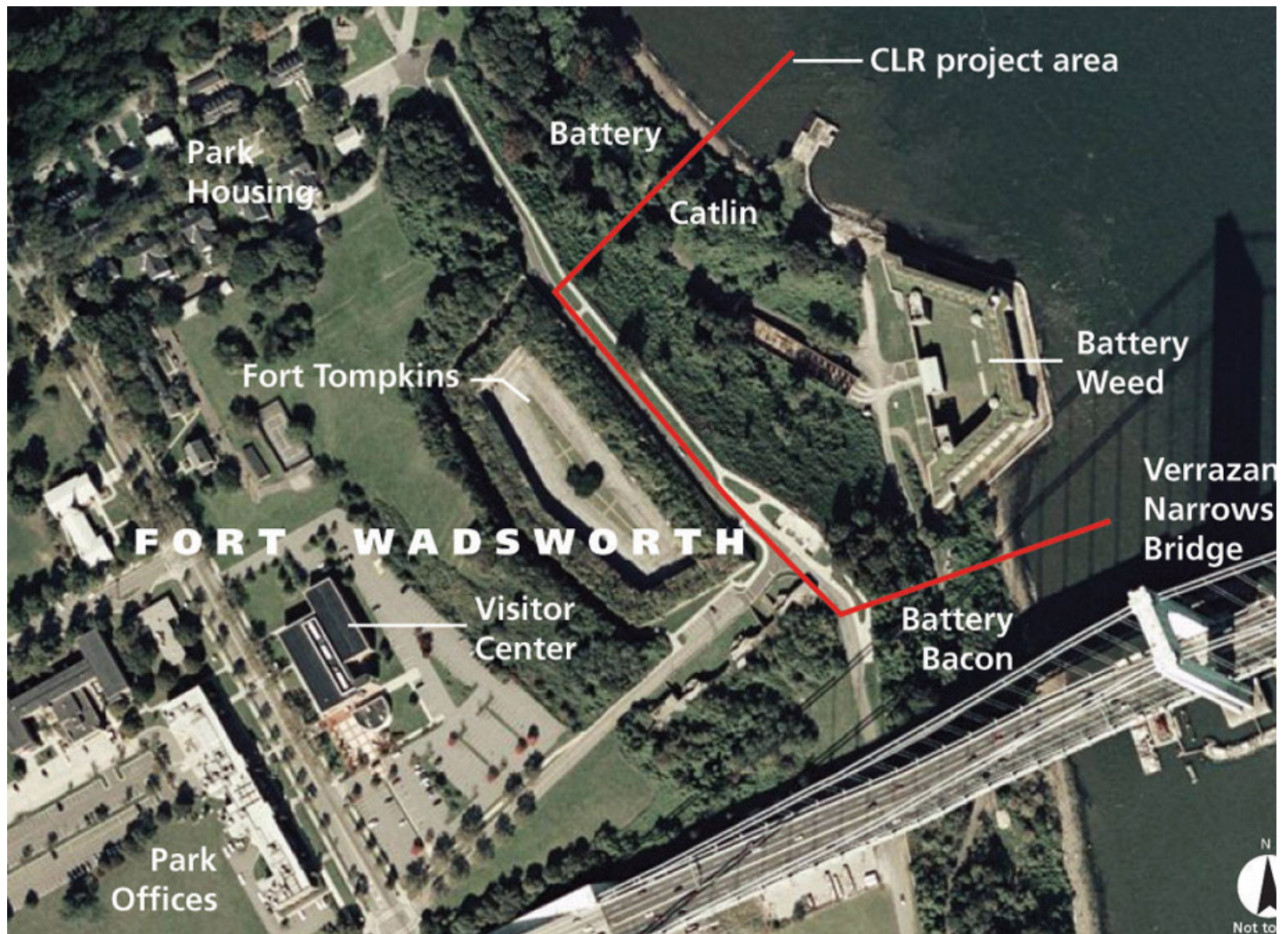
Source	Type of Point	Latitude	Longitude	Narrative
USGS Map 1:24,000	Area	-74.0559007011826	40.6065753173857	
USGS Map 1:24,000	Area	-74.0569515165615	40.6058181658068	
USGS Map 1:24,000	Area	-74.055244133922	40.6045159722858	
USGS Map 1:24,000	Area	-74.055000261057	40.6042076823818	
USGS Map 1:24,000	Area	-74.0539310204486	40.6045953101085	
USGS Map 1:24,000	Area	-74.0540807229293	40.6048758050022	
USGS Map 1:24,000	Area	-74.0536032827434	40.6052052143823	
USGS Map 1:24,000	Area	-74.0538183068986	40.6058826261601	
USGS Map 1:24,000	Area	-74.0551009575369	40.6062895084731	
USGS Map 1:24,000	Area	-74.0550478462729	40.6067034725573	
USGS Map 1:24,000	Area	-74.055630644547	40.6064469881698	

Location Map:

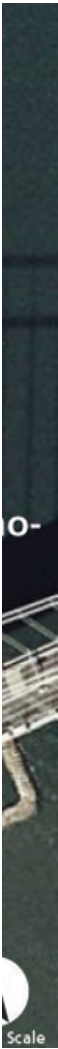


Location Map. Map of Gateway National Recreation Area showing Battery Weed at Fort Wadsworth within the Staten Island Unit, and the other park sites in green. (Park brochure, Government Printing Office, 2004, annotated by SUNY ESF)

and



Location Map. Aerial showing the Battery Weed headland project area, Verrazano-Narrows Bridge, and major features of former military reservation. (USGS aerial photograph, c.2007, reproduced from Microsoft Live Search, annotated by SUN ESF)



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IY

Regional Landscape Contexts:

Type of Context: Physiographic

Description:

Battery Weed is located within the Atlantic Coastal Plain physiographic region, within the Eastern Broadleaf Forest (Oceanic) ecological sub-region of the upper Atlantic coastal plain. This ecological sub-region consists mostly of northeastern oak-pine forest, along with fringes of northern cordgrass prairie, cedar bogs, transitional pine forests, deciduous swamps, pine plains, and grassy savannas. The region is generally characterized by level to gently sloping terrain. However, glacial deposits across Staten Island resulted in a much more varied topography. Todt Hill, less than three miles west of Battery Weed, is the highest hill on the Eastern Seaboard south of Maine at an elevation of 410 feet. The landform of the Battery Weed headland, with its 125-foot change in elevation that is one of the highest points along the coastline of New York Harbor, was originally formed by a glacial terminal moraine and thousands of years of coastal erosion (CLR 2008:117).

Battery Weed is located within the urban core of the New York bight (recessed coastal area) ecosystem. The area historically was a rich and diverse ecological region due to the confluence of several major river systems at the Atlantic Ocean. Today, three hundred and ninety five ecologically important species are known to occur within the ecosystem, which is on the North American migratory flyway. Peregrine falcons, on the federal and state lists of endangered species, nest on the Verrazano-Narrows bridge immediately to the south of the project area, and short-nosed sturgeon, listed as endangered by the National Marine Fisheries Service, exists within the Hudson River at New York Harbor. The rocky intertidal areas and tidal wetland areas immediately to the north and south of the Battery Weed headland consist of salt and brackish marshes, tidal creeks, and protected open water coves (CLR 2008:118).

Type of Context: Cultural

Description:

The Battery Weed headland is located in the New York City borough of Richmond on the eastern shore of the Staten Island, approximately six miles by water south of Manhattan. The site lies on the western shore of the Narrows, which forms the southern entrance to New York Harbor where the landforms of Staten Island and Long Island lie closest together. Directly across the Narrows at the opposite side of the Verrazano-Narrows Bridge is Fort Hamilton in Brooklyn, the eastern counterpart to Fort Wadsworth. The bridge is part of Interstate Route 278 that extends from New Jersey across Staten Island and becomes the Brooklyn-Queens Expressway on Long Island. Staten Island is connected to mainland New Jersey by way of the Goethals Bridge, Bayonne Bridge, and Outerbridge Crossing. As of 2006, Staten Island had a population of 464,573, the smallest of the city's five boroughs, with a density of 7,588 people per square mile (CLR 2008:118).

To the north and east of Fort Wadsworth are older street-car suburbs, with Saint George the primary urban center two miles to the north. Along the northern boundary of Fort Wadsworth is Arthur Von Briesen Park, a city park. The approach and toll plaza for the Verrazano-Narrows Bridge extend across the center of Fort Wadsworth from east to west. Along the shoreline south of Fort Wadsworth are boardwalks and bike paths that connect a series of public parks within Gateway National Recreation Area (CLR 2008:119).

Type of Context: Political

Description:

The Battery Weed headland is part of the 226-acre Fort Wadsworth, a former federal military reservation that was part of a system of New York Harbor defenses dating back to the eighteenth century. The Fort Wadsworth property consists of two nineteenth century stone forts (Fort Tompkins and Battery Weed), nineteenth and early twentieth-century earthen and concrete batteries along the shoreline, and approximately twenty buildings constructed prior to 1945. Approximately sixty buildings at Fort Wadsworth date to after 1945, most built by the Navy in the 1980s when it redeveloped the reservation as the headquarters of the New York Navy Yard (CLR 2008:119).

Today, Fort Wadsworth is a part of the Staten Island Unit of Gateway National Recreation Area, a 26,000-acre urban park system in the New York Harbor region administered by the National Park Service and established on October 27, 1972. The National Park Service assumed jurisdiction of Fort Wadsworth, including the Battery Weed headland, in 1995. The park maintains a visitor center near Fort Tompkins in building #120, a newer building along New York Avenue that is one of two main thoroughfares through the site. Many of the buildings on the reservation are presently occupied by other agencies, including the Army Reserve Center and the U.S. Coast Guard Auxiliary (CLR 2008:118-119).

Management Information

General Management Information

Management Category: Must be Preserved and Maintained

Management Category Date: 08/19/2009

Management Category Explanatory Narrative:

The Battery Weed Headland inventory unit meets the criteria of the "Must Be Preserved and Maintained" management category because it serves as the setting for a nationally significant structure. The Battery Weed fort was listed in the National Register of Historic Places on January 20, 1972 as a structure for national significance in the areas of "Military" and "Architecture," in the context of Third System coastal fortifications. On July 5, 1985, the Endicott-period batteries at Fort Wadsworth, including their magazines, casements, emplacements, and earthworks, were determined eligible for listing by the Keeper of the National Register through the Determination of Eligibility process. Portions of Battery Bacon (316A) and Battery Catlin (155,182) are within the boundary of the Battery Weed Headland area.

Management Agreements:

Legal Interests:

Type of Interest: Fee Simple

Narrative:

Located in managed wilderness?: Unknown

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Narrative:

Outward views of the Manhattan skyline to the northeast, the flat expanse of Brooklyn across the Narrows to the east, the Verrazano-Narrows Bridge and the Atlantic Ocean to the south, are critical to the significance of the Battery Weed headland. The panoramic water-level views contribute to the historic character of the landscape as a defining strategic feature of Third System period. The views are also associated with informal recreational use of the military site dating back to the nineteenth century. Aside from the loss of the timber dock extension and addition of the Verrazano-Narrows Bridge, the character of the water-level views remain little changed since the end of the historic period (CLR 2008:169).

The overlook view also contributes to the historic character of the landscape, as a defining feature that illustrates the landscape's strategic importance as well as the basis for its informal recreational use throughout the historic period. While the limits of the view have changed since 1945 through the growth of successional woods and introduction of the Verrazano-Narrows Bridge that constrict the northern and southern extents, overall the view retains its historic panoramic quality (CLR 2008:169).

National Register Information

National Register of Historic Places

Documentation Status: Entered Inadequately Documented

Documentation Narrative Description:

The Battery Weed headland landscape includes two National Register properties. Battery Weed was listed in the National Register of Historic Places on January 20, 1972 as a structure for significance in the areas of "Military" and "Architecture," in the context of Third System coastal fortifications. The 1972 documentation is limited to the granite structure itself, with a period of significance given as 1847 to 1861. The documentation does not discuss contributing resources and associated features of the Battery Weed headland that also includes the Endicott batteries (c.1898 to 1905), mine defense system (c.1887 to 1921), the north dock (c.1858 to c.1907), and the engineered slope (c.1847 to c.1873) and overlook (c.1873 to c.1938) above Battery Weed.

Battery Weed headland is part of Fort Wadsworth, which includes a number of individually listed or eligible properties. On July 30, 1974, Fort Tompkins (Fort Tompkins Quadrangle), just beyond the CLI boundary, was listed in the National Register for significance as an example of nineteenth-century historic military architecture. On July 5, 1985, the Endicott-period batteries at Fort Wadsworth, including their magazines, casemates, emplacements, and earthworks, were determined eligible for listing by the Keeper of the National Register through the Determination of Eligibility process, and nationally significant in the areas of "Military" and "Architecture." Portions of Battery Bacon (Building #316A) and Battery Catlin (155,182) are within the CLI boundary. On November 18, 1996, additional resources at the Battery Weed headland were determined eligible for listing by the New York State Preservation Office as part of an update to the park's List of Classified Structures for Fort Wadsworth, including the seawall (228), light station (181), torpedo storage (147), warehouse (148), north dock (141), and B.C and C.R.F. Station (South) (338). In 1997, documentation of the entire 247-acre Fort Wadsworth reservation, including Battery Weed, Fort Tompkins, and fifty-seven other resources, was prepared and submitted for listing in the National Register as an historic district for national significance in areas of military, social history, architecture, engineering, and archeology (historic non-aboriginal), with the period of significance of 1755 to 1945. An additional resource identified in the 1997 documentation for the Battery Weed headland was the rail tracks (173). Although signed by the New York State Preservation Office on August 3, 1998, the 1997 nomination was not accepted by the Keeper for technical reasons and a substantive question concerning an archeological site.

Eligibility: Eligible -- SHPO Consensus Determination

Concurrence Eligibility Date: 09/21/2009

Concurrence Narrative:

The New York State Office of Parks, Recreation and Historic Preservation concurred with the categorization of the landscape resources and features at Battery Weed Headland, Gateway National Recreation Area, as contributing, noncontributing, and undetermined, on September 17, 2009. Revisions were made to the CLI per a letter from the New York SHPO dated September 17, 2009, and through several emails exchanged between the New York SHPO (Kathy Howe and Christine Capella-Peters) and NER CLI Coordinator (Jeff Killion). Final concurrence was received via email on September 21, 2009.

Revisions to the CLI were made as follows:

- The period of significance was clarified in both the Component Landscape Description and the Statement of Significance: "Based on the extant landscape resources that retain integrity, the period of significance for the landscape at Battery Weed headland extends from the beginning of construction of the Third System fort in 1847 through the end of World War II in 1945. There may be potential for archeological significance prior to 1847, but such investigation and evaluation is beyond the scope of the CLI program. After 1945, there was no substantial new construction, and the site deteriorated from lack of active military use, although other areas of Fort Wadsworth remained under military jurisdiction until 1995 (CLR 2008:140)."
- The status of "Hudson Road [portion] (176)" and Overlook Promenade" were changed to Undetermined and "Slope & Fortress Grounds Turf" was changed to noncontributing.

Significance Level: National

Contributing: Individual

Classification: Site

Statement of Significance for National Register of Historic Places:

The Battery Weed fort continues to meet National Register criteria A and C in the areas of military history and architecture, as documented in the 1972 National Register nomination form. Based on the 2008 findings of the "Cultural Landscape Report (CLR) for the Battery Weed Headland, Fort Wadsworth, Gateway National Recreation Area," the landscape of the surrounding Battery Weed headland is also significant under criteria A and C in the areas of military history, architecture, and engineering. It is recommended that future National Register documentation address the contribution of the landscape, and expand the boundary of the Battery Weed fort property to encompass the surrounding landscape that includes the adjoining batteries, slope, and overlook. If a larger Fort Wadsworth historic district is nominated, the Battery Weed headland should be included within it to incorporate the full extent of the intact military landscape. Additionally, research for the CLR also revealed an extensive history of the Battery Weed headland being used as an informal public park. Further research should be undertaken to assess whether the headland and the larger Fort Wadsworth district meet National Register criteria for listing under the area of entertainment/recreation (CLR 2008:136-137,140-141).

Based on the extant landscape resources that retain integrity, the period of significance for the landscape at Battery Weed headland extends from the beginning of construction of the Third System fort in 1847 through the end of World War II in 1945. There may be potential for archeological significance prior to 1847, but such investigation and evaluation is beyond the scope of the CLI program. After 1945, there was no substantial new construction, and the site deteriorated from lack of active military use, although other areas of Fort Wadsworth remained under military jurisdiction until 1995 (CLR 2008:140).

The following sections describe in more detail how the landscape contributes to the historic significance of the Battery Weed headland, in accordance with National Register criteria.

NATIONAL REGISTER CRITERION A

Military History:

As documented in the 1972 nomination form, Battery Weed derives significance under National Register Criterion A in the area of military history within the national context of coastal defense, and specifically for

its central role in the defense of New York Harbor during the nineteenth and twentieth centuries. The Battery Weed headland, including the steep slope rising 120 feet above the Narrows that is one of the highest points along the shoreline of New York Harbor, provided an ideal strategic location for over two centuries of military development. Although its most active period was from the Civil War through World War I, the Battery Weed headland remained an active military site into World War II (CLR 2008:137).

As early as the mid-eighteenth century, colonial government authorization was given for guns and signal beacons at the headland on the Narrows of New York Bay. Aside from the site, however, no resources remain from this early period of development through state ownership of the military reservation that ended in 1847. Throughout the period of significance, 1847 to 1945, the Battery Weed headland was a manned and active military site, with a landscape that was developed in accordance with the evolving technology of American coastal defense. Numerous features dating from 1847 to World War I continued to be used through World War II and remain in the landscape today, including earthworks, buildings and structures related to the Second, Third, and Endicott systems of coastal defense. From 1942 through 1945, the Battery Weed headland was the site of World War II home-front activities such as training, equipping, and decommissioning operations. After 1945, the Battery Weed headland was largely abandoned, serving primarily as a storage area related to military activity elsewhere at Fort Wadsworth. The landscape was largely left to the elements after this point, resulting in collapse of several structures and growth of successional woods on formerly open slopes and batteries. Much of the overgrowth is reversible. The landscape overall retains integrity sufficient to illustrate its significance in military history (CLR 2008:137-138).

NATIONAL REGISTER CRITERION C

Architecture and Engineering:

The current National Register listing documents the architectural significance of Battery Weed, with its granite block construction in three casemated tiers and former moat bounded by a granite seawall, as an excellent example of the Third System period (1847 to 1861) in coastal defense. The Battery Weed headland is also significant under National Register Criterion C in the areas of Architecture and Engineering as a strategic component in the development of American coastal defense systems. Aside from the fort, contributing resources remaining today include portions of the Endicott-era batteries Catlin and Bacon that were built on the site of earlier batteries flanking the fort (c.1898 to 1905); several buildings and structures associated with the Endicott mine defense system (c.1887 to 1921), including the north dock (c.1858 to c.1907); and grading and earthworks associated with the engineered slope (c.1847 to c.1873) and the overlook area (c.1873 to c.1938). These features represent components of the outwardly expanding New York Harbor system of defenses, and evidence the progression over time of coastal military architecture and engineering technologies (CLR 2008:138).

Following acquisition of the headland on the Narrows in 1794 and 1809, the State of New York began initial military development with the construction of Fort Richmond, built of red sandstone according to the Second System specifications for coastal fortifications, and accompanied by several ancillary structures at the water's edge. Federal purchase of the site in 1846 led to the removal of the Second System fortress, and the construction of a new granite Third System fort, later named Battery Weed, in its place between 1847 and 1861. No above-ground features remain from before 1847. The new fort was conceived as a component of a larger system of defenses designed to secure the entrance to New York Harbor in conjunction with Fort La Fayette and Fort Hamilton located across the Narrows on Long Island (Brooklyn). Battery Weed, with its three tiers of granite casemates, was designed in a half-hexagon and carefully situated to complete range of fire objectives together with Forts LaFayette and Hamilton. Included in part of the new construction program was a stone dock extending into the Narrows to the north of Battery Weed built in c.1858 (CLR 2008:138).

The landscape of the Battery Weed headland was engineered with a system of secondary fortifications to protect and support the primary fort. Grading of portions of the site coincided with the construction of the fort in c.1847, and was continued by the Army for a series of earthen and concrete ground batteries named the South and North Cliff Batteries (named for their respective relationship to Battery Weed) during the Civil War in the 1860s. These batteries were reconstructed in the Endicott period between 1898 and 1904 as Batteries Catlin and Bacon together with Batteries Turnbull and Barbour to the south, incorporating earlier features such as a c.1865 subsurface parados. Gun emplacements located on the batteries were

updated throughout the historic period. In 1918, at the time of the World War I Armistice, Battery Bacon's two three-inch guns were dismounted and sent to Aberdeen Proving Ground in Maryland. Guns mounted on Battery Catlin were out of service by 1942 (CLR 2008:138-139, referencing Black 1983:111).

Construction of the mine defense system, a system of electrically-detonated floating mines that was one of the chief innovations of the Endicott period, began in 1887 with the addition of a mine casemate in Battery Weed and a mine railway leading to the north dock. Later expansions of the system included the Torpedo Storage Building built in c.1894, a second mine casemate on Battery Catlin built in c.1905, six cable tank buildings constructed between 1898 and 1905, additions and realignment of the mine railway up until 1921, and construction of a timber extension to the north dock along with a mine boathouse in c.1907 (CLR 2008:139).

Later military features dating from the World War I period and Great Depression are limited to a Coincidence Range-Finder (CRF) station constructed in c.1917 on the slope above Battery Bacon. Several small secondary structures reflected the continued military use of the headland during this time, including a concrete-block garage adjacent to the torpedo storage building constructed between 1924 and 1940, a concrete shed near the south end of Battery Catlin built in c.1940, and a concrete seawall north of the north dock built in c.1938. A stone wall along the overlook terrace along Hudson Road and specimen roadside sycamore trees were added around the same time (CLR 2008:139).

During World War II, in addition to the presence of troops and more activity, there were some changes in the appearance of the landscape, although there was apparently no new construction at the Battery Weed headland. Vegetation management practices may have changed in response to a 1942 order for a new program of obscurement from aerial attack. Although some successional vegetation may have resulted from this directive on the batteries adjoining Battery Weed, most of successional woods and vines present today are the result of a lack of maintenance that occurred after World War II (CLR 2008:139).

While the Battery Weed headland today retains many of its architectural and engineering features, most notably Battery Weed, the north dock, and Batteries Bacon and Catlin, the overall character of the landscape has changed considerably due to the growth of successional woods and vines on formerly open, mown ground. These woods obscure the batteries and engineered slope, and cover some of the secondary buildings and structures. While this is a dramatic change to the historic landscape, it can be reversed. Significant changes have occurred to 1945 to a number of buildings and structures, including the Torpedo Storage Building and second mine casemate, which were ruined during the 1980s, probably by fire; the loss of eight support buildings in the mine defense system in c.1960; and the loss of the timber extension, mine boathouse, quartermaster's warehouse, and dock house on the north dock in c.1960. The mine railway system remains partially intact, although concealment by vegetation prevented an accurate evaluation of its integrity (CLR 2008:139-140).

National Register Significance Criteria:

- A - Associated with events significant to broad patterns of our history
- C - Embodies distinctive construction, work of master, or high artistic values

Area of Significance:

Area of Significance Category: Architecture

Area of Significance Subcategory:

Explanatory Narrative:

Area of Significance Category: Engineering

Area of Significance Subcategory:

Explanatory Narrative:

Area of Significance Category: Military

Area of Significance Subcategory:

Explanatory Narrative:

National Register Criteria Consideration:

National Register Periods of Significance (with Historic Context Themes):

Time Period: CE 1847 - CE 1945

Historic Context Theme	Subtheme	Facet	Other Facet
Shaping the Political Landscape	Political and Military Affairs 1865-1939	America Becomes A World Power, 1865- 1914	
Shaping the Political Landscape	Political and Military Affairs 1865-1939	World War I, 1914- 1919	
Shaping the Political Landscape	World War II	The Home Front	

NRIS Information:

Other Name: GATE Battery Weed (72000908)
Primary Certification Date: 01/20/1972

State Register Documentation:

Identification Number: 90NR01013
Name: Battery Weed
Listed Date: 06/23/1980

Identification Number: 98NR01415
Name: Fort Wadsworth
Listed Date: 08/03/1998

National Historic Landmarks:

National Historic Landmark? No

Theme:

Contributing:

NHL ID:

NHL URL:

Date:

Statement of Significance for National Historic Landmark:

World Heritage Site:

World Heritage Site? No

Category:

WHS ID:

WHS URL:

Date:

Is Resource within a designated National Natural Landscape: No

Chronology and Physical History

Chronology:

Year	Event	Major Event Narrative
CE 1524	Explored	Giovanni de Verrazano sails into the Narrows.
CE 1609	Established	Henry Hudson names Staaten Eylandt (Island of the States) in honor of the States General of the Netherlands.
CE 1621 - 1664	Established	The Battery Weed headland area is part of the Province of New Netherland/Dutch West India Company.
CE 1630	Land Transfer	Staten Island is granted to Michael Pauw by Dutch West India Company.
CE 1661 - 1662	Settled	First colonial agricultural settlement on Staten Island, Oude Dorpe, is established.
CE 1664	Land Transfer	King Charles II of England grants Staten Island lands to the Duke of York.
CE 1680 - 1689	Land Transfer	Battery Weed headland is assigned to ownership of F. Walton (not patented).
CE 1683	Established	Staten Island is designated Richmond County.
CE 1711	Planned	Plan approved for a system of signal guns and fire beacons to be developed in several locations at the Narrows, including Staten Island.
CE 1712	Established	First ferry charter between Manhattan and Staten Island.
CE 1750 - 1794	Inhabited	VanDeventer family maintains ownership of the headland, known as "Bluff Point" or "Van Deventer's Point" ca. 1750-1794.
CE 1754	Planned	Colony of New York proposal for batteries on Staten Island (not implemented).
CE 1755	Purchased/Sold	Colonial legislation authorizes payment to carry to the site two guns along with tar barrels and posts for beacons.
CE 1776 - 1783	Inhabited	British occupy the Battery Weed headland during the Revolutionary War.
CE 1776 - 1783	Farmed/Harvested	British harvest mature trees.
CE 1776 - 1783	Established	Signal Hill is established (land title remained with Van Deventer).
CE 1779	Established	British defenses by this time at Van Deventer's Point included earthen batteries, redoubt, twenty-six gun platform, and hot-shot furnace.
CE 1782	Built	British construct four-bastion fort and several barbette batteries at/near Van Deventer's Point.
CE 1794	Purchased/Sold	State of New York acquires 24 ½ acres from Ann Jacobsen and Catherine Van Deventer.
CE 1794 - 1807	Established	Federal government begins First American System of Coastal Fortifications.
CE 1807 - 1817	Established	Second American System of Coastal Fortifications is established.
CE 1808	Planned	Army Engineer Jonathan Williams develops a plan for fortification at the Narrows.

Year	Event	Major Event Narrative
CE 1809	Purchased/Sold	New York State acquires twenty-two additional acres near Van Deventer's Point from John Jacobsen including farm house, barn, and road.
CE 1810	Built	Water Battery-Fort Richmond, Second System Fortress, is completed.
CE 1812	Planned	Due to War of 1812, state and federal governments authorize telegraph observatories and signal poles.
CE 1814	Built	Construction of Second System Fort Tompkins substantially begun, Fort Richmond serves as a checkpoint for all vessels entering or leaving New York Harbor.
CE 1816	Abandoned	Fortifications at the Narrows are largely abandoned by the state due to lack of funds.
CE 1817 - 1861	Established	The federal government institutes the Third American System of Coastal Fortifications.
CE 1820 - 1845	Established	Unresolved negotiations between the state and federal governments over ownership of the fortifications at the Narrows.
CE 1828	Established	Fort Tompkins Light near state fortifications at the Narrows.
CE 1847	Land Transfer	Conveyance of land at the Narrows from New York State to the federal government. Construction of Fort Richmond begins.
CE 1848	Built	Slope sustaining wall is constructed.
CE 1852	Built	West wall of moat is completed.
CE 1854	Purchased/Sold	A 5.2 acre parcel is purchased by federal government from Peter Jacobsen on west side of fortifications.
CE 1855	Built	Cofferdam is completed.
CE 1856	Purchased/Sold	A 17-acre strip parcel along New York Avenue is purchased by federal government from William Aspinwell.
CE 1857	Planned	Congress appropriates \$150,000 for reconstruction of Fort Tompkins.
CE 1858	Built	North stone dock is completed.
CE 1859	Built	Construction begins on the new Fort Tompkins; an inclined railway is built from the north stone dock to the top of the bluff in order to transport materials up to the Fort Tompkins construction site.
CE 1860	Built	Two story guardhouse with a drawbridge is built on the west face of Battery Weed. Hourly ferry service from Manhattan instituted.
CE 1861	Inhabited	5th Regiment New York Volunteer Artillery is garrisoned at Forts Tompkins & Richmond.
CE 1862	Developed	Construction of North and South Cliff Batteries is begun.
CE 1864	Built	Fort Richmond is completed (except for seawall/moat) at a cost of \$750,000.00; number of troops at the post peaks at 1,921; many wooden support buildings are constructed.
CE 1865	Altered	War Department changes the name of Fort Richmond to Fort Wadsworth.
CE 1867	Demolished	Many temporary wartime buildings are demolished.

Year	Event	Major Event Narrative
CE 1870	Altered	Around this time, macadam is added to roadways at Fort Wadsworth.
CE 1871	Built	Seawall and moat around Fort Wadsworth is completed.
CE 1871 - 1875	Altered	South and North Cliff Batteries and Hudson Battery are modernized.
CE 1873	Graded	Ground surrounding Fort Wadsworth including glacis, slopes, and batteries graded and seeded; draining and filling of swamp at foot of glacis at New York Avenue.
CE 1876	Built	Second Fort Tompkins is completed.
CE 1877	Built	Boathouse is constructed on north stone dock.
CE 1880	Established	Rail service is established from St. George to South Beach, and runs past military reservation.
CE 1885	Built	President Cleveland establishes Endicott Board to study coastal defense improvements; earthen berm is constructed at top of slope along present Hudson Road; this begins the Endicott Era in coastal fortifications that extends to World War I.
CE 1886	Altered	Moat dewatered and reservoir constructed at southwest corner; Staten Island Rapid Transit Railroad Company founded.
CE 1887	Altered	Northwest bastion of Battery Weed is converted to a mining casemate.
CE 1887	Built	First mine tracks are completed.
CE 1889	Built	Cable tank #2 is built; Staten Island linked to New Jersey by a railroad bridge.
CE 1890	Altered	Around this time, Fort Wadsworth (Battery Weed) is used for storage of munitions from Ellis Island.
CE 1892 - 1894	Built	Mine storage building is constructed west of Battery Weed.
CE 1892 - 1901	Purchased/Sold	Around 141 acres are purchased in ten parcels from various owners to the south and west by the federal government, expanding the Fort Wadsworth reservation from 90 to 226 acres.
CE 1892 - 1902	Built	Fog signal is installed on northeast corner of Fort Wadsworth (Battery Weed) seawall.
CE 1895 - 1904	Built	Six new batteries are constructed for higher-powered artillery South and North Cliff and Hudson Batteries equipped with modern guns.
CE 1898	Built	Cable tank #1 is constructed.
CE 1899	Reconstructed	Battery Bacon is reconstructed from north end of South Cliff Battery.
CE 1901	Altered	Army Corps of Engineers transfers mining complex to Coast Artillery Corps.
CE 1902	Altered	Fort Wadsworth renamed Battery Weed; entire U.S. military reservation renamed Fort Wadsworth.
CE 1902 - 1903	Built	Combined fog signal and lighthouse is constructed on barbette of Battery Weed's northeast bastion.
CE 1902 - 1904	Reconstructed	Battery Catlin is reconstructed from North Cliff Battery.

Year	Event	Major Event Narrative
CE 1904	Altered	West side of moat is filled in around this time; two three-inch rapid fire guns are mounted at Battery Bacon.
CE 1905	Built	Second mine casemate is constructed at Battery Catlin; cable tanks #4, 5, and 6 are constructed outside west wall of Battery Weed.
CE 1906	Expanded	Around this time, a timber addition is constructed on north stone dock along with extension of the mine railway.
CE 1907	Built	Around this time, a mine boathouse and open dock house are constructed on the north stone dock and its timber addition.
CE 1910	Altered	Mine tracks are realigned.
CE 1913	Altered	Six three-inch rapid fire guns mounted at Battery Catlin.
CE 1913	Destroyed	Timber addition to dock destroyed by steamer "Hamilton" collision.
CE 1916 - 1918	Inhabited	1,400 troops are garrisoned at Fort Wadsworth.
CE 1917	Built	Around this time, a coincidence range finder station is built on the slope above Battery Bacon.
CE 1918	Abandoned	Battery Bacon is taken out of service.
CE 1919	Altered	Command shifts from Coast Artillery Corps to the infantry.
CE 1920	Established	Four anti-aircraft guns are emplaced at Fort Wadsworth.
CE 1921	Altered	Mine tracks are realigned.
CE 1927	Inhabited	Only fourteen enlisted men are on the post.
CE 1935	Built	Civilian Conservation Corps (390 Veterans Co.) and Works Progress Administration-funded laborers begin work at Fort Wadsworth; they construct part of seawall and undertake limited forestry work; probably also construct overlook wall.
CE 1940 - 1944	Planned	Anti-submarine net (series of subsurface mines) is planned across the Narrows.
CE 1941	Established	Fort Wadsworth is returned to the Coast Artillery Corp.
CE 1942	Abandoned	Battery Catlin taken out of service.
CE 1942 - 1945	Established	Harbor Entrance Control Post (HECP) command center established at Fort Wadsworth.
CE 1944 - 1945	Inhabited	Fort Wadsworth houses a service unit of Italian prisoners of war.
CE 1948	Developed	Trailer camp developed for military housing at Fort Wadsworth.
CE 1952	Moved	Korean War anti-aircraft unit assigned to Fort Wadsworth.
CE 1955	Established	Around this time, NIKE Surface-to-Air Missile Command center is established at Fort Wadsworth.
CE 1959 - 1964	Built	Construction of Verrazano-Narrows Bridge begins; buildings in Fort Wadsworth demolished along the bridge approaches. The bridge opens in 1964.
CE 1960	Removed	Winds and rains from Hurricane Donna probably damages north dock and buildings in the headland. All wood-frame buildings on the headland, including the mine defense buildings along the west side of Battery Weed and buildings on the north dock, are removed.

Year	Event	Major Event Narrative
CE 1972	Removed	The Department of Defense identifies Fort Wadsworth as surplus property to be transferred to newly established Gateway National Recreation Area at a future date.
CE 1979	Established	U.S. Navy takes over Fort Wadsworth from the Army as headquarters of New York Naval Station.
CE 1983	Reconstructed	U.S. Navy begins extensive redevelopment of Fort Wadsworth.
CE 1985	Damaged	Around this time, the Torpedo Storage Building is heavily damaged by fire.
CE 1994	Abandoned	New York Naval Station at Fort Wadsworth is decommissioned.
CE 1995	Established	National Park Service assumes jurisdiction of Fort Wadsworth, including the Battery Weed headland.

Physical History:

The following section provides information on the physical development and evolution of the site, organized by time periods. The narrative is taken directly from the 2008 report, "Cultural Landscape Report for the Battery Weed Headland, Fort Wadsworth, Gateway National Recreation Area." Graphics associated with this section are located at the end of this report, but a comprehensive collection of historic and existing photographs, maps, and plans can be found in the CLR.

NATIVE ENVIRONMENT AND COLONIAL SETTLEMENT, PRE-1809

Over many centuries, natural processes and physiographic events have shaped the coastal landscape of Staten Island and endowed it with a wealth of historically important resources both cultural and natural. Landform and habitat changes brought by rising sea levels resulted in the creation of inland marshes and supported a diverse collection of plant and animal species. From the time of the earliest sightings of Staten Island by European explorers, the headland at the western bank of the Narrows has held great strategic importance. Colonial agricultural settlement of the area by the Dutch beginning ca. 1662 included the development of farmsteads featuring simple wooded structures and furrowed fields. Beginning in the mid-eighteenth century, the long and strategic prospect offered from the heights of the bluff above the bay began to overshadow the agricultural value of the land. The vantage point from the bluff above the bay became the site of a semaphore station and lookout as the shipping trade expanded in the region. Recognition of the importance of the vantage point from this landscape led to a continuing effort to protect the entrance to one of the most important cities and trading centers of a young nation (CLR 2008:15).

Natural History:

From the time of the retreat of the last great ice sheet, the Laurentide Glacier, approximately 12,000 years ago, the landscape of the Battery Weed headland has remained an index of natural history. The Ronkonkoma and Harbor Hill moraines, terminal deposits left by the retreating glacier composed of boulders, gravel ridges, striated rock, and surface till, form the heights of the New England south coast islands stretching from Cape Cod to Staten Island. These moraines once acted as natural dams holding back glacial melt-water in a series of great lakes to the north. During a period of global warming, the flow of water from the north breached an area of the morainal dam and carved a deep chasm through the till, from the Hudson Highlands, south of the Catskills, to the mouth of the Atlantic Ocean at the site of Battery Weed on the Narrows of New York Bay (CLR 2008:15).

Although the site of Battery Weed is located within the Atlantic Coastal Plain physiographic region, which is generally characterized by level to gently sloping terrain, the extensive glacial deposits forming Staten Island resulted a much more varied topography. Daily tidal flows through the Narrows, to the present day, have eroded the moraine with a water depth in the Narrows of 100 feet to bedrock (CLR 2008:15).

A formation consisting of a scatter of materials, such as sandstones, siltstones, and schists in a variety of sizes from very large boulders to small stones and top soils, was left behind at the bluff above Battery Weed because of the carving out of this morainal dam. Over the many centuries, the effects of wind and water further shaped the bluff, eroding away the loose material, and exposing large boulders. This glacial and weather-carved landscape, although it has since been smoothed out and reshaped, remains evident in the steep drop-off from the crest of the bluff above Battery Weed to the waters edge below (CLR 2008:16).

The location of the Battery Weed at the head a major river system and along the coast of the Atlantic Ocean resulted in a diverse ecology. The paleo-environment (pre 8,000 Before the Common Era/BCE) was likely dominated by mixed tundra and spruce woodlands supporting herds of large fauna. During the warming of the Early Archaic period (8,000 BCE - 6,000 BCE), rising sea levels brought environmental changes to the landscape in the form of large inland marsh areas, and a predominance of pine-oak forests (CLR 2008:16).

Native American Habitation:

The ecological changes that resulted from broad environmental trends after the retreat of the glacier led to diverse and abundant fauna that supported Native American hunter-gatherer groups. Until late in the seventeenth century, Staten Island was home to the Lenape people, known by Europeans as the Delaware, who were part of the larger Algonquian linguistic family that lived on the East Coast from Maine to the Chesapeake Bay. Archeologists have unearthed projectile points, ceramic remains, and shell middens dating to 3,000 BCE, evidence of Lenape use of the available natural resources near the Battery Weed headland (CLR 2008:16).

The Lenape people called Staten Island Aquehonga-Monacknong, or Monacknong, meaning enchanted woods. Historian George W. Hilton noted in a 1964 publication that Native Americans also called the island Eghquaons, meaning high sandy banks. By any name, the island was host to a prosperous native culture. The Lenape were hunters and fishers harvesting an abundance of oysters from the shallow beds off the shores of the island. Although it is unknown precisely where, the Lenape also made substantial woodland clearings for the cultivation of corn (maize), beans, pumpkins, and tobacco. They made hooks of bone and wove hemp nets for fishing. The Lenape used rushes, grasses, and husks to make baskets and mats, and a variety of island plants and other materials were used for medicinal and ceremonial purposes (CLR 2008:16).

European Exploration and Colonization:

European discovery of Native American during the sixteenth century, followed by early seventeenth century Dutch attempts at agricultural settlement, began years of conflict over rights to the land. Commissioned by France to find passage to China, Italian Commander Giovanni da Verrazano anchored his vessel, the Dauphine, off Staten Island in April of 1524. He reported that oysters and fish were plentiful, and bears, turkey, wolves, fox, beaver, and muskrat were known to be on the island. Verrazano's report is the first known written description of Staten Island: "...this region which seemed so commodious and delightful, and which supposed must also contain great riches, as the hills showed many indications of minerals." A 1636 map of New Netherland and New England illustrates the abundant resources discovered in early explorations of the new world (CLR 2008:17, citing Holden 1964:10).

Explorations along the eastern seaboard of the United States and up the Hudson River brought several early navigators to the shore of the Battery Weed headland. In 1609, Henry Hudson, an English navigator employed by the Dutch West India Company, anchored his vessel the Half Moon in the Narrows off of Staten Island before embarking on his explorations of the Hudson River. Henry Hudson is credited with naming the island Staaten Eylandt in honor of the States-General, the governing body of Holland. Hudson's mate on the Half Moon wrote in his journal of being welcomed by the native people, "well-dressed in deer skins who brought green tobacco in trade for knives and beads. [They were said to] possess yellow copper and great stores of maize or Indian wheat...The country is full of great tall oaks" (CLR 2008:17, citing Steinmeyer 1987:17).

Settlement by the Dutch began almost immediately following Hudson's reports home. The Dutch established a settlement named New Amsterdam on the southern tip of Manhattan Island, which reached a population of two hundred by 1626. The government of Holland soon attempted to colonize nearby Staten Island by offering patroonships (large tracts of land granted for settlement) to wealthy directors of the Dutch West India Company and requiring them to bring farm workers and their families with them. Although repeated attempts at settlement were made during the period between 1639 and 1661, none was successful. The first Patroon, Michael Pauw, was granted all of Staten Island and part of New Jersey by the Dutch West India Company in 1630. Pauw made no attempt to colonize the land and apparently relinquished his rights in 1637. Captain David Pietersz de Vries, a prolific international maritime trader, received land rights on Staten Island soon after. In 1639, he sent a few families to settle and established a farm complex of his own, known as a *bouwerij* (the Bower) by the Dutch, in the area of the present Tompkinsville two miles north of Battery Weed. The farm was attacked and destroyed by the Lenape in 1641. Another grant was made to Cornelius Melyn who was granted all of Staten Island except for the De Vries farm. Although Melyn established a colony of about forty settlers approximately one mile south of the present Battery Weed site in 1642, tensions between the Lenape and the settlers led to abandonment of the settlement by 1643. Several violent incidents occurred between the Dutch settlers and the Lenape in the early years of colonial settlement, resulting in casualties of hundreds of people among both groups. In a particularly disastrous massacre known as The Peach War of 1655, a Lenape woman was killed by a farmer named Van Dycke for allegedly stealing a peach from his orchard. The Lenape people avenged her death with an attack on New Amsterdam where they killed Van Dycke. The Lenape were then forced to retreat to Staten Island where they proceeded to destroy Melyn's entire colony. Following this incident, most of the Lenape people left the island, retreating to a mainland area of what would later become New Jersey (CLR 2008:17-18).

It was not until seven years later, in 1662, that the first permanent Dutch settlement was established

approximately one mile south of Battery Weed at South Beach. The settlement, later known as New Dorp, was established in an area of fields suitable for the planting of grain with ample room for the pasturage of cattle, and with a creek that gave access to the lower bay. A record of the explorations in 1679 of two Dutch visitors to the island, Jaspas Dankars and Peter Sluyter, contains a description of a climb up a steep bluff along the eastern shore of Staten Island where the two became lost in the woods before they managed to make their way back to the shore, not far from where they had started their ascent. This account suggests that in 1679, portions of the bluffs along the eastern shore of the island near Battery Weed were thickly wooded (CLR 2008:18).

As the first Dutch colonists were settling in on Staten Island in 1664, King Charles II of England made a gift of the Dutch territories of North America to his brother James, the Duke of York. The agreement allowed the Dutch to remain unharmed, with original rights and uses to remain intact. Following James' accession to the throne of England, and after the Duke of York's purchase of Staten Island from the Lenape on April 13, 1670, English Crown Land Grants were made to various individuals covering every acre of land on Staten Island. The records of the State of New York disclose a large number of Crown Land Grants on Staten Island that were subject to annual quit-rents, which were fees payable by the grantee to England. A map prepared in 1907 shows colonial land patents dating from 1668 to 1712 in the area of the future site of Battery Weed. An unpatented thirty-acre area marked "F. Walton" appears to be on or adjacent to the Battery Weed headland, the earliest indication of ownership. By the mid-eighteenth century, settlements on Staten Island had grown sufficient to support at least four villages, with a ferry on the eastern shore to the north of the Battery Weed headland. Here, the Narrows was one of the most important physiographic place on Staten Island, shown prominently on maps of the period along with primary settlements (CLR 2008:18-19).

Finnish naturalist Peter Kalm (after whom Carl Linnaeus named mountain laurel *Kalmia latifolia*) visited Staten Island in ca. 1748 and described the colonial island landscape as:
...extremely pleasing, as it is not so much intercepted by woods, but offers more cultivated fields to view. Hills and vallies [sic] still continued, as usual, to change alternately. Near every farm house was an orchard. Cherry trees stood along the enclosures round corn fields. The corn fields were excellently situated, and either sown with wheat or rye. They had no ditches on their sides, but (as is usual in England) only furrows, drawn together at greater or lesser distances from each other. In one place we observed a water mill so situated that when the tide flowed, the water ran up into a pond, but when it ebbed, the flood gate was drawn up and the mill driven by the water flowing out of the pond. (CLR 2008:19, citing Steinmeyer 1987:32)

A painting of the eastern shore of Staten Island along the Narrows made two decades later illustrates the agricultural landscape that Kalm described. The shore also contained extensive salt meadows consisting of vast stands of native, saltwater-loving species such as salt cordgrass (*Spartina alterniflora*), and yellow saltgrass (*Spartina patens*), which were mowed for hay even though they were regularly inundated by the tides. The salt marshes of the coast were a valued natural resource as they produced annually large crops of natural grasses, and furnished good year-round natural pastures for cattle and sheep. Salt hay meadows were highly valued by the farmers whose lands bordered on them, as they constituted an unfailing source of hay for winter use and a surplus for exportation. In addition, salt hay meadows attracted a diverse group of coastal wildlife species, such as mussels, egrets, and herons (CLR 2008:19).

From the mid-eighteenth century until 1794, the Battery Weed headland and the area to south belonged to John Van Deventer and his family, and was known as Van Deventer's Point (the actual point was south of the Battery Weed headland). Under British rule, title to the land remained in the hands of the Van Deventer family. A farmhouse, later known as the Van Deventer-Fountain House was constructed on the point in ca. 1786. This property was located on a deep-water channel, ideally positioned for launching Atlantic crossings during the eighteenth century. John Van Deventer operated a shipyard during the middle of the eighteenth century and was commissioned by a group of Moravian settlers to build a sailing vessel at Van Deventer's Point. The ship he built there in 1748, the "Irene," made fourteen round-trip Atlantic crossings, bringing missionaries and settlers from Europe to the new world (CLR 2008:19-20).

The Van Deventer property was leased from Ann Jacobsen and Catherine Van Deventer by Cornelius McLean for farming during the late eighteenth century. It is unknown exactly what McLean raised on the leased land, but as illustrated in an etching showing farmland just to the north of the site in 1776, the land would have been suitable for pasturage, and was likely used for this purpose (CLR 2008:20).

Strategic Development at the Narrows:

The landscape of the Battery Weed headland was in a prominent geographic location overlooking the entrance to New York Harbor. During the early years of the eighteenth century, the harbor entrance became the commercial gateway to the interior, including Albany and Montreal and the Great Lakes, by way of the Hudson River. A competitive environment existed between the French and English over important trade routes opportunities for commerce in the region. Although the landscape was not occupied by any fortification at this time, there was a growing recognition of the strategic importance of this and other sites overlooking the entrance to New York Harbor (CLR 2008:20).

Colonial era fortifications in New York Harbor included Fort Amsterdam, built in 1626, at the southern tip of the island of Manhattan, and a battery on Governor's Island. A plan was approved in 1711 for a system of signal guns and fire beacons to be developed for several locations including "some eminence on Staten Island." With a charter for a ferry service between Manhattan and Staten Island given shortly thereafter in 1712, settlers were also beginning to realize the island's potential for agricultural (CLR 2008:20, citing Hilton, 19).

Although concerns related to the outbreak of war in the colonies between the French and the British in 1754 resulted in a proposal by the New York colonial government for batteries on Staten Island, the proposal was not implemented. However, in 1755 the colony did authorize a payment to carry two guns down to the Battery Weed headland along with tar barrels and posts for beacons. Maps of this period indicate only one building and a ferry landing at or near the Battery Weed headland (CLR 2008:20).

Following their evacuation of Boston in March of 1776, the British arrived at the Narrows of New York Bay. A drawing dated July 12, 1776, and titled "View of the Narrows between Long Island and Staten Island with our fleet at anchor and Lord Howe coming in," illustrates the British arrival at the bay just to the north of the Battery Weed headland. The British used Staten Island as a staging area, and both British and Hessian troops were stationed there throughout the American Revolution. An artillery post, probably of earth with wooden supports, was constructed by the British at an undetermined location at the top of the bluff above the present site of Battery Weed (CLR 2008:20-21).

By 1779, British defenses at the Narrows consisted of a redoubt, a line of twenty-six gun platforms, and a hot-shot furnace that was part of an ammunitions system used to set attacking ships afire. During this period, the bluff above Battery Weed became known as Flagstaff Hill, with a signal house and fort of earthworks. The island landscape served the needs of the military, as well as the burgeoning population of Manhattan, in supplying forage and firewood. The British occupation of the land along the west bank of the Narrows resulted in the harvest of many of the available mature trees in the area for fuel. By 1783, the British had evacuated New York, and the earthen fort they constructed on the slope above Battery Weed deteriorated in the years that followed (CLR 2008:21).

During the later eighteenth century, Governor George Clinton of New York, fearing insufficient federal funding to protect the port of New York, established a state board of commissioners, the Commissioners of Fortifications. The board was given extensive authority, including the power to "...enter and survey any land regarded as required for defense, and to purchase such tracts, and, when owners seemed recalcitrant or unreasonable, to proceed through the Chancery Court of the State of New York to force the sale on fair terms." Charles Vincent, an engineer commissioned by the U. S. War Department, identified privately held lands on both banks of the Narrows as lands required for the defense of the port of New York. Vincent submitted a report and comprehensive survey on the fortification needs of New York Harbor in 1794. In this report, Vincent referred to the site at the top of the bluff on the west side of the Narrows as "Stag Stake" and suggested it be used to pass along a successive relay of signals from Sandy Hook to Manhattan via Bedloe's (Liberty Island) two miles to the southwest of the city. By this method, he proposed a means to monitor the

entrance to New York Harbor for any threats to security and commercial activity (CLR 2008:21, citing Black 1983:28).

In his 1794 report, Vincent also discussed several possible sites for constructing batteries, noting the particular suitability of the site at “Sandy Bay” on the west bank of the Narrows, possibly referring to the Battery Weed headland and the cove to its north. Vincent considered the site “much more interesting on account of vessels coming much closer to it, driven by the currents and endeavoring to avoid the advancing high ground.” He suggested the establishment of a battery there “above the level of the highest tides” and “connected by a covered way with a redoubt to be erected on the extremity of the steep bank where formerly stood a block house.” This land belonged to the Van Deventer family, and although they were willing to sell the farm to the state, the board of commissioners considered the price extravagant. Despite this, in November of 1794, twenty-four and one half acres of the Van Deventer property along the shore passed out of private ownership, by order of the Court of Chancery, to the State of New York. Although the Battery Weed headland was in public ownership, the state would not develop the property for military purposes for another fifteen years (CLR 2008:22, citing Black 1983:32).

Landscape of Van Deventer’s Point:

By the first decade of the nineteenth century, the landscape of Van Deventer’s Point, including the Battery Weed headland, had changed relatively little over the course of the preceding centuries. Native American habitation of the area probably had little impact aside from possibly small agricultural clearings. Colonial settlement had a more extensive impact through development of agricultural landscapes. British occupation during the years of the American Revolution had probably the greatest impact on the site with development of an earthen fortification and harvesting remaining woods for fuel. In 1809, the Battery Weed headland was likely a broad sandy flat and beach, possibly interspersed with coastal grasses. The steep, irregular bluff above the future site of the present fort was probably characterized by glacial boulders, eroded banks, grasses and wildflowers, and trees, such as red cedar, oak, and pine. Earthen farm roads provided access to the beachfront site from both the north and south running across and diagonally down the bluff. The headland was probably still used for agriculture, probably by the Jacobson family who would have leased the land from the state. A farmhouse was located along the shoreline south of the point, and on the top of the bluff was another farmhouse and barn. Although the state had not constructed fortifications on the headland by 1808, plans were in the works for the strategic development of the Narrows, including construction of a large stone fortress along the water’s edge according to the federal second system of coastal fortifications. In the decades to follow, these plans would significantly alter the landscape (CLR 2008:22).

SECOND SYSTEM STATE FORTIFICATION, 1809-1846

During the early nineteenth century, contrasting cultural values of agriculture, harbor defense, and recreation came together in the landscape of the Battery Weed headland. In 1809, the State of New York began construction of its first military fortifications, transforming the earlier agricultural landscape with large masonry forts, batteries, wharfs, and other facilities constructed according to the second system of coastal fortifications developed by the federal military. During a long period of military inactivity that followed the War of 1812, the land was used for agriculture as well as for recreation. By 1846 at the end of state ownership, the fortifications had purportedly fallen into ruins. This condition, however, added to the picturesque character of the landscape, which had become a popular spot for taking in the expansive view of New York Harbor, and the subject of naturalists, authors, and poets (CLR 2008:29).

Romantic Staten Island:

New York City in the early nineteenth century was a rapidly growing center of trade, finance, and commercial activity. Staten Island, less than five miles offshore to the south remained largely a rural and agricultural community. The island, accessible since 1713 by way of a short ferry ride from Manhattan, expanded quickly in population and in 1800, the total population numbered 4,564, and by 1810 nearly a thousand more individuals had arrived. The island's agricultural landscape featured plowed fields of corn, hay, and rye, and orchards and cherry tree hedgerows between the furrowed fields. Although detailed written descriptions of the historic landscape immediately surrounding the Battery Weed headland are few, there are many historic accounts of the landscape of Staten Island. In a book published in 1829 and titled *Three Years in America*, author James Stuart wrote:

"We saw many comfortable looking farm houses, amidst rich valleys and lands, and orchards abounding in fruit; but what surprised me the most in looking at the fruit, was the extraordinary quantity of cherry trees producing the small black and red cherry. In this ride, I saw a greater number of cherry trees, I am persuaded, than I had seen in the whole course of my life...No part of the wood in Staten Island...is of great size, the British during their occupation of New York, in the Revolutionary War, having cut down for fuel all the wood within their reach." (CLR 2008:29, citing Steinmeyer 1987:62)

Continuing increases in population through the nineteenth century brought the growth and development of village settlements along the eastern shore of the island including Stapleton, Clifton, Tompkinsville, and Edgewater. Affluent families established country estates to the north and south of the Battery Weed

headland. One observer remarked in 1842:

"...the whole eastern shore [of Staten Island] is becoming almost a continued village from the Quarantine [Tompkinsville] to the Signal poles at Fort Richmond being occupied by country seats and town plots." (CLR 2008:29, citing Steinmeyer 1987:62)

Many authors and artists visited Staten Island during this time or passed along its shores. In 1839, author Herman Melville made a voyage from New York to Liverpool, and passed through the Narrows. Upon his departure and return, he took in the picturesque landscape of the Staten Island shoreline and the state fortifications at the headland in particular. Ten years later, he wrote of this landscape in his novel, *Redburn*. Although probably containing some fiction, Melville captured the character of the Battery Weed headland which had not seen active military use for some time:

"...on the right hand side of the Narrows as you go out, the land is quite high; and on top of a fine cliff is a great castle or fort [Fort Tompkins], all in ruins, and with trees growing round it...It was a beautiful place, as I remembered it, and very wonderful and romantic, too...On the side away from the water was a green grove of trees, very thick and shady and through this grove, in a sort of twilight you came to an arch in the wall of the fort...and all at once you came out into an open space in the middle of the castle. And there you would see cows grazing...and sheep clambering among the mossy ruins...and I once saw a black goat with a long beard standing with his forefeet lifted high up on the topmost parapet, and looking to sea...Yes, the fort was a beautiful, quiet and charming spot. I should like to build a little cottage in the middle of it, and live there all my life." (CLR 2008:29, citing Melville 1849:81,82)

Henry David Thoreau, at the age of twenty-six, lived as a tutor at the home of Judge William Emerson in the Staten Island neighborhood of Concord less than two miles directly west of the Battery Weed headland. Since the headland was between Judge Emersons' home and the sea, Thoreau presumably had occasion to walk along the waterfront there. Thoreau provided another character sketch of the coastal island landscape in a letter he wrote in 1843:

"I must live along the beach, on the southern shore, which looks directly out to sea...The cedar seems to be one of the most common trees here, and the fields are very fragrant with it. There are also gum and tulip trees...The woods are full of honeysuckle in full bloom, which differs from ours in being red instead of white...The painted cup is very common in the meadows here. Peaches, and especially cherries seem to grow by all the fences...The whole island is like a garden, and affords very fine scenery... seaweed, water, and sand; and even the dead fishes, horses and hogs have a rank, luxuriant odor; great shad-nets spread to dry; crabs and horseshoes crawling over the sand; clumsy boats, only for service, dancing like sea-fowl over the surf, and ships afar off going about their business." (CLR 2008:29, citing Steinmeyer 1987:63-65)

The island landscape, and particularly the Battery Weed headland overlooking the entrance to New York Harbor, drew the attention of many. From the heights of the bluff, visitors enjoyed the views of Manhattan, the bay and islands to the north and east, and the Fort Tompkins lighthouse—an aide to navigation built in 1828 on the Staten Island shore to the south. The coastal landscape also offered scenic views associated with island agriculture, offshore shipping, and fishing activities that appealed to visitors. The long prospect from atop the bluffs also offered strategic value, and although the aesthetic qualities of the site attracted many, its military importance would dominate the landscape (CLR 2008:31).

State Fortification of the Narrows:

By the late eighteenth century, an intensified international competition for territory and resources was underway. American domestic defense policy focused on the identification and acquisition of strategic coastal sites. In 1794, President George Washington initiated the country's earliest unified program for harbor defense, known as the First American System. Washington turned to French engineers residing in the United States to design fortifications for the protection of harbors and ports along the Atlantic Coast. Most forts consisted of shoreline batteries with open works and earthen parapets over which twenty-four pound cannons could fire. Many states retained ownership of defense sites and exercised control over construction and maintenance. While New York had acquired the site at the Narrows during this time, it did not build any structures there under the first system (CLR 2008:31).

Increased tension with Great Britain that led up to the War of 1812 prompted the United States to revitalize its coastal defenses. These improvements in military engineering were later termed the Second American System. The new program initiated during the presidency of Thomas Jefferson called for forts with more elaborate designs, most notably replacing earthen forts with all-masonry structures, many of which included circular or elliptical segments. A major innovation in American military architecture, the casemated gun emplacements, led to the construction of high, vertical-walled harbor defenses with a greater concentration of firepower in multiple tiers of guns. Armament installed during this period was typically larger and of greater numbers than First System weaponry. New York City was one of sixteen coastal locations identified as requiring defensive works in this new program of coastal fortification. Forts constructed by the federal government during this period in the New York Harbor included Castle Williams on Governor's Island, Castle Clinton at the Battery on Manhattan, Fort Gibson on Ellis Island, and Fort Wood on Bedloe's (Liberty) Island. Although the federal government recognized the merits of fortifications on Staten Island, other sites were funding priorities, so the Battery Weed headland was not initially included in the new federal construction Program (CLR 2008:31-32).

In place of a federal presence, the State of New York proceeded with plans for constructing its own fortification at the Battery Weed headland. In 1809, the state purchased an additional twenty-two acres to the south of the twenty-five acre Van Deventer tract it purchased in 1794. The second purchase made possible the construction of substantial defensive works at the site. The state planned two forts, Fort Tompkins at the top of the bluff and Fort Richmond, known as the Water Battery, on the beach below. An 1809 plan illustrates the proposed state military development, as

well as the earlier remnants of agricultural land use. This plan locates the Van Deventer farmhouse ("Jacobsons Dwelling") along with a barn and a fish hut on the shore, and the proposed military works, including batteries A and B, Fort Tompkins, Fort Richmond, two barracks, a dwelling, smith shop, office and store. The map shows a wharf extending eastward into the Narrows north of the proposed Fort Richmond (CLR 2008:32).

The state completed construction of Fort Richmond on the shore near the water's edge in 1810. The new Second System fort, built in a half-circle with a cluster of support buildings, and a new wharf to the north was constructed of solid masonry, possibly red sandstone, and measured approximately 266 feet along its west side, roughly 500 feet along the curved channel-facing curtain wall, and approximately 30 feet high. The state constructed two sets of barracks along the straight west wall of the fort and a powder magazine that was located near the center (CLR 2008:32).

By June of 1812, Congress voted for war against Britain, and just a few days later, but prior to the Senate taking the same action, the New York State legislature appropriated \$25,000.00 to build the second or upper fort, Fort Tompkins. Instead of the original modified rectangular plan documented in 1809, the state began building a pentagonal bastion in 1814 near the end of the War of 1812. Funding limitations led to cessation of work and the new Fort Tompkins remained unfinished. In addition to Fort Tompkins, by late in 1813 the state completed a blockhouse on the hill near the new fort (CLR 2008:32).

The bluff at the Battery Weed headland, which had been a signal flag site during the Revolutionary War, became known in the early nineteenth century as "Signal Hill" for its role in the relay of optical signals between Sandy Hook and the Merchant's Exchange in Manhattan. In 1812, the state legislature authorized the governor to arrange with the federal government the establishment of a telegraph observatory and signal poles at the state-owned site. A semaphore station, an optical telegraph system consisting of tall signal poles with adjustable flags, was constructed at the top of the bluff above Fort Richmond. By 1819, the state fortifications at the Narrows also included several small structures, probably the barracks, store, and office shown on the proposed 1809 plan (CLR 2008:33).

Fort Richmond served an important role during the War of 1812, and was considered the most important defensive position at the Narrows. The fort was used as a checkpoint for all vessels entering or leaving New York Harbor during this period. Although a maximum of 558 men were stationed at the site during the war, in 1814 New York Governor Tompkins stated that there were "quarters and tents at the state works at the Narrows for nearly 750 men." The importance of the fortifications at the Narrows was reflected in February of 1815 when, in honor of the ratification of the treaty of peace between Great Britain and the United States, the 46th U.S. Infantry Regiment at Fort Richmond participated in a "national salute" that was given from several New York Harbor defenses (CLR 2008:33, citing Black 1983:53-54).

Following the end of the War of 1812, the state had scarce funding available for the maintenance and repair of the fortifications, which were largely abandoned in 1816, giving good reason for Herman Melville's description of ruins more than two decades later. Despite the abandonment, the federal government was gaining an increasing interest in the site, in tandem with the growing importance of New York City as a gateway to the interior of the country. Many rounds of negotiations over the transfer of the site to the federal government were held between the State of New York and the War Department from 1820 to 1845, but none was successful (CLR 2008:33).

Landscape of the Battery Weed Headland:

After the initial development during the period leading up to and during the War of 1812, the state fortifications at the Narrows witnessed little new construction in the decades that followed. At the completion of a survey of the reservation in 1819, the state fortifications included the half-circle of Fort Richmond at the water's edge accessed by a road extending down the steep bluff. To the north of the fort was a wharf (dock), sheltered in a small bay that was probably lined by a sandy beach. The lower terrace surrounding Fort Richmond also contained a number of smaller buildings in a line at the base of the bluff between the fort and wharf, including a long rectangular building used as a barracks, a storehouse, office, and smith shop, all probably built around the same time as the fort in

ca. 1809. The pre-existing fish hut south of Fort Richmond, a remnant of the earlier private use, probably was removed with the state fortification of the headland. On the top of the bluff overlooking Fort Richmond was Fort Tompkins, the pentagonal bastion partially completed in 1814. To the south on the high point of the bluff was the wood signal tower erected in ca. 1812 as part of a system of semaphore signals used to communicate across the broad expanse of the harbor. The old farmhouse near the south shore of Van Deventer's Point was probably removed with the development of Fort Tompkins in 1814. The state had planned construction of batteries along the edge of the bluff south of Fort Tompkins, but these were apparently not built during this period (CLR 2008:33-34).

By 1846, more than three decades after the completion of Fort Richmond, the reservation was reportedly in a ruinous state. While the degree of deterioration at Fort Richmond is not known, Fort Tompkins, which was never completed, was apparently quite ruinous according to the earlier quoted description by Herman Melville. Fort Richmond probably fared better because of its function as a monitor of the shipping lanes through the Narrows. The rest of the state reservation was leased to farmers, who, as Melville wrote, grazed their sheep, cows, and goats there (CLR 2008:34).

While military use of the headland had declined by 1846, this pastoral landscape, including the craggy bluff above Fort Richmond with its panoramic views and groves of trees clinging to the slope, was becoming a favorite destination for strolling. The bustling activity of the sailing vessels below, the curved stone walls of the two Second System forts—Fort Tompkins on the top of the bluff and Fort Richmond on the beach—together with the wind-blown and weathered quality of the eroding rocky bluff lent a lovely picturesque quality to the site. A ca. 1840 etching captures the uniquely layered character of the headland during this period. In the etching, entitled "Scene on Battery Point," a curious discussion takes place atop the bluff between what appears to be military, government and private interests while sightseers stroll along the crest of the bluff in the background (CLR 2008:34).

Within a decade of this etching, the landscape would change dramatically as the old state fortifications gave way to much larger and stronger defenses erected by the federal government. Despite the change, however, visitors would continue to come to the site for its picturesque qualities (CLR 2008:34).

THIRD SYSTEM FEDERAL FORTIFICATION, 1847-1885

The headland at the west bank of the Narrows, although used consistently for both harbor defense and recreation, changed dramatically during the years between 1847 and 1885. The construction of a new Third System Fort Richmond (Battery Weed), and the later reconstruction of Fort Tompkins above, resulted in extensive reshaping of the coastal landscape. The bluff above the present site of Battery Weed, a rocky and partially wooded overlook, was cleared, graded smooth, and seeded with lawn. Technological advancements in weaponry and military tactics lead to the acquisition of more land for the military post and the addition of ground batteries, large new earthen forms, and subsurface structures in the landscape. All the while, visitors came to the increasingly popular seaside site to enjoy the scenic views of busy New York Harbor (CLR 2008:43).

Pastoral Staten Island:

Throughout the early nineteenth century, the port of New York served as the main gateway to the interior of the rapidly developing nation. The port was at the head of the state's canal system that gave access to the Great Lakes, and served a rapidly expanding system of railroads on both the New York and New Jersey sides. By 1840, New York City was the busiest port in America, moving tonnages greater than Boston, Baltimore, and New Orleans combined. Seventy percent of the total imports into the United States passed the Narrows into New York Harbor. A renewed interest in coastal defense, particularly at the Narrows that was the main entrance into the harbor from the Atlantic Ocean, accompanied this rapid economic growth. Development of the New York Navy Yard at Brooklyn underscored the nation's interest in the security of New York Harbor (CLR 2008:43).

Along with the economic growth, New York City's population swelled with the influx of immigrants from Europe during the 1840s, and by 1860, the city numbered more than one million people. Respite from the crowded streets was difficult to find. Residential squares such as St. John's Park, Gramercy Park, Union Square, and Washington Square were usually fenced in with access restricted to neighboring property owners. It was not until 1858 that concerns for public health, in addition to a growing desire for pleasant outdoor public social spaces such as those provided in Europe by noblesse oblige, resulted in the Greensward Plan for Central Park by Frederick Law Olmsted and Calvert Vaux (CLR 2008:43).

While such new urban landscapes as public parks and promenades fulfilled some of the needs for public green space, the wealthy and leisure class could also afford to escape the city entirely. The rural, coastal landscape of Staten Island, somewhat wild and windswept, provided a welcome relief from the pace and disturbance of rapid industrialization and working-class crowds of Manhattan Island, Brooklyn, and nearby cities in New Jersey. For many, Staten Island also had strong romantic appeal. Although romanticism had its roots in Europe in the late eighteenth century, by the mid-nineteenth century, the idea of naturalistic or picturesque beauty that harkened back to preindustrial harmony was becoming widely appreciated among the wealthy and in artistic circles. This was especially evident in New York, a cosmopolitan city with continuing ties to European cultural influences (CLR 2008:43).

Staten Island was especially favored because it offered a sense of remoteness, yet was easily accessible by ferry from Manhattan. During the 1850s, running time of the ferry was only about thirty minutes, only slightly more than it is presently, and by the 1860s, ferries were operating on an hourly schedule. The accommodations aboard these ferries included bars with refreshments, and lunch counters stocked with biscuits, sausages, dried beef, and fruits. On the approach to the island, passengers were able to view the dramatic rise of the terrain from the water. Todt Hill, five miles to the west of Battery Weed at an elevation of 409 feet, was the highest point on the eastern seaboard south of Maine (CLR 2008:44).

Places such as the military fortifications at the Narrows offered cool breezes and picturesque vistas, and were especially popular destinations for an afternoon stroll. During the middle of the nineteenth century, many wealthy New Yorkers also settled on Staten Island, establishing large country estates overlooking the harbor (Figure 1). By the post-Civil War years, these estates, laid out in the tradition of English landscape gardens with winding drives through ample grounds, extended across former

farmland to the west and south of Fort Tompkins and Fort Wadsworth (Figure 2). One of the largest estates in the area, belonging to the Appleton and Jones families, lined the west side of New York Avenue across from the military reservation (CLR 2008:44).

The Staten Island landscape also offered its seaside charms as inspiration to artists such as American landscape painter Frederick Kost (1861-1923), who resided on the island between 1867 and 1900. Kost painted softly lit and atmospheric scenes in the New York Harbor region, often depicting harvest of salt hay meadows. Jasper F. Cropsey (1823 - 1841), painter and architect known for landscape and Civil War scenes, was a founder of the American Watercolor Society and was born on his father's farm in Rossville on Staten Island. The landscape architect Frederick Law Olmsted, who designed Central Park along with Calvert Vaux, also was charmed by the beauty of Staten Island. The shorefront farm he purchased at the south end of the island in 1848 was advertised as having a "prospect...of unsurpassed beauty" (CLR 2008:44, citing Roper, 56).

Federal Fortification of the Narrows:

The origin of the federal fortification of the Narrows that began in 1847 traces back to development of the Third System of coastal defense that began in 1817 under the direction of French military engineer, Simon Bernard. Unlike the earlier two systems, the Third System was initiated with no immediate need for war-time security. Bernard's goal was to construct forts of permanence that could resist the erosive actions of storms and waves as well as enemy attacks. All forts utilized casemates resulting in multiple tiers of armament. Third System forts varied widely depending on the topography, available materials, remoteness, or proximity to population areas, as well as the size and importance of the channel requiring protection. Third System forts were generally hexagonal in plan, and included one or more tiers of arched casemates that nearly always extended the full length of the seaward front, and walls were made of stone or brick a minimum of five feet thick. Armament improvements included the Columbiad, a smaller gun with greater versatility and range that fired either shell or shot at any angle between zero and forty degrees, and Rodman guns in calibers as large as fifteen or twenty inches. The substantial increase in firing elevation afforded by the multiple tiered-forts nearly tripled the range of American armaments (CLR 2008:45).

Under the Third System, the Army Corps of Engineers designated the west bank of the Narrows a "class one" project, vital to the security of the nation, and recommended that the development of adequate defenses there be commenced as soon as possible. New military objectives began to take shape as hostilities developed with Mexico over expansion of United States territory in the mid-1840s. Plans for construction of the new Third System Fort Richmond (Battery Weed) were begun in 1846, the same year that the Mexican-American War began. Major General Joseph G. Totten, U. S. Chief Engineer, was the principle designer of the new federal fortifications on both sides of the Narrows from 1838 until his death in 1864. One of Totten's main objectives was to have the field of fire include as much of the shoreline to the north and south of the Narrows as possible. Plans for the new Fort Richmond rested on the potential to increase the field of fire by the reorientation of a new structure fifteen degrees further to the south. This reorientation in combination with the range of fire possible from the east side of the Narrows at Forts LaFayette and Hamilton, would secure the harbor entrance (CLR 2008:45).

Conveyance of the forty-seven acre military reservation on Staten Island from state to federal ownership occurred in February of 1847. Almost immediately, the U. S. War Department began construction of the new Fort Richmond directly on the site of the earlier Second System fort. A new stone dock was also planned just to the north. Construction of the new fort employed men with horses and carts and a pivoting crane structure used to move heavy materials into place. Work on the new fort proceeded quickly. In mid 1850, however, in the wake of the Mexican-American War, federal appropriations began to dry up. The lack of funding slowed work considerably until 1852, when construction operations were suspended completely. It was not until late in the summer of 1854 that Congress renewed appropriations to continue work on the new fort (CLR 2008:45-46).

Federal plans for the fortifications required the acquisition of additional lands, including five acres in 1854, and seventeen acres at the top of the bluff along New York Avenue acquired from William Aspinwell in 1856. With these purchases, the federal government was in possession of the area from the waterfront at the Narrows to beyond the crest of Flagstaff Hill, a roughly seventy-acre tract that

became known as the United States Reservation (CLR 2008:46).

The years leading up to and during the Civil War brought conflicts of ideologies and commercial interests to the New York City region. Economic competition between the northern and southern regions of the nation became an important factor in the years leading up to the Civil War. During this politically tumultuous time, the northeast witnessed a rapidly growing urban population and economy based on industry, family farms, mining, commerce, and transportation. New York City had strong commercial and economic ties with the south and resisted demands to discontinue the profitable cotton shipping trade (CLR 2008:46).

Fort Richmond was nearing completion when the Civil War broke out in 1861, but sections such as the seawall remained under construction. In August of 1861, the fort became garrison for the first troops from the 5th Regiment New York Volunteer Artillery. Despite this, through most of the long years of the Civil War, Fort Richmond did not see any active combat, only occasional artillery testing. Army reports give 1864 as the year of completion of Fort Richmond; adjoining Fort Tompkins remained unfinished. That same year, an inventory of armaments at Fort Richmond listed guns in every position of the three-tier casemates with more guns added to the earth-covered barbette tier during the following year. At the close of the Civil War in November of 1865, the United States War Department changed the name of Fort Richmond to Fort Wadsworth in honor of Brevet Major General James S. Wadsworth who died due to wounds received at the Battle of the Wilderness in Virginia the year before (CLR 2008:46).

In the isolationist climate of the years following the Civil War, domestic affairs, especially economic development, became a national priority. A broadly held belief existed that war was unlikely, and a new attitude of anti-militarism developed. A distrust of the military was even voiced by some citizens, and this dampened support for the expansion or modification of coastal fortifications (CLR 2008:46).

Despite this, the War Department invested in a number of major improvements during the post-war period at the Narrows. However, technological advances in heavy ordnance that were occurring during the 1870s soon rendered the forts on the Staten Island shore militarily obsolete. The Third System of compactly designed granite casemates proved to be impossible to modify to accommodate the new larger guns and rifles that emerged following the Civil War (CLR 2008:47).

Development of the U.S. Military Reservation:

The construction of the new Fort Richmond by the federal government beginning in 1847 resulted in extensive changes to the former state military reservation at the Narrows. Other than the earthen batteries Morton and Hudson, the reservation, however, initially featured few military structures aside from the main forts. Much of the landscape continued to be used for pasturage even beyond the federal purchase of the land. Indeed, account books of Major General Delafield from the 1850s include entries for pasture rental (CLR 2008:47).

In 1859, as work continued on Fort Richmond, the War Department began construction on a new fort to replace the old pentagonal Fort Tompkins. The new fort was planned as a supplemental structure intended primarily to protect Fort Richmond and the reservation's batteries. The new stone fort was built on the site of the old fort in an asymmetrical pentagon plan with flanking earthen batteries to the north and south. The fort featured a dry moat, central parade ground, and exterior earthen glacis. Materials were brought to the site by an inclined railway extending up from the shoreline. Construction would continue for another decade and a half, slowed in part by supply limitations during the Civil War (CLR 2008:47).

The Civil War witnessed construction of a number of other buildings and structures as the troops at the military reservation rose to a high of 1,921. Wood buildings constructed to support the garrison included twelve two-room barracks, two stables, officer's quarters, a hospital, laundry, kitchens, and storage buildings. Following the war, federal funds were not always forthcoming for modifications to batteries and armaments, but engineering and labor was available, and was put to use in the repair and maintenance of the grounds, roads, and remaining buildings and structures on post. By 1867, most of the frame buildings constructed during the war were condemned and subsequently removed. Primary roads were macadamized after the war and others received a new dressing of gravel (CLR

2008:47).

Despite the post-war decrease in military expansion, the military reservation at the Narrows continued to witness major construction as work progressed on completing the new Fort Tompkins that was begun just prior to the Civil War. Work on the structure was largely complete by 1871, but work continued through 1876, although it was never fully completed. In the surrounding landscape, the new fort replaced the fenced pastureland, round stone bastions, and gently curving earthen road of the earlier fort with paved and straightened roads (present Hudson Road), engineered slopes, and expansive manicured lawn (CLR 2008:47-48).

Fort Wadsworth was garrisoned by units of the Regular Artillery regiments in the decades following the Civil War. During this time, the number of men on post declined markedly, fluctuating between fifty and one hundred prior to 1890. With much less military activity, and the completion of major construction at Fort Tompkins by 1876, the landscape of the military reservation began to assume a park-like character with only an occasional test firing of artillery. Within the wider scenic context of the island landscape, the dramatic beauty of the reservation with its bluff overlooking the harbor drew the attention and praise of both military and non-military visitors. General Sheridan, who inspected the reservation in the late summer of 1884, wrote that it was "a beautiful post." Caroline Winne, wife of Army surgeon Captain Charles Winne, wrote in the closing years of the nineteenth century after many years on post that she was "...still discovering the attractions at Fort Wadsworth, such as walking in the woods, where she admired the great variety of wild flowers" (CLR 2008:47-48, citing Black 1983:97,99).

The Landscape of the Battery Weed Headland:

With federal refortification of the Narrows that began with the construction of the new Fort Richmond in 1847, the landscape began to shift from its romantic, ruined character in the preceding decades since the end of the war with Britain, to a highly engineered, manicured appearance. The landscape during this time also became an integral part of a larger system of defenses designed by General Joseph G. Totten. The headland was carefully engineered to coordinate not only its site-specific conditions, but also a network of fortifications, particularly those on the opposite side of the channel on Long Island: Fort Lafayette as Fort Richmond's water-level counterpart, and Fort Hamilton as Fort Tompkins' upper-level counterpart (Figure 3) (CLR 2008:48).

Construction of the new Fort Richmond, which was completed at the close of the Civil War in 1864 at a cost of three quarters of a million dollars, had a marked impact on the surrounding landscape, most notably through replacement of the much smaller half-round fort. The new granite fort was constructed seventy-five feet into the Narrows, which interrupted the natural beach that had remained in front of the old fort. The northeast bastion was located between the high and low water marks. The eastern scarp or outer edge of the new fort was designed to parallel the main ship channel. Given its watery location, the stone structure was built on a network of wooden piles driven into the earth that supported granite foundation slabs (CLR 2008:48-49).

The granite block fort measured 286 feet along each channel front wall, and 450 feet along the west or inland scarp wall. Designed with three casemated tiers rising one on top of the other, the fort featured an open top fourth tier known as the barbette tier, which rose sixty-three feet above the Narrows. It was covered with earth and edged with a four foot high wall (parapet) along the channel side. Thirty-one gun emplacements, nine on each of the channel fronts and one in each bastion (corner position) were located on the barbette tier. The gun emplacements, circular raised brick and mortar pedestals, featured iron pintles, or pins, designed to attach to rotating cannon. The area surrounding the gun emplacements on top of the parapet was finished in turf. Circulation was along the interior edge of the barbette tier, which was fitted with an ornamented iron railing (CLR 2008:49).

The increased size of the new Fort Richmond necessitated not only its extension into the Narrows, but also into the adjoining bluff near the southwest bastion. The bluff here was excavated and plans were developed for grading the area into an even, engineered slope. The grading and excavation was, however, limited to a relatively small area and much of the bluff remained in its rocky, eroded, and tree-covered condition. Engineers constructed a retaining wall at the base of the steep slope to hold back the earth and provide a level area for the realigned roadway that extended along the base

of the bluff. A second wall was constructed to retain the lower edge of the roadbed (CLR 2008:49).

In an effort to inhibit direct ground attack by land or water, General Totten designed a moat around the entire fort. Entry to the fort would be only by way of a drawbridge that was later integrated into a two-story guardhouse completed in ca. 1860 on the west wall of the fort. Plans for the moat called for it to have a depth of six-and-one-half feet along the gorge curtain, or landward side of the fort. The ditch was thirty feet wide at its widest point at the entrance to the fort and fifteen feet wide at the bastions. Because the fort was sited beyond the low-tide mark, a cofferdam was needed to allow for the construction of the outer walls of the moat (seawalls). The cofferdam, in place by 1855, was approximately forty feet out from the eastern scarp, and measured about sixteen feet wide, filled with cobbles and boulders contained within a timber frame (Figure 4). The cofferdam also served as a temporary construction wharf (CLR 2008:49).

In 1858, the Army began construction of a new stone dock (wharf) at the north end of the seawall, north of the fort. This replaced the cofferdam around the perimeter of Battery Weed that had been used as a temporary wharf, and apparently supplemented a second wharf at the south end of the reservation. Measuring thirty-eight feet wide and eighty-one feet long, the north dock provided a permanent berthing place where cargo was unloaded, a necessity given the lack of land routes to Staten Island. Soon after the dock was completed, the Army built an inclined railway extending up the slope from the new dock. The primary purpose of this railway was to bring supplies up to the top of the bluff where construction of the new Fort Tompkins was begun in 1859. Materials were lifted from ships on a davit and powered by steam engine over a horizontal distance of 700 feet and a vertical lift of 125 feet to the construction site (CLR 2008:49-50).

To the rear of the fort and north dock at the base of the bluff were six ancillary buildings, probably constructed of wood. Several of these may have existed prior to the federal government's acquisition of the reservation in 1847, while others were probably built to support the construction of Fort Richmond. The buildings extended in a row and included, from south to north, a smith shop, galvanizing building, store house, carpenter's shop, office, and a barn (CLR 2008:50).

During the Civil War, the federal government began construction on a number of new fortifications intended to supplement Fort Richmond and Fort Tompkins. On the headland, two massive earthen batteries were built beginning in 1862 along the shoreline to the north and south of Fort Richmond. Construction of the batteries required realignment of the roads as well as removal of the six support buildings at the base of the bluff. Named the North and South Cliff Batteries, each featured a massive earthen berm with a series of open barbette batteries on the top supporting fifteen-inch guns set on stone and concrete emplacements (Figure 5). The North Cliff Battery also featured an underground ammunition magazine known as a bomb-proof parados. This structure was constructed at the south end of the earthen battery, close to Fort Richmond. Access to the parados was by a narrow passage lined by granite retaining walls. The 1863 plan for the batteries also called for construction of an earthwork or berm along the top edge of the bluff with several gun emplacements, and the grading of the bluff into a uniform, engineered slope apparently intended as a sort of glacis for Fort Tompkins (see Figure 5). These changes were not made until after the Civil War (CLR 2008:50).

Aside from its primary purpose as a fortification, the military reservation was a popular place for the public to visit in the years leading up to the Civil War, attracted in part by the ongoing construction of the two forts. An etching overlooking Fort Richmond from the top of the bluff published in 1852 illustrates visitors taking in the view of the construction of the new fort and the busy harbor in the background. The etching also shows the irregular and apparently eroded bluff and a signal house and semaphore station, successors to the earlier signal tower, perched at the edge of the bluff just east of the round bastions of the old Fort Tompkins. A two-rail pasture fence ran alongside an unpaved road at the top of the bluff. This illustration was apparently accompanied by the following article entitled "New York Bay and Harbor:"

"...the view...from this high promontory, is truly beautiful; here opens from the sea, or lower bay, a fairy scene unsurpassed in the world, not excepting the bay of Naples. All tourists agree on this point. The bay...its smooth surface dotted over by numerous snow-white sails; the hurrying to and fro of hundreds of steamboats, packet ships, and smaller craft, continually passing in and out; while here

and there is a gigantic ocean steamer from old Europe. The whole forms a picture of brilliancy, which defies the painter's pencil or the poet's pen." (CLR 2008:51, citing "New York Bay and Harbor," 25 September 1852).

This scene was also the subject of an etching produced in 1860, looking over the southwest bastion of Fort Richmond from the top of the bluff, with the Great Eastern steamship sailing up the Narrows. This illustration shows the watered moat with visitors strolling on top of the seawall. Others appear to be taking in the view from the barbette tier of the fort. In ca. 1872, Fort Richmond—by then renamed Fort Wadsworth—was the subject of a painting by soldier and artist Seth Eastman. Viewed from Fort LaFayette across the Narrows, the painting depicts the massive fortress set against the rough bluff with the low profile of Fort Tompkins above. This water-level view of the fort clearly illustrated its formidable presence on the Narrows (CLR 2008:51).

The character of the landscape surrounding the military fortifications changed markedly in the years soon after this painting was completed. Much of the change was not related to major new building construction, aside from addition of a boathouse on the north dock in 1877, but rather to refinement of the landscape. The long years of construction at the reservation had resulted in irregular piles of earth and improper drainage. Grading and maintenance of the grounds was not just an aesthetic improvement, but was also considered an important contribution to the military readiness of the forts and batteries. The condition of the landscape had also become a matter of public concern. Nearby residents believed drainage problems resulting from the unevenness of the ground contributed to a higher than usual incidence of malaria in the nearby Village of Edgewater. They petitioned the Secretary of War and Congress for appropriations to carry out the needed landscape improvements. In 1873, perhaps as a result of this public pressure, the grounds surrounding Fort Tompkins and Fort Richmond were cleared of vegetation and graded into even slopes (Figure 6). After grading, the exposed soil on parapets, paradors, traverses, terrepleins, glacis, and elsewhere was finished in turf, resulting in a look of manicured lawn. The turf was necessary to hold down the earth and prevent erosion, while mowing kept the ground open and free of obstructing woody vegetation (CLR 2008:51-52).

One of the most noticeable of these landscape changes was the extensive grading of the bluff to an even, engineered slope, completing the plans drawn in ca. 1863 and extending the work that had been completed earlier to the section off the southwest bastion of Fort Wadsworth (see also Figure 6). Completed in ca. 1873, the grading transformed the once craggy bluff above the fort into a carefully groomed, steeply sloping lawn. With this grading, the site became spatially open and views to the northeast, east, and southeast were no longer framed with trees and rock outcrops, but completely unrestricted. This change was necessary from a military need in order to provide clear lines of sight from the new Fort Tompkins. It was probably as part of this grading that the earthwork at the top of the slope parallel to Fort Tompkins, proposed in the ca. 1863 plan, was constructed. The earthwork, referred to as a covered way, featured a road along its inner side, later known as Hudson Road, and two gun emplacements at its south end aimed southeast toward Lower New York Bay (CLR 2008:52).

The engineered slope with its finely manicured lawn is illustrated in a postcard dating to ca. 1890 looking north toward officers' quarters and post headquarters north of Fort Tompkins on Mount Sec Avenue. The postcard also shows the turf glacis extending off the north end of Fort Tompkins, Hudson Road, and the road leading down to Fort Wadsworth, later known as Battery Weed Road, surfaced either in macadam or fine gravel. This park-like setting proved popular with visitors, who continued to come for the spectacle of the busy harbor. Visitors also picnicked along the crest of the slope and strolled along the seawall around the waterfront of Fort Wadsworth (CLR 2008:52).

Perhaps the most revealing description of the Battery Weed landscape during the late nineteenth century comes from an 1889 Staten Island guidebook by Reau Campbell. Although written two years after the end of this period, this account expresses the character of the headland landscape as it had developed over the previous decades. Campbell describes the experience of visitors who came to the military reservation for a stroll and to take in the view:

"Fort Wadsworth is a more formidable name than Rosebank [a neighborhood to the north], but in these piping times of peace the Fort is a good place to go for a summer's jaunt...Passing in front of

the Officers' quarters, a row of comfortable houses with the Commandant's elegant one on the bluff overlooking the sea; then come to the grassy parapets. There is a smooth pathway all along the top. The view is magnificent. A hundred feet below is the granite lower fort [Battery Weed] bristling with a hundred guns...These parapets do not look as made for war, but for lovers' uses. It is a veritable lovers' walk. The gentle sloping [sic] requires a slow walk, and there is time to say many pretty words before the end is reached; and the green grass is an inviting resting place, where one may sit and watch the ships come and go...The music from Fort Hamilton comes floating on the summer air across the Narrows...Fort Wadsworth offers everything for a delightful ramble on a summer's day." (CLR 2008:52-53, citing Black 1983:101-102)

Between 1847 and 1885, the landscape of the old state military reservation at the Narrows was transformed under federal ownership. Aside from the two new stone fortresses and extensive lines of earthen batteries, the once wooded and rocky bluff had been cleared, graded smooth and planted with grasses. Views of the bay from the crest of the slope, once framed with mature trees, were now spatially open, unrestricted, and covered with neatly groomed lawn. Despite the change to a more engineered appearance, the public continued to visit the military reservation, particularly for the walk along the top of the slope and down to Fort Richmond to take in the panoramic view of the harbor. This use, in conjunction with decreased military activity, lent the landscape the feeling of a public park and promenade. In the decades to come, the landscape of the Battery Weed headland would see the addition of many military structures and technological advances, but its overall character as developed during this period would persist (CLR 2008:53).



Figure 1. C.1854 view showing country estates on Staten Island and federal fortifications at the Narrows. (Reproduced from John A. Kouwenhoven, *The Columbia Historical Portrait of New York*, New York: Doubleday & Company, Inc., 1953. Annotated by SUNY ESF)

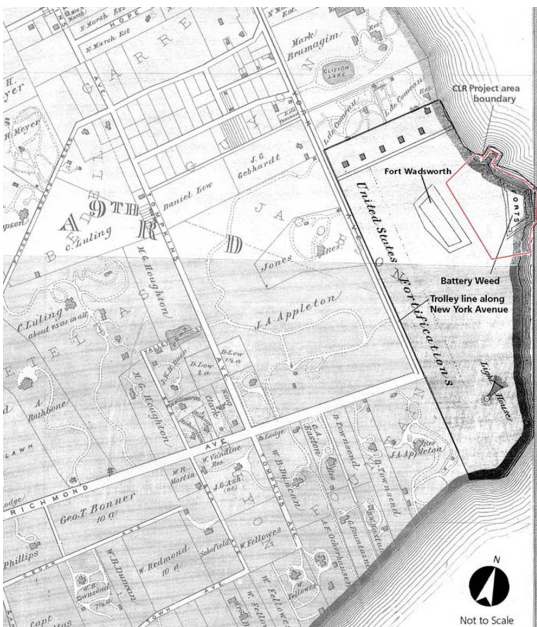


Figure 2. Detail of an 1874 atlas of Staten Island showing the development of country estates in the area surrounding the federal military reservation. (Collection of the Staten Island Institute of Arts & Sciences, annotated by SUNY ESF)

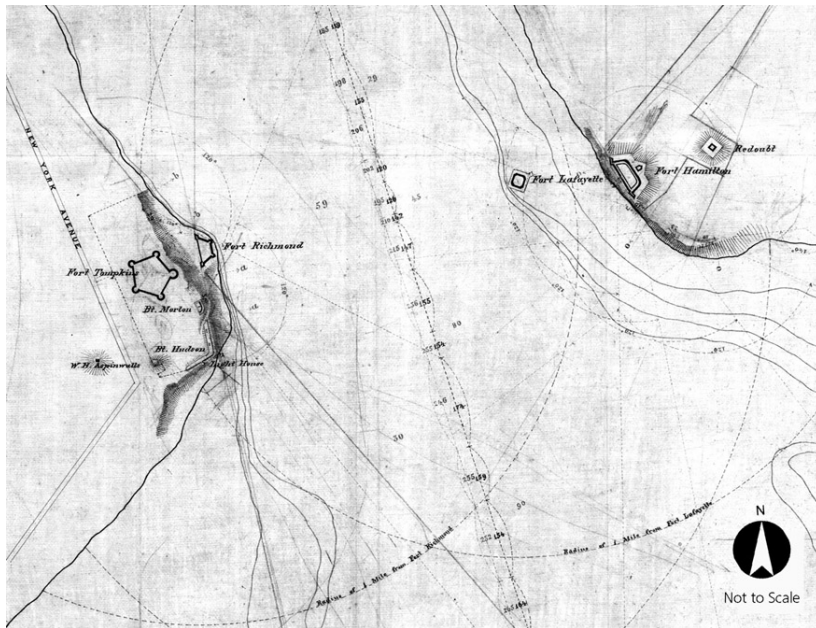


Figure 3. An 1857 plan showing the context of the new Fort Richmond as part of a system of fortifications in the Narrows. (RG 77, Dr 36, Sht. 65, Cartographic Division, National Archives II, College Park, Maryland, annotated by SUNY ESF)

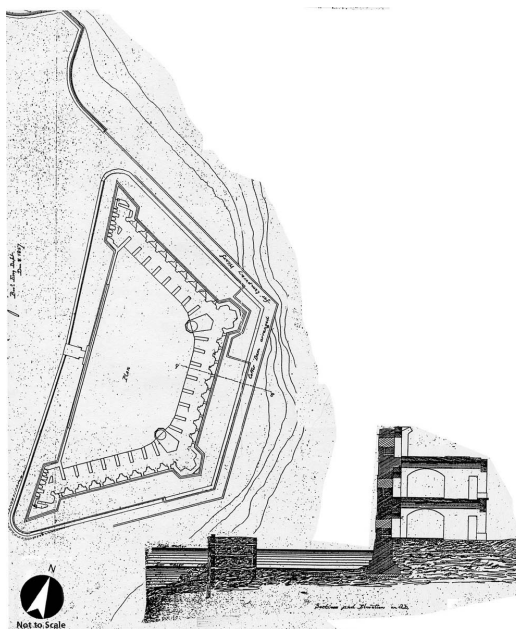


Figure 4. Plan and section drawings made in 1857 showing the moat and cobble filled timber cofferdam. (RG 77, Dr 43, Sht. 46, Cartographic Division, National Archives II, College Park, Maryland, annotated by SUNY ESF)

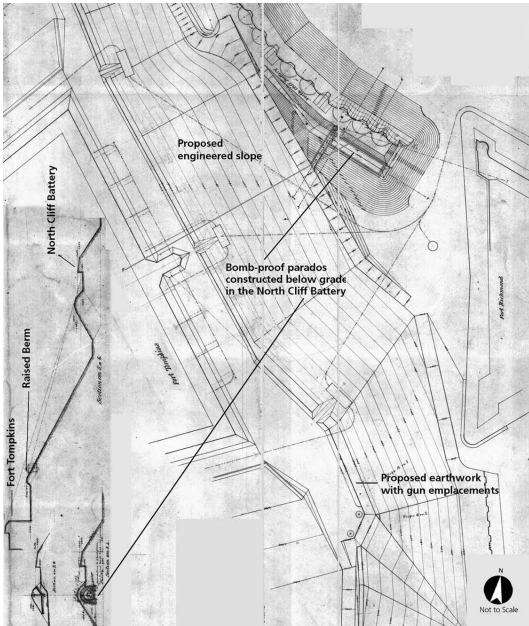


Figure 5. C.1863 drawings showing the location of North Cliff Battery with below grade bomb-proof parados. (RG 77, Dr 41, Sht. 55, Cartographic Division, National Archives II, College Park, Maryland, annotated by SUNY ESF)

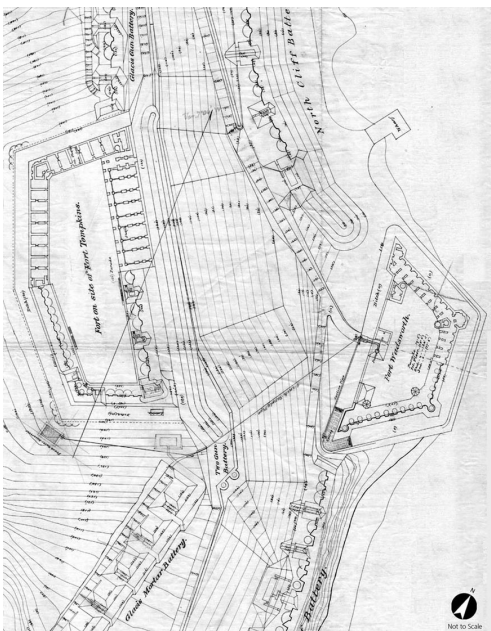


Figure 6. A 1886 plan of the headland through the end of the Third System period following extensive grading work during the 1870s. (RG 77, Dr 41, Sht. A, Cartographic Division, National Archives II, College Park, Maryland, annotated by SUNY ESF)

ENDICOTT PERIOD AND WORLD WARS I AND II, 1886-1945

From 1886 to 1945, the landscape of the Battery Weed headland was developed and adjusted repeatedly as the military reservation adjusted to technological innovations in a new phase of coastal

defense known as the Endicott period. Fort Wadsworth, renamed Battery Weed in 1902 after Brigadier General Steven H. Weed who was killed at Gettysburg, was adapted from its function for heavy ordnance to being a storehouse and part of an extensive underwater mine defense system, one of the chief technological innovations of the Endicott period. This system included additions to Battery Weed, construction of a railway system to transport torpedoes, modification of the north dock, and construction of several support buildings. In addition to the mine defense system, changes during this period also included reconstruction of the North and South Cliff Batteries to accommodate upgraded weaponry. After World War I and end of the Endicott period, the Battery Weed headland entered another period of minimal military activity when few changes came to the landscape (CLR 2008:75).

Staten Island – New York City Borough:

At the end of the nineteenth century, northeastern Staten Island in the vicinity of the U. S. military reservation was in transition as new transportation links to rapidly urbanizing New Jersey fostered industrial and residential development. In response to its development potential as well as efforts to secure ties to New York, Staten Island was incorporated as one of the five boroughs of Greater New York City in 1898 (CLR 2008:75).

While regular ferry service to Manhattan continued throughout this period, the shift in the island's transportation network came with the first railroad bridge to New Jersey completed in 1889. The increasing use of automobiles further spurred development and connections to New Jersey, with three bridges to Staten Island opening between 1928 and 1931. Within the island, transportation improvements included a street-car trolley started in 1886, which began at St. George on the northeastern shore of Staten Island, ran south on New York Avenue, and turned west on Richmond Avenue within the military reservation. Here, riders could get off to walk the short distance to the bluff above the Narrows to take in the panoramic views of New York Harbor, or continue to the end of the line at South Beach, a short distance from Fort Wadsworth. A separate dedicated rail line, the Staten Island Rapid Transit Railway, was built prior to 1907 running roughly parallel to the trolley line (CLR 2008:75).

These changes in transportation and increasing industrialization during the late nineteenth and early twentieth centuries led to continual residential growth, with street-car suburbs replacing many of the former large country estates in the vicinity of the Narrows. The population of Staten Island gained nearly 100,000 people between 1900 and 1930, when it totaled 158,346. Much of this growth was concentrated on the northern side of the island, while the central and southern portions remaining sparsely developed. By the first decade of the twentieth century, the area to the north and west of the military reservation was largely small-lot residential neighborhoods, with a few remnant country estates remaining on larger lots (CLR 2008:76).

In addition to residential and industrial development, Staten Island continued to offer recreational attractions during this period. Amusement parks, including Happyland Park and resort hotels at South Beach less than a mile to the southwest of Battery Weed, became well known throughout the New York area by the turn of the century, attracting thousands of visitors. Many of these visitors passed through the military reservation on the trolley line that ran down New York Avenue, which included a car named "Fort Wadsworth." The trolley line would continue to run until 1934, when the automobile became the preferred means of personal transportation (CLR 2008:76).

The Endicott Period:

During the 1880s, a more active foreign policy and associated naval build-up focused action on the nation's antiquated system of coastal defense and the need to adapt to major technological advances in weaponry. In 1885, President Grover Cleveland convened a joint Army-Navy-civilian board under the direction of Secretary of War William Endicott to develop recommendations for upgrading coastal defense systems to respond to the threats of newly developed weapons. The Endicott Board issued its recommendations in 1886 calling for larger guns, floating batteries, torpedo boats, and submarine mines. The most evident physical change was the shift in emphasis from the walled fort to the weapons themselves. Now built of reinforced concrete, new batteries were dispersed along the shoreline with two to four large mortars designed to blend with the surrounding landscape (CLR 2008:76).

Major armaments of the Endicott Period included three classes. The first was flat-trajectory weapons mounted on disappearing-type carriages in massive emplacements. The second class included heavy armament that fired twelve-inch mortars, clustered in groups of four with dugout emplacements behind hills or parapets that shielded them from enemy fire. The third class of weapons involved marine minefields designed to prevent penetration by shallow-draft vessels, supported by an onshore battery of rapid-fire guns (CLR 2008:76-77).

This third class of weapons would become the primary function of the Battery Weed headland during this period. Marine mine defense systems involved the deployment of contact mines in buoyant cases anchored to float just under the surface of the water. The mines were usually designed to be electrically detonated by a signal sent through a single-conductor cable from an on-shore fire control operator. This operator was located in a mine casemate which housed all necessary electrical and control apparatus. Mines were positioned visibly to force vessels to slow down and allow guns in on-shore batteries to command a field of fire. In addition to the mine casemate, the system also required the construction of loading wharfs and storage facilities for the cables, mines, and anchors. With electronically-controlled firing technology, Endicott mine defense systems did not interfere with friendly shipping traffic, an especially important consideration for busy shipping channels such as the entrance to New York Harbor (CLR 2008:77).

In the years after World War I, the Endicott system of coastal defenses was superseded by new systems focusing on anti-aircraft. While many coastal fortifications were outfitted with anti-aircraft weapons in the 1920s and 1930s, overall the period prior to World War II witnessed little substantial redevelopment of the nation's coastal defenses. During the World War II era, another new and much more extensive system of coastal defenses was developed, which featured new and more powerful armament with substantial concealment from aircraft, ranging from heavy reinforced concrete cover to disguises meant to look like civilian buildings. These World War II developments in coast artillery would not, however, be implemented on the Battery Weed headland (CLR 2008:77).

Changes at the Military Reservation:

The U. S. military reservation, designated Fort Wadsworth upon the renaming of Battery Weed in 1902, expanded during the late nineteenth and early twentieth centuries to accommodate the new Endicott technologies and systems of coastal defense. Land purchases by the federal government between 1892 and 1907 extended the military reservation to the west beyond New York Avenue and to the south of Richmond Avenue through acquisition of fourteen parcels, most part of preexisting country estates. Most of these estates were destroyed to clear the way for the construction of modern batteries and military housing (CLR 2008:77).

Prior to the country's formal entrance into World War I in 1917, the garrison of military troops at Fort Wadsworth increased to 1,400 men and remained close to that number until 1918. At the end of World War I, the garrison diminished dramatically, and as a coast defense site, it was essentially mothballed. In 1928, the coast artillery personnel at Fort Wadsworth consisted of just twelve enlisted men and one officer, who basically performed a caretaking detachment. The post's armament during this period was described as being in excellent condition, but out of commission (CLR 2008:77-78).

The years following World War I probably witnessed a reemergence of informal public recreational use of the grounds that had ceased during the war years. The ample grounds of Fort Wadsworth with its scenic views and its close proximity to dense residential neighborhoods ensured the public's interest in the military post as a sort of informal public park (Figure 7). Recreation was an important part of military life at Fort Wadsworth. Tennis courts were laid out on the parade grounds in the quadrangle of Fort Tompkins. A nearby country club offered a golf course, and officers at the post were usually invited to become members. Fishing was reportedly fair, and Staten Island's excellent roads provided many opportunities for automobile touring. From the trolley line that stopped at Fort Wadsworth, military personnel had a direct line to the Manhattan ferries at St. George prior to the line's termination in 1934 (CLR 2008:78).

With declaration of the national emergency in 1939 and subsequent entry of the United States into World War II, Fort Wadsworth once again became a hub of military activity. Heightened activity

during this period included the movement of various units of Coast Artillery Corps, Military Police, and National Guard through Fort Wadsworth for activation, equipping, and training for service overseas. In March of 1944, a service unit of two hundred Italian prisoners of war was quartered at Fort Wadsworth and they remained at the Staten Island post until August of 1945. In the landscape, the development of aerial warfare caused the War Department to initiate a program of so-called protective obscurement, which required all military reservations to disperse, conceal, or camouflage themselves in preparation for attacks that might now come from the air. This program may have resulted in planting of vegetation on the batteries to conceal armament. No new batteries were constructed or improved at Fort Wadsworth during the war, although a number of guns remained active. During the war, however, many were scrapped. By the end of the war, all gun emplacements stood silent and vacant, signaling the final end of Fort Wadsworth's role as a coastal fortification in New York Harbor (CLR 2008:78).

Landscape of the Battery Weed Headland:

The War Department quickly implemented the 1886 recommendations of the Endicott Board at the Battery Weed headland, beginning in 1887 with development of a submarine mine defense system in the Narrows and continuing through the first decades of the twentieth century with reconstruction of the earthen batteries to protect the mine field. The War Department continued to adjust this system into the early 1920s. These last adjustments reflected the final military developments on the headland. Aside from a few minor improvements for anti-aircraft weaponry, the Battery Weed headland would see few changes in its landscape for the remainder of the period (CLR 2008:78-79).

As the military redevelopment of the headland got underway in the late 1880s, the landscape continued to be a popular place for visitors to take in the spectacular views of the harbor from the grassy slope above the fortress, despite the earlier grading and removal of nearly all trees. A drawing made eight years later indicates not only the public park-like use of the landscape, but also visitors' enjoyment of the inactive guns, which served not only as benches for reading a newspaper, but even as a children's play ground. Between 1887 and 1892, the Army built three walks extending from the overlook down the steep slope to Battery Weed. While the original intent of these walks is not known, they were probably used by visitors who would have enjoyed a changing panorama of the harbor scene as they descended down the switchbacks. The walks may also have had a military function, to allow personnel to bypass the mine railway at the base of the slope that was begun in ca. 1887. The walks extended to the south and north of a proposed building for the storage and processing of torpedoes (CLR 2008:79).

Changes to the Fort & Batteries

In the early years of this period, many of the guns at Battery Weed remained intact. A photograph taken in ca. 1902 shows the barbette tier, the earthen turf-covered roof of the fort, carefully maintained with the grasses kept short to allow clear access in the operation of the guns on their round emplacements, with their rammers close by, perhaps as part of a recent firing exercise (Figure 8). Down in the parade ground in the center of the fort stood large piles of shot. Soon, however, these armaments would become obsolete and removed from the fort. By the turn of the century, the guns on the barbette tier were gone and the lower casemates of Battery Weed were maintained with just fifteen mounted and serviceable guns, most of which would soon be scrapped. The fort's function had, aside from an addition for the mine defense system, transitioned to more of a storehouse than an active military fortification. Munitions removed from Ellis Island in 1890 were stored here, and in later years, mines, submarine nets, and accessories of the Third Naval District, and miscellaneous stores of Army Corps of Engineers and the Lighthouse Division of the Treasury Department, were stored among the casemates on all three tiers (CLR 2008:79).

Aside from its storage function, Battery Weed did continue to serve its long-time function as a guardian of the shipping lane through the Narrows. In 1903, a light and signal station was completed on the northeast bastion of the barbette tier, a feature that would have been a strategic obstruction had the guns remained in place. The lighthouse, which had a fourth-order Fresnel lens visible for fourteen nautical miles, replaced the earlier Fort Tompkins (Wadsworth) Lighthouse constructed south of Fort Tompkins in 1873. It was replaced due to its remoteness from the Narrows and probably also because its site was needed for the construction of new batteries. Around the same time as the new lighthouse was built, a fog signal was erected on the seawall along the northeast

side of Battery Weed. Sometime after 1904 and prior to the outbreak of World War I, a thirty-six inch searchlight was installed on the barbette of the southeast bastion to illuminate the Narrows at night (CLR 2008:80).

Elsewhere in the Battery Weed headland, the Endicott period brought substantial changes to the Civil War-period batteries that flanked the shoreline north and south of the fort. These batteries were redesigned for rapid-fire weapons intended to cover the mine field in the Narrows that was developed beginning in ca. 1887. The north end of the South Cliff Battery was reconstructed in 1899 and renamed Battery Bacon; the sections to the south were rebuilt as two separate batteries named Barbour and Turnbull between 1898 and 1903. The entire North Cliff Battery was reconstructed between 1902 and 1904 and renamed Battery Catlin, although its weapons were not mounted until 1913. While portions of the old batteries were retained and reused (including the bomb-proof parados in the North Cliff Battery), much was constructed anew. The new batteries featured reinforced concrete gun emplacements and expanded earthworks above the shoreline. Sand was excavated from the beaches for the enormous quantities of cement needed for the parapets. A system of trolleys, light inclined trestles, steam hoisting engines, and mixers were used to build the massive structures (CLR 2008:80).

The new technologies and systems developed throughout the site required the careful maintenance of grass and vegetation to preserve the earthworks from erosion and to maintain both clear sight lines between the fire control facilities and the water passage, as well as easy access to the artillery. The result was a carefully graded and neatly clipped landscape surrounding Battery Weed that, although heavily engineered, was a favorite subject for artists with its still picturesque setting along the Narrows (CLR 2008:80).

Mine Defense System

The most extensive change to the headland was a result of the development of the mine defense system for the Narrows, begun soon after the Endicott Board issued its recommendations in 1886. The narrowness of the water passage into New York Harbor made it an ideal place for use of buoyant mines, initially known as torpedoes. Mines used in the new system were not permanently placed in the waters, but stored along with miles of cables in waterside facilities where they could be quickly deployed. The deployment of the mines and cable was undertaken by a special mine-laying vessel. The physical facilities that were developed throughout the Battery Weed headland, aside from Batteries Catlin and Bacon, included fire-control stations, improved dockage with buildings for storing the mine-laying vessel, mine casemates, and mine and cable storage buildings (CLR 2008:80-81).

Plans for developing the mine defense system began early in the Endicott period, perhaps as early as 1886. A plan drawn that year indicated that the strategically obsolescent moat around Battery Weed had been dewatered in apparent anticipation of building a mine casemate at the northwest bastion that would require space in the former moat. A section of the moat at the southwest bastion was retained as an open reservoir, fed by a natural spring with water piped to the guardhouse for distribution through the fort. Construction of the casemate and first sections of the mine railway followed in ca. 1887, soon after the moat was dewatered and the reservoir constructed. The casemate was designed to house the electric switchboard used to control the firing of the mines, with a large conduit running out through the seawall and into the waters of the Narrows to the east and northeast. An electrical cable, probably lead-sheathed copper, was run through the conduit to connect the mines to the firing switchboard in the casemate. To protect the equipment in the casemate from bombardment, solid concrete additions were added to either side of the bastion within the dewatered moat (CLR 2008:81).

Battery Weed initially served as the center of the mine defense system, along with the north dock where the mines were loaded onto vessels for deployment. Aside from the casemate, the fort served as the storage area for the mine equipment, which would have included such things as mines, cables, and nets. The first alignment of the mine railway most likely ran from the interior of the fort to the dock, but it was extended in the 1890s to reach new facilities built outside of Battery Weed. The first of these freestanding facilities was the Torpedo Storage Building completed in ca. 1894 at the base of the slope parallel to the road. The two-story brick and stone building was used for storage, assembly, and loading of mines onto rail cars. The mine railway was extended through the building

by 1896, entering on the first floor at the east end, and on the second floor at the west end. The railway formed a circuit to the north dock that curved sharply around the south end of Battery Catlin. The mine railway was designed to allow rail cars, probably manually pushed, to carry mine cases, cables, and anchors directly to the north dock where a crane was used to transfer the materials to awaiting mine planting vessels. By 1910, the original railway was proving inadequate, and sections were rebuilt and realigned. The rails had originally been laid on uneven and improperly prepared ground with little or no ballast to prevent heavy rail cars from overturning (CLR 2008:81-82).

Many additional structures supporting the mine defense system were built around the turn of the century. The arrangement of these structures was intended to allow the fewest number of men to deliver the mines to the vessels in the shortest time possible. In 1898, a cable tank building was constructed parallel to the Torpedo Storage Building on the opposite side of the road. This facility, which was connected to the mine railway, consisted of a long, rectangular one-story frame building with a gable roof that served as the cover for the actual cable tank. Anchors were stored on the edge of an associated platform for easy loading. A second cable tank building was constructed onto the north side of the original building in 1899. In 1903, a smaller third cable tank was built east of the first two (Figure 9) (CLR 2008:82).

To provide much-needed space for additional support buildings, the Army filled the west side of the dewatered moat to ground level in ca. 1904, obscuring the inland moat wall. The reservoir at the southwest bastion was either covered or filled. Between 1904 and 1905, an in-ground cable testing trough and a series of wood-frame gabled buildings were constructed on top of the filled moat, abutting the west wall of Battery Weed. These included a torpedo loading room and testing room, and cable tank buildings 4, 5, and 6 (see also Figure 9). At some point after 1907, a dynamite testing room building was added in front of the cable tank building. The cable tank building, which was actually one long structure, extended across the main pedimented entrance to Battery Weed. In place of this ceremonial portal, the entrance to the fort became a nondescript opening in a wood-frame building (CLR 2008:82).

While these buildings were being constructed along the west wall of Battery Weed, work was underway on replacing the ca. 1887 mine casemate in the northwest bastion, which was suffering from excessive moisture that apparently damaged its electrical firing switchboards. In ca. 1905, work was completed on a second mine casemate, a one-story brick building constructed on high ground at the south end of Battery Catlin, north of the bomb-proof paradoss (see Figure 9). The firing controls in the new casemate included a twenty-four inch cable conduit that extended 130 feet down the slope of Battery Catlin and through the seawall into the Narrows (CLR 2008:82).

As the mine defense system was expanded during the first decade of the twentieth century, the old north dock proved inadequate for its primary function of transferring submarine cables and mines between the on-shore storage facilities and mine-planting vessels. The dock also continued to serve as a main delivery point for the post, receiving supplies through the Quartermaster's office located in the boathouse built alongside the dock in 1877. In order to retain space for the Quartermaster and provide additional room for the mining defense operations, a large timber extension was built on the east side of the dock in ca. 1906 (see Figure 9). The mine railway was extended across the length of the new dock, which more than doubled the size of the original structure. By 1907, a long, rectangular boathouse was constructed alongside the dock extension for sheltering the mine-planting vessels, and a smaller open dock house was constructed between it and the Quartermaster warehouse. A marine crane for hoisting anchors and mines onto the vessels from the mine railway was installed at the corner of the dock extension (CLR 2008:83).

By World War I, advances in gun ranges reduced the effectiveness of mine defense systems, and the technology faded in importance. Despite this, the system at Battery Weed was kept operational into the 1920s by a skeleton detachment of troops. A few improvements were also made to the system due to the increasing weight of the mines. In 1921, the railway was rebuilt and realigned to straighten out sharp curves and to prevent trucks on their way to and from the dock from crossing the rails. Soon after these changes to the railway, a concrete cable testing tank or turntable was installed just outside the long cable tank building near the entrance to Battery Weed (CLR 2008:83).

An aerial photograph of Battery Weed taken in 1924 illustrates the full extent of the mine defense system at the end of its development, with its various buildings and railway (Figure 10). This photograph also shows the overall character of the headland landscape, which was devoid of trees except for small groves to the west and southwest of Battery Weed (CLR 2008:83).

Later Changes

Aside from the modifications to the mine defense system in the early 1920s, the period from World War I through World War II witnessed few changes in the landscape of the Battery Weed headland. The only new military feature added during this period was a coincidence range-finder station, which was built during World War I on the lower part of the engineered slope above Battery Bacon in ca. 1917 (see Figure 10). This small in-ground concrete structure directed fire from the adjoining batteries. Just two other buildings were constructed on the headland through the end of World War II. These included a small garage built of rock-faced concrete block constructed at some point between 1924 and 1940 off the south end of the Torpedo Storage Building. During World War II, a small building of unknown function was constructed of prefabricated concrete panels between cable tank building 3 and cable tank buildings 1-2 (CLR 2008:83-84).

In addition to these minor buildings, the Battery Weed headland underwent several improvements to its landscape during the 1930s, thanks in part to the availability of federal work relief programs. Civilian Conservation Corps (390 Veterans Co.) and Works Progress Administration-funded laborers undertook a number of projects at Fort Wadsworth between 1933 and ca. 1941. At the Battery Weed headland, this work purportedly included construction of poured concrete seawall north of the north dock, and improvements to the overlook at the top of the slope along Hudson Road, probably to accommodate long-standing informal public use of the area for its panoramic views of the harbor. These improvements included construction of a low stone wall along the entire top of the slope bordering Hudson Road, with an expanded terrace off the southwest corner of Fort Tompkins. The wall was probably intended as a barrier for pedestrians and automobiles from toppling down the steep slope. It cut off access to the walks that led down the slope to Battery Weed. As part of the improvements, Hudson Road was apparently surfaced in concrete and lined in part by a row of sycamore trees. These trees were apparently planted as part of program of planting sycamores as street trees throughout the reservation, including along Battery Weed Road near the Torpedo Storage Building and along Mount Sec Avenue (CLR 2008:84).

Once the national emergency began in 1939, public visitation to the Battery Weed headland was most likely prohibited. During the war, Battery Weed once again would have taken on the hum of an active military post, although its fortifications were largely obsolete and inactive. However, the mine defense system and other marine defenses such as nets may have been used during the war to protect the harbor from German U-boats. Some of the formerly manicured turf on the batteries may have been planted or allowed to transition to shrubs to fit in with the native environment as part of the Army's program of aerial concealment (CLR 2008:84).

By the end of the war, the landscape of the Battery Weed headland had seen extensive and complex development since the beginning of the Endicott period over five decades earlier. The landscape featured a number of additional structures and systems that changed its character and function. Vegetation was probably kept trim and neat except perhaps on the batteries. Despite these changes, the overall open character of the landscape remained much as it had been developed during the Third System period, with Battery Weed forming the central and most prominent organizing element. The end of the war marked the end of the active military use of Battery Weed and its Endicott-period fortifications. In the years to follow, the landscape would change markedly in character, although most of the military infrastructure would remain (CLR 2008:84).



Figure 7. Photograph from 1923 looking northwest across the Narrows of the Battery Weed headland within Fort Wadsworth and adjoining residential neighborhoods that made it a popular recreational spot. (Photograph 19397, NPS/Gateway NRA Museum Collection)



Figure 8. A photograph taken in 1902 looking southwest toward Fort Tompkins showing the barbette tier of Fort Wadsworth (Battery Weed) with its rotating guns still in place. (Photograph 19401, NPS/Gateway NRA Museum Collection)

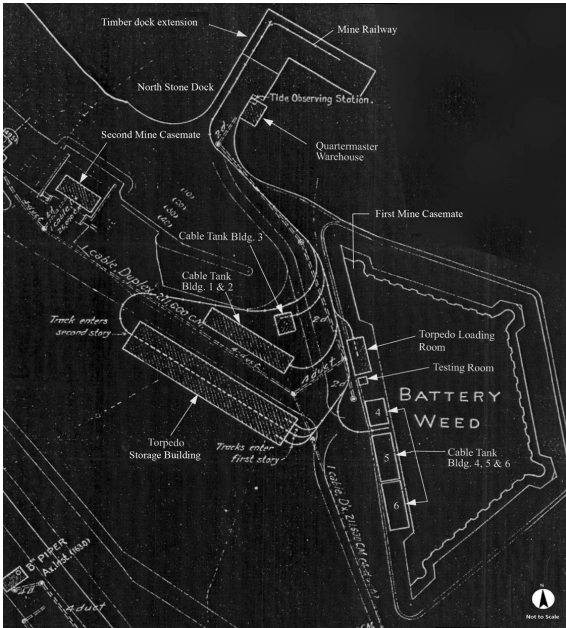


Figure 9. C.1906 plan of the mine defense system with support buildings and second mine casemate on Battery Catlin. (Unpublished report prepared for the National Park Service by URS Corporation, 2006, further annotated by SUNY ESF)

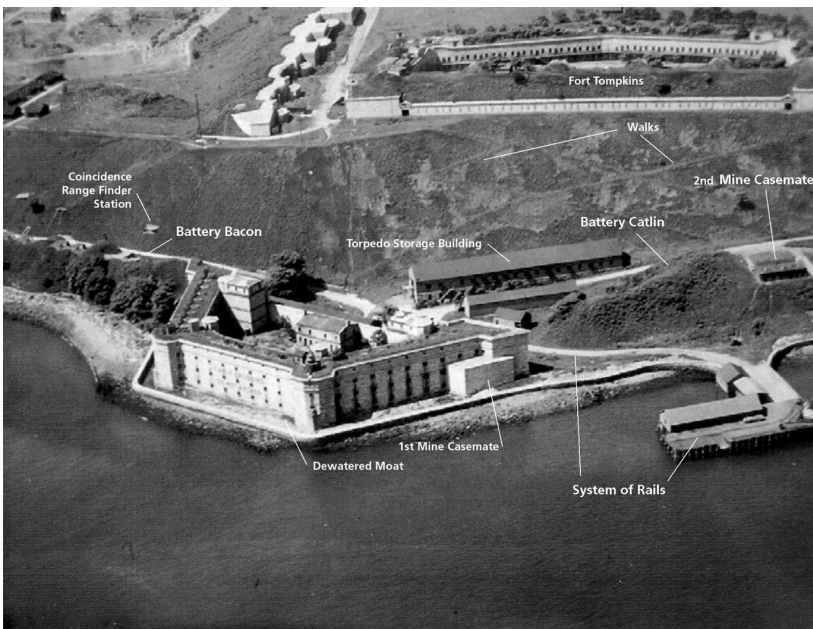


Figure 10. A 1924 photograph looking west across Battery Weed illustrating mine defense components and the overall open landscape character. (Unpublished report prepared for the National Park Service by URS Corporation, 2006, annotated by SUNY ESF)

LATE MILITARY AND NATIONAL PARK SERVICE PERIOD, 1946-2008

The close of World War II in 1945 marked the end of the Battery Weed headland's role in the coastal defense of New York Harbor. Although this role had been diminishing for some time, the refinement

of aerial warfare during World War II launched a new era in military tactical technology in the post-war years that rendered final obsolescence to the ground batteries and mine defense system. With the development of long-range missiles came changing requirements for the siting of artillery, leaving little use for the water-front site with its earthen batteries and three-tiered granite casemated fort. While the headland would remain part of a larger active military reservation into the 1990s, its subsequent stewardship as part of Gateway National Recreation Area would return public use to the Battery Weed headland, the origins of which extended well back into the nineteenth century (CLR 2008:103).

Growth of Staten Island:

In the years following World War II, the outer boroughs of New York City and adjoining counties experienced rapid growth as villages and farmland were transformed by housing tracts, industrial parks, and commercial strips tied to parkways and interstate highways. As the least developed of the city's five boroughs, Staten Island experienced similar patterns of growth. In the 1940s and 1950s, most development on the island was related to the growth of New Jersey, since the island was connected to the rest of New York City only by ferry. From 174,441 residents in 1940, the population of Staten Island climbed to 221,991 by 1960, an increase of about twenty-two percent. By 1980, the population had climbed to 352,029, an increase of an additional forty percent since 1960. Much of this latter growth was due to completion of the Verrazano-Narrows Bridge in 1964 that linked the island to Brooklyn and the city's highway network. The later development occurred primarily in the central and southern parts of the island, not in the older neighborhoods surrounding the Narrows (CLR 2008:103).

While proposals for tunnels and bridges across the Narrows dated back to the 1880s, it was not until 1946 that planning began for the suspension bridge that would ultimately be built under the direction of master planner Robert Moses. The Army had long fought plans for encroachment onto its military reservations on either side of the Narrows, but by the mid twentieth century, much of Forts Hamilton and Wadsworth had become obsolete. Although the Battery Weed headland was the actual narrowest point on the Narrows, planners chose a location just to its south that avoided the old granite fortress. After lengthy consideration by the Army as well as opposition from adjoining neighborhoods, final construction was approved in 1957 for a steel suspension bridge designed by Othmar Ammann. Work was completed in 1964, resulting in a towering presence over Battery Weed. In the decades following completion of the bridge, hundreds of thousands of motorists passed through Fort Wadsworth, but few probably were aware of the historic military reservation beneath the approaches. As the military importance of the site declined, public interest in its value as open recreational space increased sufficient to support its inclusion within the National Park System (CLR 2008:103-104).

Fort Wadsworth: Military Reservation to Public Park:

Although the nation was at peace during the years immediately following World War II, Fort Wadsworth remained an active military reservation. At the end of the war, it was used for processing military service separations for soldiers returning home from the war. As personnel on base increased, a trailer camp was established in 1948 to provide housing on post for forty military families including those of the arriving Army Signal Service Units. The trailer camp, the first to be established in New York City, was unique in that city zoning prohibited them within the city limits, and the camp at Fort Wadsworth was only possible because of federal ownership of the property (CLR 2008:104).

With the eruption of the Korean War in 1950, Fort Wadsworth became host to New York National Guard Unit Antiaircraft Artillery Brigades and was used as a basic training station and antiaircraft defense site. An Army unit, the 52nd Antiaircraft Artillery Brigade, replaced the New York National Guard Unit at Fort Wadsworth in 1952, but the antiaircraft guns were located in field positions off site at other military posts, including Fort Tilden in Queens and Sandy Hook in New Jersey. Fort Wadsworth served as the radar command and control center for the New York–New Jersey area NIKE missile systems from 1954 to 1966. None of the NIKE facilities at Fort Wadsworth were located on the Battery Weed headland (CLR 2008:104).

During construction of the Verrazano-Narrows Bridge between 1959 and 1964, many buildings in Fort Wadsworth were demolished and roads removed to make room for the bridge approaches. In the

eastern half of the reservation, the approaches were on a raised viaduct, which allowed for retention of New York Avenue and Hudson Road, as well as Battery Turnbull along the shoreline south of Battery Weed (CLR 2008:104).

In the early 1970s, Fort Wadsworth was identified in federal legislation as a future site within the proposed Gateway National Recreation Area, an expansive federal park system composed of former military sites and city park lands on Long Island, Staten Island, and New Jersey. The Gateway legislation as passed in 1972 also established Golden Gate National Recreation Area in the San Francisco Bay Area as the country's first two urban national recreation areas within the National Park System. Unlike other former military sites in Gateway which had previously been decommissioned, the U. S. Department of Defense retained Fort Wadsworth as an active military reservation following passage of the park legislation. The reservation was home at the time to the 52nd Antiaircraft Artillery Brigade, but that unit left in 1974 and Fort Wadsworth became home of the U. S. Army Chaplain School until 1979. That year, the Army transferred jurisdiction to the Navy, which used the reservation as its headquarters for the New York Naval Station. Over the following decade, the Navy extensively redeveloped areas of Fort Wadsworth outside of Battery Weed and Fort Tompkins, which had been listed in the National Register of Historic Places in the early 1970s. Many former barracks and other support buildings along New York Avenue and to the west and south were demolished and new housing complexes and support building were constructed in their place. The Navy did not redevelop any part of the Battery Weed headland. The Naval Station headquarters had a brief history at Fort Wadsworth, lasting just fifteen years at the time of its closure in August 1994. The following year, the 226-acre reservation was transferred to the National Park Service for incorporation into Gateway National Recreation Area and was opened to the public in 1997 (CLR 2008:105).

In the years following the transfer, the National Park Service adapted portions of Fort Wadsworth for public visitation. It created a visitor center in one of the buildings along New York Avenue erected by the Navy in the 1980s, established headquarters of the Staten Island unit of Gateway in one of the former Army barracks, and opened Fort Tompkins and Battery Weed for limited guided tours. Public access to the reservation was returned after a long hiatus, and thousands came annually for the New York City Marathon, which began at Fort Wadsworth and proceeded across the Verrazano-Narrows Bridge for its five-borough route. Because there were far more buildings than it could use, the park entered into leases and use agreements to allow other agencies and partners, including the U.S. Coast Guard and Army Reserve, to occupy the extensive infrastructure of the reservation (CLR 2008:105).

Landscape of the Battery Weed Headland:

While the Army and later the Navy used the upland portions of Fort Wadsworth in the decades after World War II, the Battery Weed headland was, with few exceptions, abandoned as a functioning military facility. The only structure added during this time was a wood frame building, perhaps related to the postwar separations operation, constructed in ca. 1946 at the edge of the overlook to the east of Fort Tompkins (CLR 2008:106).

Without any critical function in the Battery Weed headland, the Army put little into its care and the once highly maintained landscape began to change dramatically by the late 1950s and early 1960s. Vandals damaged the buildings and spray-painted graffiti on walls, formerly mown areas on slopes and batteries became wooded, and volunteer trees including tree of heaven (*Ailanthus altissima*) grew up around buildings and structures (Figure 11). Battery Weed, the Torpedo Storage Building, and the second mine casemate were maintained in part for storage, while several small buildings were removed, including the testing room and service dynamite room along the west side of Battery Weed. Portions of the fortress, including its two magazines, were gutted, leaving only a shell. The only feature that continued its historic function during the post-war years was the lighthouse on the barbette tier. It was maintained as an aid to navigation until completion of the Verrazano-Narrows Bridge, which rendered it obsolete. The lighthouse was abandoned in 1965 (CLR 2008:106).

The construction of the Verrazano-Narrows Bridge resulted in a dramatic change to the setting of the Battery Weed headland. Its 693-foot tall west tower loomed high over the landscape, just 340 feet to the south of the fort. While the bridge did not have a direct impact on the headland, its construction between 1959 and 1964 nonetheless led to a number of changes to the landscape. During this time,

the grounds adjoining the fort were apparently used as a staging area and place for workers to park. More importantly, in 1960, while the buildings beneath the approaches were being demolished, all of the frame buildings in the Battery Weed headland were removed. These included the three cable tank buildings and the torpedo loading room along the west wall of Battery Weed, cable tank buildings 1, 2, and 3 north of the Torpedo Storage Building, and the mine boathouse, dock house, and Quartermaster warehouse on the north dock and its timber extension. These were all probably in poor condition after being largely abandoned for fifteen years and more. Damage from Hurricane Donna in September 1960 may also have led the Army to undertake the demolitions. The hurricane brought the high tide up to approximately one foot above the level of the seawall along with four and one half inches of rainfall and seventy mile-per hour winds. The storm probably also damaged the stone seawall and south part of the timber dock, and washed out parts of the filled moat (CLR 2008:106-107).

In the years following completion of the Verrazano-Narrows Bridge in 1965, the condition of the Battery Weed headland continued to deteriorate. Periodic maintenance was undertaken in Battery Weed itself, probably at the urging of those who recognized its historic value. In 1970, a National Guard crew cleared away the woody vegetation that had grown up on top of and around the fortification. By 1980, when Fort Wadsworth was transitioning to use as the New York Navy Yard headquarters, Battery Weed was still kept free of encroaching vegetation, but the engineered slope and batteries had become covered in dense woods. Portions of the seawall had also collapsed by this time. During the 1980s, the Navy continued to mow the areas within and immediately around Battery Weed as well as the south end of Battery Catlin, but let nature take its course elsewhere. By 1990 during the Navy's tenure, the Torpedo Storage Building had suffered a devastating fire that collapsed a portion of the roof (Figure 12). The second mine casemate, which had been used for a time by a local rod and gun club, apparently also suffered fire damage around the same time, leaving only the shell of its brick walls. At the time the military transferred Fort Wadsworth to the National Park Service in 1995, most of the Battery Weed headland was heavily wooded except for the area surrounding the fortress. These woods obstructed the view from the overlook and concealed the batteries and many of the remaining ancillary buildings in the headland (CLR 2008:107).

In the years after the National Park Service acquired Fort Wadsworth, it began planning for the rehabilitation of the Battery Weed headland and its eventual opening to the public. Work was undertaken on stabilizing the key buildings and reestablishing the view from the overlook by clearing away a portion of the successional woods. The park redesigned the overlook, removing the frame building added in ca. 1946 and adding new pavement, shrubs, benches, a flagpole, and interpretive signs. The southern part of Battery Weed Road was reconstructed with concrete gutter curbs, and several interpretive waysides were installed. The park was aided by volunteer groups and partners in preservation of the historic buildings, notably the repair of the lighthouse on Battery Weed completed in 2004 by volunteers with materials provided by the park. Despite these improvements, limited funding and staffing kept the park from carrying out needed repairs and maintenance. For safety purposes, the park restricted public access to ruined buildings and much of the shoreline with cyclone fencing (CLR 2008:107).

While the Battery Weed headland today has lost much of its historic landscape character, its historic infrastructure remains to large extent beneath overgrown woods and invasive vines. Current park planning efforts are examining possible clearing of this overgrowth, as well as reconstruction of the Torpedo Storage Building for visitor services, rehabilitation of the north dock as a possible ferry landing, and repair of the stone seawall. With these and other much-needed repairs and improvements in interpretation, the landscape of the Battery Weed headland has the potential to convey fascinating insights into the history of the gateway to New York City and once again allow the public to enjoy one of the harbor's most scenic promontories (CLR 2008:107-108).

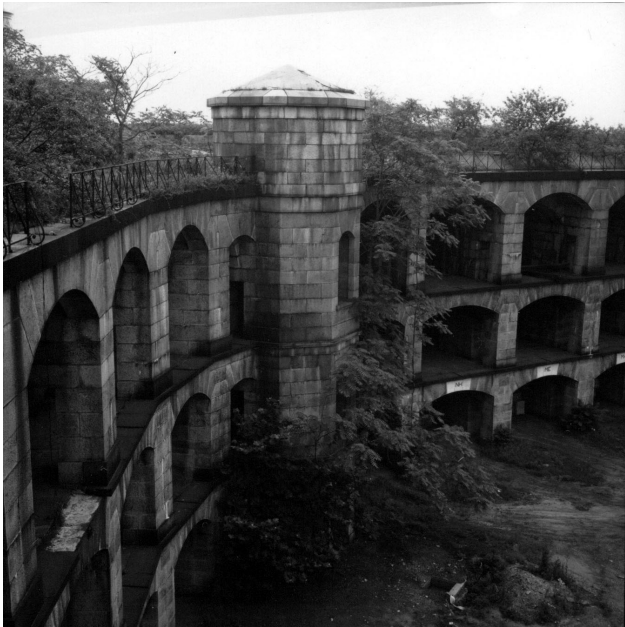


Figure 11. Battery Weed in 1964 showing poorly maintained conditions including piles of soil and ruts in the parade ground and volunteer vegetation around the building. (Print 12C02F, Still Pictures Division, National Archives II, College Park, Maryland)



Figure 12. View in 1990 of the headland near the end of Navy administration showing dense woods on the slope and batteries and fire damage to the lower end of the Torpedo Storage Building. (Unpublished report prepared for the National Park Service, 1995)

Uses

Functions and Uses:

Major Category	Category	Use/Function	Historic	Current	Primary
Defense	Arms Storage	Arms Storage	Yes	No	No
Defense	Fortification	Battery (Defense)	Yes	No	Yes
Defense	Military Facility (Post)	Military Facility (Post)	Yes	No	No
Landscape	Leisure-Passive (Park)	Leisure-Passive (Park)	Yes	Yes	No
Landscape	Scenic Landscape	Overlook	Yes	Yes	No
Landscape	Scenic Landscape	View	Yes	Yes	No
Recreation/Culture	Outdoor Recreation	Outdoor Recreation-Other	No	Yes	Yes
Recreation/Culture	Outdoor Recreation	Outdoor Recreation-Other	Yes	No	No
Transportation	Pedestrian-Related	Interpretive Trail	No	Yes	No
Transportation	Water-Related	Landing (Wharf, Dock)	Yes	No	No
Transportation	Water-Related	Lighthouse	Yes	Yes	No

Public Access:

Public Access: Unrestricted

Public Access Narrative:

Public Access: Other Restrictions

Public Access Narrative:

Access to Battery Weed and the shoreline of the Narrows is from Battery Weed Road, which begins at Mount Sec Avenue and Hudson Road on the north, extends down the bluff toward the shoreline and fort, and then goes back uphill beneath the Verrazano-Narrows Bridge where it terminates at Hudson Road and Richmond Avenue (CLR 2008:119).

The Battery Weed headland is open to the public from dawn to dusk. The Battery Weed fort is open for scheduled tours. Occasional special events are held such as a popular Halloween tour of Battery Weed. Maintenance is focused on the overlook terrace, parade ground and area surrounding Battery Weed, and on the approaches along Battery Weed Road where interpretive waysides and benches are located. The north dock, moat, and seawall are off-limits to the public and are not maintained on a regular basis, as evidenced by the washed-up debris on the beach. The ruins of the Torpedo Storage Building and second mine casemate are fenced off to prohibit access (CLR 2008:124-125).

Associated Ethnographic Group

Ethnographic Study Status: No Survey Conducted

Ethnographic Narrative:

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

Significant landscape characteristics identified for Battery Weed Headland include natural systems and features, spatial organization, land use, circulation, topography, vegetation, constructed water features, buildings and structures, views and vistas, small scale features, and archeological sites. Many of these characteristics have associated with them features that contribute to the site's overall historic significance and identity, as well as features that do not contribute or are undetermined. The analysis that follows is taken directly from the 2008 report, "Cultural Landscape Report for the Battery Weed Headland, Fort Wadsworth, Gateway National Recreation Area."

The physical integrity of the Battery Weed headland landscape is evaluated by comparing landscape characteristics and features present during the period of significance (1847-1945) with current conditions. Many features still contribute to the historic character of the Battery Weed headland landscape. Spatial features include the moat space, the parade ground within Battery Weed, and the overlook space. Circulation features include the mine railway, overlook promenade, Battery Weed Road, and the dock road. Panoramic views from the overlook and waterfront are also contributing features. Buildings and structures include Battery Weed, the Torpedo Storage Building, the second mine casemate, Battery Catlin parados (magazine), the overlook stone wall, concrete block garage, small concrete shed, north dock, seawall, Battery Bacon north gun emplacement, the Coincident Range-Finder station, and slope retaining wall. Topographic features that define the historic character of the landscape include the engineered slope above Battery Weed, and the earthworks of Batteries Catlin and Bacon. Contributing vegetation features include the specimen trees along Battery Weed Road and Hudson Road, and the parade ground lawn. Small-scale features include the parade ground munitions pads, cable testing trough, parade ground flagpole, dock bollards, and dock utility pole (CLR 2008:8).

Although many features have been altered since 1945, there have been relatively few lost altogether. These include six cable tank buildings, a testing tank, and a torpedo loading room building used in the mining defense complex, and three buildings on the north stone dock. There are several non-historic features that detract from the historic character of the landscape, most notably successional woods and invasive vines that cover formerly open ground and batteries, and chain-link fencing that closes off historic circulation patterns. Major condition issues that detract from the historic character of the landscape include fire damage to the Torpedo Storage Building, loss of the roofs on the Battery Weed magazines, removal of sections of mine railway, collapse of the second mine casemate, loss of the wood extension on the north stone dock, and probable loss of sections of the slope walks (CLR 2008:8-9).

INTEGRITY

Overall, the landscape of the Battery Weed headland retains historic integrity and still clearly conveys its historic significance through existing resources. Integrity of setting and feeling has been diminished, but is in part reversible (CLR 2008:141).

Location:

The Battery Weed headland, a part of the Fort Wadsworth reservation, retains all of the land included in its development in 1847 to 1945 (CLR 2008:141).

Design:

The Battery Weed headland retains the original fortification plan as developed during the Third System period of coastal fortifications between 1847 and 1885. The landscape also retains features illustrating design during the Endicott period from 1886 through the early twentieth century, including reconstructed batteries and remnants of a mine defense system. The additions made from World War I through World War II resulted in little change to the Third System and Endicott period design of the landscape. The water-filled moat was drained in c.1887 and filled in c.1904. Since there was little new construction after 1945, the design has been largely unaltered except through forces of deterioration and natural succession, the latter being mostly reversible. Significant changes to the overall design of the landscape include loss of mine defense buildings and portions of the mine railway, loss of the timber extension and buildings on the north dock, and damage to the Torpedo Storage Building and second mine casemate. Although some historic fabric has been lost, the Battery Weed headland retains much

of its historic design as a Third System and Endicott-period military installation (CLR 2008:141-142).

Setting:

The Battery Weed headland retains its overall setting defined by its waterside position along the Narrows below the 120-foot slope extending up to Fort Tompkins. The integrity of setting has been diminished since 1945 by the growth of successional woods on the slope and batteries, as well as the introduction of the Verrazano-Narrows Bridge, which although outside of the headland impacts the setting due to its enormous scale. The bridge also obscures the historic visual connection to Fort Hamilton on the opposite side of the Narrows. The historically open setting of the slope and batteries that provided panoramic views of New York Harbor from the overlook has been diminished by the growth of successional woods. The larger setting of Fort Wadsworth outside of the project boundaries to the south and west on the approach to Battery Weed has been diminished with the addition of multifamily housing units and other structures built primarily during the 1980s with the Navy's redevelopment of Fort Wadsworth as the New York Naval Station. The loss of setting resulting from successional vegetation is reversible (CLR 2008:142).

Materials:

The Battery Weed headland retains historic built materials of granite, concrete, stone, earth, brick, asphalt, iron and steel in its buildings, walls, batteries, roadways, rail tracks and dock. Historic materials have been diminished due to the removal of sections of the mine railway in the resurfacing of Battery Weed Road, loss of wood-frame support buildings in the mine defense system, and loss of the roof and portions of the walls in the Torpedo Storage Building and second mine casemate. No buildings or structures have been covered or rebuilt in substitute materials. The palette and location of historic plant materials has been altered because of natural succession and spread of invasive vines that has led to loss of historically mown turf. This condition is reversible (CLR 2008:142).

Workmanship:

Workmanship is the physical evidence of the crafts and methods of construction used during the specified historic period. The Battery Weed headland retains workmanship characteristic of the evolution of coastal defense systems and technologies during the nineteenth and twentieth centuries. This is evident in the fine masonry of Battery Weed and north dock, and seawall, the more rustic construction of the overlook stone wall, and the early techniques of poured concrete found in Endicott-period gun emplacements and mine casemate additions to Battery Weed. Although not historically prominent, the workmanship of the macadam roads has largely been lost due to contemporary reconstruction and repaving (CLR 2008:143).

Feeling:

The Battery Weed headland retains the commanding presence along the Narrows that characterized it historically. However, the landscape surrounding the fort has lost its feeling as a highly maintained military property. There is a loss of feeling in the sense of abandonment that exists on the site today as a result of limited public access, fenced off areas of the fort grounds, the deterioration of several abandoned buildings, and most notably, the growth of successional woods and vines on historically mown and open slopes and batteries. This latter condition is reversible (CLR 2008:143).

Association:

Although the historic association of the Battery Weed headland with the U. S. Army no longer remains, the property continues to reflect this association through its physical features remaining from the Mexican-American War through World War I. These features include the fort, flanking earthen batteries, north dock, and the mine defense system buildings and structures. Battery Weed headland remains under federal administration as it has since 1847 (CLR 2008:143).

The section that follows presents an analysis of landscape characteristics and their associated features and corresponding List of Classified Structures names and numbers, if applicable. It also includes an evaluation of whether the feature contributes to the property's National Register eligibility for the historic period (1847-1945), contributes to the property's historic character, or if it is noncontributing, undetermined, or managed as a cultural resource. The following information is taken directly from the 2008 report, "Cultural Landscape Report for the Battery Weed Headland, Fort Wadsworth, Gateway National Recreation Area." Items noted with an * are listed on the National Register of Historic Places.

Landscape Characteristic: Natural Systems and Features

The Battery Weed headland includes natural flora, landforms, and hydrology. Natural flora (successional woods) is considered a natural system while managed vegetation (specimen trees, hedgerows, lawn, etc.) is not. Since the historic period, mown grasses have been succeeded by a mix of hardwoods and shrubs, and an invasive wild grape species, porcelain berry (*Ampelopsis brevipedunculata*). Porcelain berry has its origins in northeast Asia and was originally cultivated in the United States as a bedding and landscape plant in c.1870. Natural succession since the historic period has led to an increased area of wooded and scrub land in large areas of the Battery Weed headland (CLR 2008:144).

Another natural characteristic is the landform, not including constructed topography (drainage ditches, earthworks, etc.). Battery Weed was developed on this site specifically because of the steep bluff rising approximately 125 feet above the Narrows of New York Bay, and the relatively level area at the water's edge of a deep-water channel. At the beginning of the historic period, the bluff above Battery Weed featured a steep and irregular form with rock outcroppings and eroded ravines. During the historic period, the bluff was graded to an even and consistent slope and planted with grasses (see topography characteristic) (CLR 2008:145).

The hydrology and ecology of the site includes the waterfront and rocky beach on the Narrows, a part of the Hudson-Raritan Estuary. The Battery Weed headland forms the southern edge of a protected open water cove in an estuarine system influenced by both fresh and salt water and strong tidal currents. Also present in some form during the historic period was a fresh water spring located below the bluff that emerged from the ground approximately 120 feet from the high water line near the southwest bastion of Battery Weed. Prior to c.1860, this spring was probably minimally managed as a water resource. A moat and granite seawall, completed in 1871, surrounded the fort and incorporated the spring in its design to fill and keep the structure supplied with water. The moat has since been filled and it is unknown if the spring remains intact underground. The spring no longer forms a visible natural feature of the landscape (CLR 2008:145).

NS-1, Successional Woods and Vines

Historic Condition:

During the construction of Battery Weed from 1847 through the completion of the seawall surrounding the fort in 1871, the broad sandy beach was probably interspersed with coastal grasses including saltwater-loving species such as salt cordgrass (*Spartina alternifolia*) and yellow saltgrass (*Spartina patens*). A mix of grasses, wildflowers, and successional tree species, such as cedar, oak, and pine existed on the steep, irregular bluff above the site of the fort. The natural flora was likely removed when the site was graded in c.1873 and replaced with managed grasses for a period of many years until c.1940. During World War II, some of the natural flora may have become reestablished on and around the batteries through the direction of the Coast Artillery command in an effort to conceal the earthworks from aerial attack (CLR 2008:145).

Existing Condition:

Since the end of the historic period in 1945, natural succession has reclaimed most of the mown grass on the slope and batteries (Figure 13). These areas are now covered in a mix of native and non-native species including Norway maple (*Acer platanoides*), tree of heaven (*Ailanthus altissima*), black cherry (*Prunus serotina*), and a wild grape or porcelain berry (*Ampelopsis brevipedunculata*). This vine is climbing many of the trees in the successional woods and covering much of the slope and the earthworks of the batteries (CLR 2008:145-146).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Successional Woods and Vines [NS-1, Successional Woods and Vines]	137902	Noncontributing – Compatible					No

Landscape Characteristic Graphics:



Figure 13. View across the Battery Weed headland in 1994 showing the growth of successional woods on formerly open ground. Compare this photo with Figure 7. (Unpublished report prepared for the National Park Service, 1995)

Landscape Characteristic: Spatial Organization

During the historic period, the Battery Weed headland was defined spatially by the steep slope to the west, raised earthen batteries to the south and north, and the open waters of the Narrows to the east. Since 1945, the spatial organization has been altered mainly through natural succession, and the removal of some of the mine complex buildings and structures. Despite these changes, the landscape retains the overall organization that has defined it since its development between 1847 and 1894, although it has become much more enclosed due to the growth of successional woods (CLR 2008:146).

SO-1, Parade Ground
Historic Condition:

Early in 1847, the parade ground began to take shape with the start of construction of the granite fort that would later be known as Battery Weed. When the fort was completed in 1864, the space at its center, the parade ground, was a nearly level lawn area, open to the sky above with a passage to the outside in the center of the west curtain wall, and a cistern set below grade adjacent to each of the eastern stair towers. From the parade ground, the only opening to the exterior was a narrow gated passage through the guardhouse. During the historic period, the parade ground was probably used in part for storage of munitions as well as for military exercises centered on a flagpole (CLR 2008:146).

Existing Condition:

Little change has occurred in the parade ground since the end of the historic period in 1945 aside from its use for storage and military exercises. Measuring approximately 260 feet by 140 feet, the parade ground is enclosed and framed to the east by three sides of a gently rounded half-hexagon of arched granite casemates in three tiers at a height of approximately thirty-six feet with two four-story stair towers and a delicate iron railing between the towers along the top tier (Figure 14). A lower, straight granite wall encloses the parade ground on the west side and incorporates a two-story guardhouse with iron entry gate and two four-story magazines with stair towers at the northwest and south corners. The parade ground is maintained entirely as mown lawn except for two concrete munitions pads (CLR 2008:146-147).

SO-2, Moat Space

Historic Condition:

Construction of a four-sided, seven-foot deep moat between 1851 and 1871 established a space surrounding Battery Weed defined by the high granite walls of the fort and the low granite seawall, with a granite or concrete retaining wall on the west or landward side. The water-filled moat was intended to provide strategic protection, but also served as a waterfront walkway or promenade. In c.1887, water was drained from the moat, except at the southwest corner where a reservoir was established. In c.1904, the landward (west) side of the moat was filled to ground level for construction of mine defense support buildings, which obliterated this part of the moat space. On the seaward sides, the moat space was altered around the same time through partial filling to a depth of about four feet (CLR 2008:147).

Existing Condition:

Since the end of the historic period in 1945, the seaward sides of the moat were filled to a level just below the capstone, which altered the enclosure of the moat space (Figure 15). The filled moat surrounds Battery Weed at a distance of approximately thirty-three feet from the outer granite walls of the fort. Grasses, weeds and reeds occur in the fill, which has a top dressing of gravel to protect against outwash. The space of the filled-in moat to the south, east, and northwest defines a bay-front terrace along the seaward sides. Lawn extends across the grounds abutting the west wall of Battery Weed over the filled landward side of the moat. The mine defense components were removed at some point after 1945, leaving concrete footing on the filled moat (CLR 2008:147).

SO-3, Overlook Space

Historic Condition:

At the beginning of the historic period in 1847, the overlook was a grassy knoll at the crest of a weathered and eroding, partially treed-covered bluff 125 feet above the Narrows and the construction site of Battery Weed. The space was defined by a large rock outcropping to the south, a pasture fence, dirt road, and the round stone bastions of the original Fort Tompkins to the west. A small signal house and semaphore signal was located at the crest of the bluff above the bay. In 1859 with construction of the new Fort Tompkins, plans were developed for constructing a raised earthen berm with gun emplacements along the top of the bluff. This earthwork was built by c.1873, probably at the time the slope was graded. Between c.1897 and 1908, the earthwork was removed and the top of the bluff was graded into a level terrace bordered by Hudson Road. In c.1938, a stone wall was built along the crest of the slope, apparently to define the space for informal use by the public for its scenic views (CLR 2008:148).

Existing Condition:

After 1945, the overlook space became enclosed by the growth of successional woods on the slope and by construction of a wood-frame building at the widest part of the overlook in c.1946. Portions of the slope and the wood-frame building were removed and space reopened as part of the park's

redesign of the overlook terrace in c.1995. The redesign included a visitor gathering area at the widest part of the overlook space at the head of Tompkins Road, defined by a flagpole, low concrete wall, and shrubs, surrounded by an open expanse of concrete and turf panels (Figure 16) (CLR 2008:148).

SO-4, Slope Space

Historic Condition:

Prior to c.1873, the 125-foot high slope above Battery Weed was mostly a steep and craggy, eroded bluff scattered groves of trees including cedar and pine. Portions of the slope were cleared from grading completed off the southwest bastion of the fort in c.1847, and most likely adjoining the North and South Cliff Batteries during their construction in the 1860s. In c.1873 as work was nearing completion of Fort Tompkins, the Army graded the remainder of the bluff to an even grade of approximately fifty degrees, removing all remaining trees and creating one large open space maintained in mown grasses (CLR 2008:149).

Existing Condition:

Since the end of the historic period in 1945, the slope space above Battery Weed, bordered by the overlook stone wall at the top and Battery Weed Road at the base with a base plane at an angle of approximately fifty degrees, became enclosed in dense successional woods. A large area was cleared in c.1995 to reestablish the view from the overlook, but this area is today covered by a blanket of invasive porcelain berry vine (Figure 17) (CLR 2008:149).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Parade Ground, [SO-1, Parade Ground]	137904	Contributing					No
Moat Space, [SO-2, Moat Space]	137906	Contributing					No
Overlook Space, [SO-3, Overlook Space]	137908	Contributing					No
Slope Space, [SO-4, Slope Space]	137910	Contributing					No

Landscape Characteristic Graphics:



Figure 14. The parade ground (SO-1) view looking northeast, is enclosed by a half-hexagon of arched granite casemates with two four-story stair towers and guardhouse on the west side. (SUNY ESF, 2006)



Figure 15. The moat space (SO-2) and waterfront promenade (C-5), looking north, is filled with earth and rubble and top-dressed with gravel between the granite seawall (BS-2) and the fort walls. (SUNY ESF, 2006)



Figure 16. The overlook terrace (SO-3) and overlook promenade (C-3), and overlook stone wall (BS-10), looking north, incorporates a contemporary gathering area and a stone wall built c.1938 along the top of the slope above Battery Weed. (SUNY ESF, 2006)



Figure 17. The slope space (SO-4) in foreground looking southeast from the overlook illustrating open areas interrupted by woods and scrub. (SUNY ESF, 2007)

Landscape Characteristic: Land Use

During the historic period, the Battery Weed headland was characterized primarily by military use and secondly by informal public recreation. Although Fort Wadsworth remained under United States military jurisdiction and was part of an active military base until 1994, the Battery Weed landscape largely fell out of active military use after 1945. The site, and in particular the overlook at the top of the slope with its panoramic views, was also used during the historic period as a quasi-public park and promenade outside of times of war, especially after completion of major construction in the 1870s. Recreational uses also diminished after 1945, as reflected in the loss of the panoramic views from the overlook due to the natural succession. In 1995, recreational use became formalized with the incorporation of Fort Wadsworth into Gateway National Recreation Area (CLR 2008:149).

Landscape Characteristic: Circulation

Circulation through the Battery Weed headland during the historic period included roads, walks, and rail lines. Public use of the headland for taking in the views created patterns of circulation along the overlook and along the moat surrounding Battery Weed. After World War II, some of the circulation features were lost as military and public recreational uses disappeared. Circulation at the overlook has been returned, but has been lost on the walks extending down the slope and along the moat, where access is restricted by chain-link fencing (CLR 2008:150).

C-1, Battery Weed Road (174) (portion)

Historic Condition:

During the historic period, Battery Weed Road, built in c.1847 roughly following an earlier farm road, entered the site from the south along the edge of the cliff, at the east end of Richmond Road, and turned to the northwest near the entrance of the fort ascending the slope above the north dock and connecting with Mont Sec Avenue. The road was realigned with the construction of the North and South Cliff Batteries in the 1860s. In c.1883 the road surface was first dressed with macadam and gravel. When the Torpedo Storage Building was constructed in c.1894, Battery Weed Road was realigned and widened at the north and south entrances of the new building. The steel rails of the mine railway were set into the road surface along with construction of the Torpedo Storage Building (CLR 2008:150).

Existing Condition:

In c.1995, the south part of Battery Weed Road, which extends up a steep grade adjacent to Battery Bacon, was reconstructed with concrete gutter-curbs, and the area in front of the entrance to Battery Weed was widened. The north leg of Battery Weed Road is surfaced in asphalt without curbs and measures approximately twelve feet wide and widens around the Torpedo Storage Building (Figure 18). The south curbed leg of the road measures approximately twenty feet wide. The road is surfaced in concrete where it is crossed by the mine railway. The wide area between Battery Weed and the Torpedo Storage Building is occasionally used for short-term visitor parking (CLR 2008:150).

C-2, Hudson Road (176) (portion)

Historic Condition:

Hudson Road originated prior to 1847 as a dirt road along the crest of the bluff and was realigned several times into the early twentieth century. In c.1873, it was lined by an earthwork (berm) along the crest of the bluff. Hudson Road was first given a macadam (asphalt) surface in c.1880. It was widened and realigned with removal of the earthwork in c.1908, and again with the addition of the overlook stone wall and roadside sycamore trees in c.1938 (CLR 2008:151).

Existing Condition:

Between 1945 and 1961, Hudson Road was widened at its mid-section and at the north end to incorporate perpendicular parking spaces on the east side of the road. The last realignment of the road took place in c.1995 with redesign of the overlook terrace. Hudson Road has an asphalt surface and is approximately twenty feet wide and 2,000 feet long running along the overlook

terrace immediately to the east of Fort Tompkins. The road has concrete curbs with integral gutters. It connects to Battery Weed Road completing a loop that circumnavigates the slope between Battery Weed and Fort Tompkins (CLR 2008:151).

C-3, Overlook Promenade (no #)

Historic Condition:

The overlook promenade was an informal circulation route along the crest of the bluff above Battery Weed prior to 1873. Following the grading of the bluff in c.1873, circulation probably followed an earthwork (berm) that extended along the crest of the bluff and expanded into a terrace measuring approximately 250 feet long by thirty feet wide. In c.1892, the overlook terrace and walk were linked to new walks that crossed the slope diagonally above Battery Weed, connecting the overlook terrace and walk with Battery Weed Road below. In c.1908, the earthwork was removed, allowing for the widening of the circulation route. A stone wall along the top edge of the slope constructed in c.1938 formalized the circulation route and also blocked access to the slope walks (CLR 2008:151).

Existing Condition:

In 1995, circulation along the overlook promenade was formalized with the addition of concrete sidewalks along the stone wall and a paved terrace area at the intersection of Tompkins Road (see Figure 16). The walks extend approximately seventy feet to the south of the terrace and 600 feet to the north along Hudson Road (CLR 2008:151).

C-4, Slope Walks (no #)

Historic Condition:

In c.1892 around the time the Torpedo Storage Building was being constructed, the Army constructed three walks crossing the steep slope down to Battery Weed Road. One approximately 660 foot-long walk extended from the northwest to the southeast crossing the other two walks at a switchback about halfway down. The other two walks extended from the northwest along Battery Weed Road to the southeast, connected in an acute angle and joined the path at the crest of the slope near the overlook. The walks were approximately six feet wide with concrete edging. The historic surface is unknown (CLR 2008:152).

Existing Condition:

Since the end of the historic period in 1945, the slope walks have been obscured with successional vegetation and invasive vines, and impacted by erosion. It is unknown whether they remain substantially intact. A part of the walk is visible from Battery Weed Road north of the Torpedo Storage Building. Approximately 120 feet of concrete edging remains along this walk. Further investigation, including possibly archeological testing, is necessary to determine historic width, surface, and edging of the walks (CLR 2008:152).

C-5, Waterfront Promenade (no #)

Historic Condition:

The waterfront promenade around Battery Weed, which probably came into use with completion of the cofferdam in c.1850 and then the seawall in c.1871, was used by visitors outside times of war and major construction for strolling and taking in the view of the harbor. Visitors probably also walked along the moat once it was partially filled in c.1904 (CLR 2008:152).

Existing Condition:

Since the end of the historic period in 1945, use of the waterfront promenade declined as conditions became hazardous and as public use of the overlook decreased due to growth of woods and use restrictions. The promenade follows the top of the granite seawall and the adjoining filled moat (see Figure 15). Access to the promenade is presently blocked by plastic fencing at the southwest bastion, and a six-foot high chain-link fence extending from the northwest bastion (CLR 2008:152-153).

C-6, Mine Railway (173)

Historic Condition:

In c.1887, the first sections of mine railway were extended from the mine storage area in Battery Weed to the north dock where they were deployed by boat. In 1896, the railway was extended to the new Torpedo Storage Building, where three sets of tracks entered the south end for deployment to the dock, and a return set entered the upper floor at the rear of the building. The rails were extended several times to reach mine support buildings built between 1904 and 1905, and then in

1907 to access a timber extension and mine boathouse at the north dock. In 1910, the rails were realigned to reduce the sharp curves at the south end of the Torpedo Storage Building. In 1921, final modifications to the railway further adjusted the alignment (CLR 2008:153).

Existing Condition:

Since the end of the historic period in 1945, sections of the mine railway have been lost at the north dock, parade grounds, and along the west side of Battery Weed. Sections remain at Battery Weed Road at the north and south ends of the Torpedo Storage Building, and extending toward Battery Catlin and the north stone dock. The rails are generally set into concrete pavement (Figure 19). In Battery Weed Road, the concrete pavement has been rebuilt and the rails set in a polymer caulk. Where the rails are covered by dense vegetation at the south end of Battery Catlin, it is unknown whether they still exist or have been removed (CLR 2008:153).

C-7, Dock Road (175)

Historic Condition:

The dock road was probably established along with the construction of the north dock in c.1858. In c.1887, the road was improved and possibly realigned as part of the development of the mine railway. A spur off the road was constructed to the north along Battery Catlin at some time after 1913. It is not known where this spur ended. The dock road was paved in asphalt at an undetermined date during the historic period (CLR 2008:153-154).

Existing Condition:

Since the end of the historic period in 1945, the east end of the dock road has washed out and become covered in weeds and scrub. The remainder of the road is asphalt with worn and indefinite edges. A chain link fence cuts off access to the dock road at the north end of Battery Weed. There is no trace of the spur to the north along Battery Catlin (CLR 2008:154).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Battery Weed Road (portion) (174) [C-1, Battery Weed Road]	137932	Contributing	41235		Location	21178	Yes
Hudson Road (176) (portion) [C-2, Hudson Road]	137934	Undetermined	41237		Location	21180	Yes
Overlook Promenade (no #) [C-3, Overlook Promenade]	137936	Undetermined					No
Slope Walks (no #) [C-4, Slope Walks]	137938	Undetermined					No
Waterfront Promenade (no #) [C-5, Waterfront Promenade]	137940	Contributing					No
Rail Tracks (173) [C-6, Mine Railway]	137942	Contributing	41244		Location	22184	Yes
Dock Road (175) [C-7, Dock Road]	137944	Contributing	41236		Location	21179	Yes

Landscape Characteristic Graphics:



Figure 18. Battery Weed Road (C-1), looking southeast along the Torpedo Storage Building. The concrete surfaced track of the mine railway extends across the road from the rear of the building. (SUNY ESF, 2006)

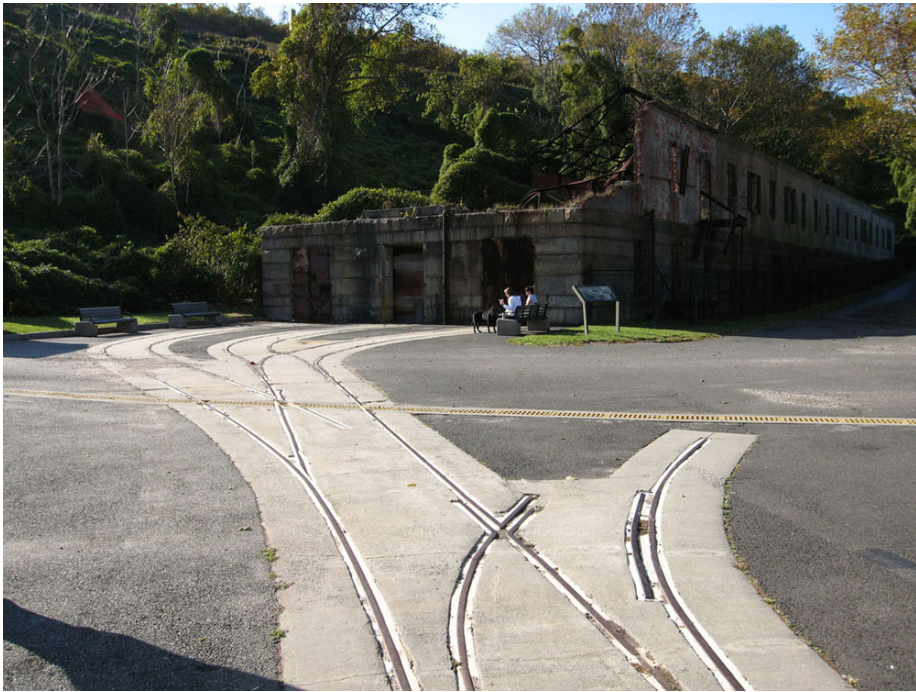


Figure 19. The mine railway (C-6), built between c.1887 and 1921 looking northwest toward a section to the Torpedo Storage Building (BS-3) built in c.1896. (SUNY ESF, 2007)

Landscape Characteristic: Topography

The topography of Battery Weed was historically characterized by a dominance of engineered slopes with even grades on earthworks and slopes. In the initial development of the landscape, the natural contours of the land were manipulated to provide more even, level surfaces for circulation of laborers, carts, and materials involved in the construction of the fort. In c.1862, construction of large earthworks for the South Cliff and North Cliff Batteries began on the level waterfront area and continued with reconfigurations of the topography through c.1905 with the completion of Battery Bacon and Battery Catlin, together with Batteries Turnbull and Barbour to the south outside of the project area. The final major reconfiguration of the topography came with the reconstruction of Fort Tompkins between 1859 and 1876, which impacted the adjoining engineered slope extending down to Battery Weed (CLR 2008:154).

T-1, Engineered Slope

Historic Condition:

In c.1848 with the start of construction on Battery Weed, the portion of the natural bluff off the southwest bastion was graded into an even slope, retained by a wall at its base along Battery Weed Road. Additional portions of the bluff were graded in the 1860s as part of the construction of the North and South Cliff Batteries. In c.1873, as part of the completion of Fort Tompkins, the remaining sections of the natural bluff were graded to a nearly even slope of approximately fifty percent from its crest to its base. When the grading was complete, approximately two feet of its earlier 125-foot elevation had been lost and the slope crested at 123 feet at the overlook terrace. The slope was maintained in mown turf. In c.1892, three walks were graded into the slope, supported by concrete edging on the downhill side (CLR 2008:154-155).

Existing Condition:

Since the end of the historic period in 1945, some soil erosion has occurred in the slope above the north end of the Torpedo Storage Building where a gully has formed as a result of water runoff. The grade of the slope has most likely become more irregular overall due to erosion and growth of vegetation (CLR 2008:155).

T-2, Battery Catlin Earthwork (South End)

Historic Condition:

Initially constructed in c.1863 to 1867 as the North Cliff Battery, the large earthwork was reconstructed in c.1902 to 1904 as the approximately 140 foot wide and 720 foot long Battery Catlin. The earthwork was redesigned to accommodate new Endicott-period technology in coastal defense artillery, but retained some of the existing features including a subsurface parados. Battery Catlin in its entirety was built as a series of earth mounds rising approximately forty-five feet above the level of the shoreline. These earth mounds incorporated several poured concrete structural walls, gun emplacements, steps, access paths, and with earth-covered concrete arches. The second mine casemate was built at the south end of the battery in c.1905 (CLR 2008:155).

Existing Condition:

With the exception of some erosion and deterioration of structural elements and a dense covering of successional woods, little change has occurred to the Battery Catlin earthwork since the end of the historic period in 1945. The southern end of Battery Catlin consists of a large earth mound measuring approximately 320 feet by 140 feet rising to a height of forty-five feet above the level of the dock road (CLR 2008:155).

T-3, Battery Bacon Earthwork (North End)

Historic Condition:

Battery Bacon was initially constructed in c.1862 to 1866 as the South Cliff Battery and reconstructed in c.1898 as Batteries Bacon, Turnbull, and Barbour. Redesigned to accommodate new Endicott period technology in coastal defense artillery, the earthwork of Battery Bacon rose approximately fifty feet above the water level of the Narrows just above the shoreline and included poured concrete structural walls, steps, and gun emplacements (evaluated under BS-9) (CLR 2008:156).

Existing Condition:

With the exception of the overgrowth of vegetation on the battery, little change has occurred to the Battery Bacon earthwork since the end of the historic period in 1945. The northern end of Battery Bacon consists of a large earthen mound measuring approximately 200 feet by 80 feet, rising to an elevation of fifty feet above the water level of the Narrows (Figure 20). The only section that has been cleared of heavy vegetation is the north gun emplacement (CLR 2008:156).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Engineered Slope (see also SO-4) [T-1, Engineered Slope]	137956	Contributing					No
Battery Catlin Earthwork (155) (South End) [T-2, Battery Catlin Earthwork (155) (South End)]	137958	Contributing	41216		Location	27865	Yes
Battery Bacon Earthwork (316A) (North End) [T-3, Battery Bacon Earthwork (316A) (North End)]	137960	Contributing	41220		Location	20074	Yes

Landscape Characteristic Graphics:



Figure 20. The vine and tree-covered Battery Bacon earthwork (T-3) built in c.1898 above the shoreline, looking southeast from the parapet of Battery Weed. The battery is the area above the shoreline. (SUNY ESF, 2007)

Landscape Characteristic: Constructed Water Features

The only constructed water feature in the Battery Weed headland was a moat designed by Army Chief Engineer General Joseph G. Totten in c.1850 to be filled by a combination of water sources including a spring located near the fort, and tidal waters of New York Bay. Totten designed the moat to surround the fort providing highly controlled access and thus protection from landward attack. Construction of the moat was undertaken in stages and included the temporary construction of a timber and stone cofferdam below the high tide line that allowed the permanent construction of the granite seawall that formed the outer edge of the moat. The moat surrounding Battery Weed, approximately thirty feet wide and seven feet deep, was finished with the completion of the seawall in c.1871. The moat was dewatered in c.1887, and partially filled with earth and rubble in c.1904 to a depth of approximately four feet below the capstone. At some point after 1945, the moat was completely filled to within a foot of the capstone (see SO-2 for evaluation of the moat space) (CLR 2008:156).

Landscape Characteristic: Vegetation

Planted vegetation on the site prior to c.1930 was limited primarily to perennial grasses that were established as lawn and mown turf covering the grounds, slope, and batteries (see NS-1 for successional woods and vines). In the 1930s, roadside specimen trees were added to the landscape, the only known instance of ornamental plantings in the headland during the historic period. Since 1945, much of the lawn and mown grasses have been lost with the cessation of maintenance that led to the growth of invasive vines and successional woods (CLR 2008:157).

V-1, Parade Ground Lawn

Historic Condition:

The Army established a lawn on the parade ground within the walls of Battery Weed during the initial construction period in c.1847 to 1864 and maintained it throughout the historic period (CLR 2008:157).

Existing Condition:

The parade ground lawn was not maintained after 1945 and by the 1960s, it was characterized by volunteer trees, ruts, and piles of earth. The lawn was restored in c.1995 as a mix of perennial grasses mown short, less than four inches (Figure 21). There are no other plantings on the parade ground (CLR 2008:157).

V-2, Slope & Fortress Grounds Turf

Historic Condition:

The open ground around Battery Weed, including the slope and overlook, Batteries Catlin and Bacon, and the level areas along the roads and adjacent to the fort, were planted with grasses as the land was graded in stages from c.1847 through c.1904. Although the topography of the slope and batteries was adjusted to accommodate new gun technologies, the vegetation was maintained as mown grasses throughout the historic period, with some shrub growth along the shoreline near the batteries by the 1920s. The turf on the batteries may have been let go during World War II as part of an order for aerial concealment, but this vegetation would have been low (CLR 2008:157).

Existing Condition:

Since the end of the historic period in 1945, most of the slope & fortress grounds turf (approximately eighty percent) has been lost, except for the area bordering Battery Weed and Battery Weed Road. Most of the former areas of mown turf on the slope and batteries has been lost to successional woods and a blanket of invasive porcelain berry (see also NS-1) (CLR 2008:157).

V-3, Roadside Specimen Trees

Historic Condition:

A row of sycamore trees was planted along Battery Weed Road across from the Torpedo Storage Building and along Hudson Road near the overlook in c.1938. The addition of these trees was an aesthetic enhancement that probably was made in conjunction with the formalization of the overlook that included construction of a stone wall. The plantings were probably made at the same time as the existing sycamores along nearby Mount Sec Avenue (CLR 2008:158).

Existing Condition:

Since the end of the historic period, most of the roadside specimen trees have been lost. Three sycamore (*Platanus occidentalis*) trees remain. One is located on the east side of Hudson Road across from Fort Tompkins, at a diameter of approximately fourteen inches. This sycamore may be a replacement planting or a remnant of the row of trees that existed during the historic period. Two mature sycamore trees are located along the east side of Battery Weed Road across from the Torpedo Storage Building. One is approximately forty-two inches in diameter, and the other is of approximately thirty-six inches (CLR 2008:158).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Parade Ground Lawn [V-1, Parade Ground Lawn]	137962	Contributing	000000		Location	27860	No
Fortress Grounds & Slope Turf [V-2, Fortress Grounds & Slope Turf]	137964	Noncontributing – Compatible					No
Specimen Roadside Trees [V-3, Specimen Roadside Trees]	137966	Contributing	000000		Asset	545834	No

Landscape Characteristic Graphics:



Figure 21. The parade ground lawn (V-1), looking south from an upper tier casemate showing also the flagpole and flanking munitions pads. The munitions pads (SS-6) and flagpole (SS-7) can also be seen. (SUNY ESF, 2007)

Landscape Characteristic: Buildings and Structures

Most of the existing buildings and structures in the Battery Weed headland were developed as a part of an evolving complex of coastal fortifications over a period of approximately seventy-four years from 1847 to c.1921. Only one structure and two ancillary buildings were added after this time. There were a number of buildings in the landscape prior to 1847, notably the Second System Fort Richmond and a row of support buildings to its west, but all were removed during the historic

period. Battery Weed remains the dominant and most significant building in the landscape. A number of ancillary buildings and structures associated with the mine defense system, constructed between 1887 and 1921, have been lost since 1945. These include a complex of buildings and a timber extension on the north dock, which were removed in c.1960 during construction of Verrazano-Narrows Bridge and probably as a result of Hurricane Donna. At the same time, the wood-frame support buildings for the mine defense system located on land were also removed. These included cable tank buildings 1 (c.1898), 2 (c.1899), 3 (c.1904), and 4, 5 & 6 (c.1905); a testing room (c.1904), and a torpedo loading room (c.1904) located along the west wall of Battery Weed and parallel to the Torpedo Storage Building. All other secondary buildings and structures remain, although many are in poor or ruined condition (CLR 2008:158-159).

BS-1, Battery Weed (150, 151,181)

Historic Condition:

Battery Weed was designed in c.1846 under the direction of Army Chief Engineer General Joseph G. Totten according to the Army's specifications for Third System coastal fortifications. Construction began in 1847 and was complete by 1864. The granite fort, extending into the waters of the Narrows, was built in a half-hexagon plan with three tiers of casemates surrounding a central parade ground, with a perimeter moat and seawall. The top or barbette tier featured a turf-covered earthen surface and parapet with gun emplacements. Incorporated into the west curtain wall of the fort were the main entrance (via a drawbridge prior to c.1904), guardhouse, and magazine towers. In c.1887, two concrete sections were added to the northwest bastion to provide protection for the first mine casemate located within the fort. In 1903, a lighthouse was added to the barbette tier at the northeast bastion. Most of the guns had been removed from the fort by this time (CLR 2008:159).

Existing Condition:

Since the end of the historic period in 1945, the only substantial change to Battery Weed has been the loss of the roofs of the magazine towers, which occurred prior to 1958. Battery Weed is a massive granite structure measuring 286 feet along each channel-front wall, and 450 feet along the west scarp wall (Figure 22). The fort features three casemated tiers, rising one on top of the other, and an open earth-covered barbette tier with a breast height parapet wall along the channel side that rises sixty-three feet above the Narrows. Thirty-one gun emplacements are located on the barbette tier, each a circular raised brick and mortar pedestal with iron pintles that held rotating canon. The area surrounding the gun emplacements and the area on top of the parapet are planted with mown turf (CLR 2008:159).

BS-2, Granite Seawall (228)

Historic Condition:

Construction of the granite seawall, completed in c.1871, began with the building of a temporary timber and stone cofferdam in c.1851. The seawall consisted of two different sections. Around the channel sides of the fort, the seawall was a freestanding structure forming the outside wall of the moat. It continued to form the inland wall of the moat, which was buried beneath fill in c.1904. North of the fort, the seawall was a retaining structure that curved outward to form a bulkhead for the north dock (CLR 2008:160).

Existing Condition:

Since the end of the historic period in 1945, two sections of the retaining wall section of the seawall have collapsed, one between Battery Weed and the north dock, and the other north of the dock. A portion of the moat seawall along the east side of Battery Weed was rebuilt in 2006. The granite seawall extends for approximately 1,000 feet from the south end of Battery Weed to a point north of the north dock. The moat section of the seawall extends along the entire outer channel-facing sides of Battery Weed and terminates at the rocky beach near Battery Bacon on the south (see Figure 22). The retaining wall section of the seawall extends from Battery Weed north beyond the north dock. Both sections are built of coursed quarry-faced granite ashlar (CLR 2008:160).

BS-3, Torpedo Storage Building (147)

Historic Condition:

The first freestanding structure to be constructed as a part of the mine defense complex was the Torpedo Storage Building (#147) in c.1894. Sited at the base of the slope on the west side of Battery Weed Road, the two-story stone and brick structure featured engineered iron roof trusses

and windows with steel shutters. Used for the storage, processing, and delivery of underwater mines (torpedoes) and cables, the building contained three mine railway entry doors on the south end at the first story level, and one on the north end at the second story level (CLR 2008:160).

Existing Condition:

After the end of the historic period in 1945, the Torpedo Storage Building was used only for storage.

In the 1980s, it suffered extensive fire damage, which resulted in loss of roof trusses and brick walls at the south end. As a result of this fire, the roof skin was removed and the building left as a shell. Sections of wood structural timbers and window sash remain. Overall, the brick and stone building with a steel-truss gable roof measures approximately 230 feet by 40 feet (see Figure 19). Planning is underway to rehabilitate this building for visitor use (CLR 2008:160-161).

BS-4, Concrete Block Garage (148)

Historic Condition:

Sometime between 1924 and 1940, a small, concrete-block building with a gable roof was erected at the base of the slope to the south of the Torpedo Storage Building. The building may have been used for storage or housing a vehicle (CLR 2008:161).

Existing Condition:

The concrete block garage at the base of the slope to the south of the Torpedo Storage Building measures approximately nine feet by eleven feet. The building is constructed of rock-faced concrete block and has a gable-front roof with a boarded-up garage door and attic vent in the front wall. The asphalt-sheathed roof has deteriorated and has a large hole on the north side (CLR 2008:161).

BS-5, Concrete Shed (144)

Historic Condition:

In c.1940, a small concrete-slab shed was constructed immediately to the east of cable tank buildings 1 and 2 on the west side of the dock road. The building may have housed utilities or possibly served as a guard station during World War II (CLR 2008:161).

Existing Condition:

The small, one-story, concrete-slab shed on the west side of the dock road measures approximately ten feet by twelve feet and has a low-pitched concrete shed roof and a door opening on the southwest side (Figure 23). The door is missing (CLR 2008:161).

BS-6, North Dock (141)

Historic Condition:

The north dock was initially built in c.1858 as an 'L'-shaped granite masonry structure approximately forty-feet wide by eighty-feet long, supported by granite piles and extending from a curved bulkhead retained by the granite seawall. The deck was surfaced in granite block, the same material used in the construction of Battery Weed and the seawall. In c.1877, a boathouse, later used as the quartermaster's warehouse, was built along the south side of the dock. Steel rails of a mine railway were initially laid in c.1887 from Battery Weed to the end of the stone dock so that subsurface mines could be transported to vessels for deployment. The rails were laid on a concrete bed that replaced the granite blocks. A large timber extension, measuring 154 feet long by sixty-five feet wide, was built off the east end of the dock in c.1907. The mine railway was extended onto the new section and a mine boathouse was built along its western side. At the same time, an open dockhouse, enclosed by 1945, was built off the east side of the quartermaster's warehouse. Inside this building was a tide station installed in c.1925 (CLR 2008:162).

Existing Condition:

In c.1960, part of the timber dock extension and the three dock buildings—quartermaster's warehouse, dock house, and mine boathouse—were removed, possibly as a result of hurricane damage. The remainder of the timber dock extension collapsed prior to 1995, leaving scattered piles and remnants of the mine railway. The remaining original stone section of the dock, extending from the shoreline north of Battery Weed in an 'L' shape, is approximately forty feet wide by eighty feet long. The structure consists of granite piles spaced approximately sixteen feet that support granite and iron beams. The deck is surfaced in granite block with concrete along the mine rails (Figure 24) (CLR 2008:162).

BS-7, Second Mine Casemate (140)

Historic Condition:

In c.1905, a brick and concrete structure designed as a mine casemate was built into the south end of recently constructed Battery Catlin, overlooking the Torpedo Storage Building, north dock, and harbor where the mines were processed and deployed. From its perch thirty-five feet above the Narrows, the second mine casemate held a commanding view. The building was a replacement of the first mine casemate built into the northwest bastion of Battery Weed in c.1887. Like the first casemate, its replacement housed a switchboard that controlled detonation of the mines through electrical signal transmitted over cables. These cables extended from the casemate through a twenty-four inch conduit extending 130 feet from the building through the seawall into the Narrows. The casemate also housed telecommunication equipment used to monitor activities in the harbor (CLR 2008:163).

Existing Condition:

Since the end of the historic period in 1945, the second mine casemate has stood empty except for a period when it was used by a local rod and gun club. At some point, probably in the 1980s, the building suffered extensive damage due to a fire that left only the brick walls standing. Measuring approximately sixty feet by seventy-five feet, the mine casemate is buried in invasive and successional vegetation on Battery Catlin. It is surrounded by a terrace, probably surfaced in concrete. The building is cordoned off by chain-link fence (CLR 2008:163).

BS-8, Battery Catlin Parados (182)

Historic Condition:

As part of the construction of the North Cliff Battery between 1863 and 1867, the Army constructed a subsurface chamber within the earthwork. In the plans for this structure, it is labeled as a "Bomb-proof Parados." Covered under several feet of earth in the south end of Battery Catlin, it was designed to provide protection from fire behind the fort. The only exterior feature of the chamber was an entry door set into the steep slope, today facing the mine casemate to the north. The three-inch thick, bronze-fastened, wood plank door had a small vertical window and opened outward. The hillside doorway was flanked by granite block cheek walls, which led to four steps down inside to two narrow barrel-vaulted concrete corridors, one of which was connected with a concrete underground chamber. Between 1902 and 1904, the North Cliff Battery was rebuilt as Battery Catlin, but the project apparently left the parados intact (CLR 2008:163).

Existing Condition:

The bomb-proof parados is located at the south end of Battery Catlin, and measures approximately twenty feet by forty feet in over-all dimension. Access to the underground vault is by an exterior walk set into the earthwork with heavy granite-block cheek walls that are in poor condition (Figure 25). A three-inch thick, bronze-fastened wood plank door with a small vertical window opens outward and leads to steps down through a narrow, barrel-vaulted concrete corridor and interior chamber. The entryway is concealed by dense woods and vines (CLR 2008:164).

BS-9, Battery Bacon North Gun Emplacement (portion of 316A)

Historic Condition:

In c.1898, South Cliff Battery was reconstructed as a series of earthen and reinforced concrete batteries to accommodate new gun emplacements. The northernmost of these batteries, immediately to the south of Battery Weed was Battery Bacon. The gun emplacement at its north end, rising forty-nine feet above the Narrows, contained a raised concrete platform accessible by concrete steps on each side. To the north of and extending from this platform was a gun emplacement edged with a low granite parapet wall with a round concrete pad, iron pintle and semi-circular rail set into the ground. Guns were mounted at Battery Bacon until c.1942. (The earthwork is evaluated under Topography, T-3.) (CLR 2008:164).

Existing Condition:

Since 1945, the north gun emplacement of Battery Bacon, located just to the south of Battery Weed and along the east side of Battery Weed Road, became covered in successional woods. In c.1995, the emplacement was cleared of vegetation and an interpretive panel was installed. Today, the gun emplacement is the only part of Battery Bacon kept open, although it is partially covered in invasive vines. The masonry features are deteriorating (Figure 26) (CLR 2008:164).

BS-10, Overlook Stone Wall (180)

Historic Condition:

A stone wall along the edge of the overlook along Hudson Road was probably constructed as a Works Progress Administration project in c.1938. The wall formalized the recreational use of the overlook, which had been a popular spot for taking in the panoramic views of New York Harbor since the early nineteenth century. The wall appears to have been intended as a barrier to keep pedestrians and automobiles from toppling down the steep slope. The wall cut off access to the walks that extended down the slope (CLR 2008:165).

Existing Condition:

The stone wall along the crest of the slope above Battery Weed measures approximately 2,000 feet in length and ranges in height from approximately eighteen to thirty-eight inches. It is mortared rubble wall with a mix of quarried rock and large stones, including brownstone and granite, with a parged cap. Repairs to the mortar and concrete have been made with white Portland cement in some areas, and the top parging is cracking and lifting in places (see Figure 16). Cars can no longer pull up to the wall (CLR 2008:165).

BS-11, Overlook Concrete Structure (no #)

Historic Condition:

No documentation was found on the square concrete structure to the east of the stone wall at the top of the slope below the overlook stone wall. A structure in this approximate location is indicated on a 1865 plan as a latrine. It is possible that the structure is a portion remaining from that period, although its shape appears to be different from that on the 1865 plan (CLR 2008:165).

Existing Condition:

A square concrete structure measuring approximately fifty-two inches and set into the slope immediately to the east of the stone wall at the top of the slope is flush with the surface of the slope on the west side and approximately eighteen inches above grade on the east side. The concrete is weathered and worn away in places, and the center of the structure appears to have been an opening that is covered in concrete (CLR 2008:165).

BS-12, Parade Ground Stone Gutters (no #)

Historic Condition:

Surface drainage within the parade ground was accommodated by stone gutters that emptied into a common cistern. This system was probably built between 1847 and 1864 as part of the original construction of Battery Weed. An 1893 photo of the parade ground indicates that the gutters were present at that time (CLR 2008:166).

Existing Condition:

In c.1995, the cistern cover was rebuilt in concrete with a steel hatch. It is not known if the underground section was replaced at the same time. The stone gutters, approximately 180 feet long and twenty-four inches wide, are located along the eastern edge of the parade ground approximately twenty-five feet from the casemate walls of the fort. The alignment of the three sections roughly parallels the north, east, and south walls of the fort. The gutters consist of three stone slabs forming a depressed channel that drain into the cistern at the intersection of the two northern gutter sections (Figure 27) (CLR 2008:166).

BS-13, Concrete Seawall (no #)

Historic Condition:

Records of the Works Progress Administration indicate that a seawall was constructed at Fort Wadsworth in c.1938. The WPA records likely refer to the poured concrete seawall constructed north of the end of the granite seawall, north of the north dock (CLR 2008:166).

Existing Condition:

The concrete seawall, approximately 550 feet long and seven feet high and partly covered in vines, extends from a large pilaster or utility structure measuring approximately six feet square continues north along the edge of the beach below Battery Catlin, beyond the project area (Figure 28). The adjoining granite seawall has collapsed (CLR 2008:166).

BS-14, Slope Retaining Wall (no #)

Historic Condition:

The slope retaining wall (labeled 'sustaining wall' on historic plans) along Battery Weed Road was constructed of eight-inch thick granite blocks in c.1848 to support the steep slope above the southwest bastion of the new fort then under construction. The south portion of the wall was buried

or removed with construction of the South Cliff Battery in c.1862 (CLR 2008:167).

Existing Condition:

The slope retaining wall extends approximately fifty-six feet in length and follows the slope of Battery Weed Road rising from approximately eight inches at the north end to approximately twenty-six inches on the south end (Figure 29). No substantial change has occurred to the slope retaining wall since the end of the historic period in 1945 aside from the adjoining addition of a curb gutter along Battery Weed (CLR 2008:167).

BS-15, Reveal Coincidence Range-Finder (CRF) Station (338)

Historic Condition:

The Coincidence Range-Finder (CRF) Station was constructed on the slope above Battery Bacon in c.1917 as part of the modifications to the site in support of firing accuracy from the batteries.

Another CRF Station, although not within the project area for this report, was built at approximately the same time on the slope above Battery Catlin (CLR 2008:167).

Existing Condition:

The Coincidence Range-Finder (CRF) Station is a concrete and metal structure that is obscured by dense vegetation. It appears to retain its overall structure, but the interior workings have probably been removed (CLR 2008:167).

BS-16, Surface Drain (no #)

Historic Condition:

The surface drain did not exist historically (CLR 2008:167).

Existing Condition:

The surface drain across Battery Weed Road near the entrance of Battery Weed is approximately fifty feet long and one foot wide, and was installed in c.1995 to intercept surface water flow before it reached Battery Weed. The drain did not remove the mine rails (CLR 2008:167-168).

Items noted with an * are listed on the National Register of Historic Places.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Battery Weed (150,151) * [BS-1, Battery Weed]	137968	Contributing	41198		Location	27860	Yes
Light Station (181) [BS-1, Battery Weed]	137970	Contributing	41243		Location	20035	Yes
Seawall (228) [BS-2, Granite Seawall]	137972	Contributing	41170		Asset	41869	Yes
Torpedo Storage (147) [BS-3, Torpedo Storage Building]	137974	Contributing	41196		Location	20031	Yes
Warehouse (148) [BS-4, Concrete Block Garage]	137976	Contributing	41197		Location	20032	Yes
Concrete Shed (144) [BS-5, Concrete Shed]	137978	Contributing					No
North Dock (141) [BS-6, North Dock]	137980	Contributing	41215		Location	20030	Yes
Mining Casement (140) [BS-7, Second Mine Casemate]	137982	Contributing	41195		Location	20029	Yes
Battery Catlin Magazine (182) [BS-8, Battery Catlin Parados]	137984	Contributing	41231		Location	20039	Yes
Battery Bacon (316A) (portion) [BS-9, Battery Bacon North Gun Emplacement]	137986	Contributing	41220		Location	20074	Yes
Hudson Road Wall (180) [BS-10, Overlook Stone Wall]	138256	Contributing	41242		Asset	42669	Yes
Overlook Concrete Structure (no #) [BS-11, Overlook Concrete Structure]	138282	Undetermined					No
Parade Ground Stone Gutters (no #) [BS-12, Parade Ground Stone Gutters]	138284	Contributing					No
Concrete Seawall (no #) [BS-13, Concrete Seawall]	138286	Contributing					No
Slope Retaining Wall (no #) [BS-14, Slope Retaining Wall]	138288	Contributing					No
B.C. and C.R.F. Station (338) [BS-15, Coincidence Range-Finder Station]	138290	Contributing	41225		Location	20083	Yes
Surface Drain (no #) [BS-16, Surface Drain]	138292	Noncontributing – Compatible					No

Landscape Characteristic Graphics:



Figure 22. Battery Weed (BS-1), constructed between 1847 and 1864, and the seawall (BS-2) completed in c.1871, view looking northeast at section that forms the outer wall of the moat around Battery Weed. (SUNY ESF, 2007)



Figure 23. The small concrete shed (BS-5), constructed in c.1940, looking north with the rise of Battery Catlin in the background. The historic function of this building is not known. (SUNY ESF, 2007)



Figure 24. The north dock (BS-6), built in c.1859, view looking northeast showing granite and concrete surface, and remnants of the mine railway and timber extension dating to 1907. (SUNY ESF, 2007)



Figure 25. The exterior entry of the Battery Catlin parados (BS-8) built in c.1865, looking east showing granite cheek walls and overgrown conditions. (SUNY ESF, 2007)



Figure 26. The gun emplacement (BS-9) at Battery Bacon (see T-3) built in c.1898 looking north showing concrete platform and parapet walls, iron pintle, and traverse circle. (SUNY ESF, 2007)



Figure 27. The stone gutters and cistern (BS-12), built c.1847-1864, looking west with contemporary cistern hatch in the foreground. (SUNY ESF, 2007)



Figure 28. The partially vine-covered concrete seawall (BS-13) built in c.1938, view looking northwest with Battery Catlin in the background. In the foreground is a collapsed section of the granite seawall. (SUNY ESF, 2007)



Figure 29. The slope retaining wall (BS-14), built in c.1848, view look west with Battery Weed Road in the foreground. (SUNY ESF, 2007)

Landscape Characteristic: Views and Vistas

During the historic period, the panoramic views of New York Harbor from the headland, both from the overlook and shoreline, were character-defining features that were key to the strategic design of the landscape and also drew many visitors. Visitors also enjoyed sweeping water-level views from the granite seawall of Battery Weed and from the north dock. The view from the barbette tier of Battery Weed was an important strategic element that allowed a full range and angle of fire for the guns mounted there. During times of military inactivity, visitors also climbed the circular granite steps and enjoyed the spectacular views from the barbette tier. Some of these views were either obstructed or disappeared after 1945 due to growth of successional woods, but since 1995 have in part been reopened by the park (CLR 2008:168).

VV-1, Overlook View

Historic Condition:

The overlook at crest of the slope, 123 feet above the Narrows and Battery Weed, provided an open and panoramic view from north to south. Strategically, it provided for an open range of view from Fort Tompkins. Visible from this view to the north were the bluffs along Staten Island, Upper New York Bay, and Manhattan; to the east, Brooklyn with Fort La Fayette and Fort Hamilton guarding the opposite side of the Narrows; and to the south, Lower New York Bay, the Atlantic Ocean, and Sandy Hook, New Jersey. In the foreground of the view above the bay were the north dock on the waterfront, Battery Weed, the earthen batteries and the bustling maritime activity through the Narrows. As visitors strolled along the promenade along the overlook and walked down the slope, they experienced a changing perspective on this view and the activities on the bay and waterfront below. Access to the slope walks was removed in c.1938 (CLR 2008:168).

Existing Condition:

By the 1980s, the panoramic view from the overlook became obstructed through the growth of successional woods on formerly open ground. In c.1995, the park cleared a large part of these woods to reopen the view, but left portions of the slope to the north and south wooded, which provided a more constricted view than what existed prior to 1945. The Verrazano-Narrows Bridge also obstructs views to the east and south. Despite growth of the clearing in vines, the view of the harbor looking northeast from the overlook is panoramic (Figure 30) (CLR 2008:168-169).

VV-2, Water-Level Views

Historic Condition:

Panoramic views across the water are inherent in the coastal site, but became formalized with construction of the Battery Weed, which required the views for strategic purposes. The completion of the seawall and moat in c.1871 allowed access to the waterfront, opening the views to informal, occasional public use (CLR 2008:169).

Existing Condition:

Loss of the timber dock extension in c.1960 resulted in restricted range of view from the waterfront. The panoramic waterfront views along the seawall and north dock encompass the Staten Island shoreline, Upper New York Bay, and Manhattan to the north, the Narrows, Brooklyn, and Forts Lafayette and Hamilton to the east, and Lower New York Bay to the south with Coney Island in the distance (Figure 31). The Verrazano-Narrows Bridge constricts the views to the south. Access to the shoreline and waterfront views is restricted by fencing (CLR 2008:169).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Overlook View [VV-1, Overlook View]	138318	Contributing					No
Water-Level Views [VV-2, Water-Level Views]	138320	Contributing					No

Landscape Characteristic Graphics:



Figure 30. The panoramic view (VV-1), looking northeast across New York Harbor toward Manhattan at upper right. (SUNY ESF, 2007)



Figure 31. Water-level views (VV-2) looking southeast from the north dock with Coney Island (Brooklyn) in the distance. One of two iron dock bollards (SS-11) is in the foreground. (SUNY ESF, 2007)

Landscape Characteristic: Small Scale Features

Historically, many of the small-scale features in the Battery Weed landscape were part of the coastal defense artillery, including guns (cannons), long-rangerifles, mine railway cars, mine cases, and mine planting vessels, but also included features such as flag poles, utility poles, and bollards. After c.1942, most of the cannons were removed from the site and stored elsewhere or used for scrap as part of the war effort, and after the war, the remainder of the artillery including smaller guns and mines were also removed. Small-scale features introduced after 1945 were installed either for security purposes, such as fences and light standards, or for recreation, such as benches, signs, and trash cans. Several guns were installed as interpretive elements (CLR 2008:169-170).

SS-1, Chain Link Fencing

Historic Condition:

Chain-link fencing most likely did not exist in the landscape during the historic period (CLR 2008:170).

Existing Condition:

Six-foot high chain-link fencing, installed after 1945 to close off access to the waterfront and abandoned buildings, is located along the east side of the Torpedo Storage Building, around the second mine casemate on Battery Catlin, and across the dock road, where a locked gate closes off access to the waterfront (CLR 2008:170).

SS-2, Overlook Telescopic Viewing Stations

Historic Condition:

Telescopic viewing stations did not exist in the landscape during the historic period (CLR 2008:170).

Existing Condition:

Two binocular telescopic viewing stations, installed after c.1995, are located along the west side of the stone wall at the overlook terrace. The viewing stations allow visitors to get a closer look at sights such as Battery Weed, shipping traffic in the Narrows, the Manhattan skyline, Brooklyn, and the Verrazano-Narrows Bridge (CLR 2008:170).

SS-3, Overlook Flagpole

Historic Condition:

The flagpole at the overlook did not exist during the historic period (CLR 2008:171).

Existing Condition:

An aluminum flagpole with yardarms, approximately fifty feet tall, was installed at the overlook above Battery Weed in c.1995 as part of the park's redesign of the overlook terrace. The pole, which is on axis with Tompkins Road, displays an American flag, a National Park Service flag, and a Department of the Interior flag (CLR 2008:171).

SS-4, Overlook Gun

Historic Condition:

Two cannons (guns) existed at the south end of the overlook between c.1873 and c.1908. The existing gun did not exist during the historic period (CLR 2008:171).

Existing Condition:

The overlook gun was installed as an interpretive element in the late 1990s or early 2000s as part of the park's redesign of the overlook terrace. The gun, on a concrete mount, is smaller than those that existed historically near this location. The successional woods on the adjoining slope block the line of fire toward the harbor that would have existed from this gun (CLR 2008:171).

SS-5, Cable Testing Trough

Historic Condition:

A cable testing trough was installed in c.1904 near the entrance to Battery Weed. The feature was used to test mine cable that were stored in adjoining buildings that lined the west side of Battery Weed (CLR 2008:171).

Existing Condition:

The cable testing trough, a metal covered chamber located on the fortress grounds near the

entrance to Battery Weed, measures approximately four feet by six feet and is set flush with the lawn (Figure 32). Adjoining the cable testing tank are two concentric concrete footings that are the remains of the cable testing tank (see A-4) (CLR 2008:171).

SS-6, Parade Ground Munitions Pads

Historic Condition:

The parade ground munitions were probably installed prior to 1893. A photograph by Alice Austin dated 1893 showing cannon balls stacked in an area corresponding with the existing pads. There may have been additional munitions pads in the parade grounds at the time. Following removal of the guns from Battery Weed by c.1903, cannonballs were probably no longer stored on the parade grounds (CLR 2008:172).

Existing Condition:

The parade ground munitions pads are two rectangular poured concrete panels located to either side of the flagpole near the east edge of the parade ground beside the stone gutters. Both are approximately seven feet wide, one is twenty feet long, the other thirty-two feet long (see Figure 21). The concrete is flush with the lawn (CLR 2008:172).

SS-7, Parade Ground Flagpole

Historic Condition:

A steel flagpole was installed in the center of the Battery Weed parade ground between 1893 and 1945 (it is not visible in the 1893 Alice Austin photograph). The exact date of the flagpole's installation is not known. Flagpoles were historically key features of military parade grounds (CLR 2008:172).

Existing Condition:

The parade ground flagpole is steel with a concrete base and a ball finial. It is located between the two parade ground munitions pads near the north/south center of the parade ground and is approximately twenty feet tall (see Figure 21). (CLR 2008:172).

SS-8, Park Benches

Historic Condition:

The eight park benches in the Battery Weed headland did not exist during the historic period (CLR 2008:173).

Existing Condition:

Four of the park benches are located at the overlook terrace, three are outside the south end of the Torpedo Storage Building, and one is along the west wall of Battery Weed. They are constructed of plastic or fiberglass and metal with concrete bases (CLR 2008:173).

SS-9, Interpretive Waysides

Historic Condition:

The six interpretive waysides in the Battery Weed headland did not exist during the historic period (CLR 2008:173).

Existing Condition:

Installed after 1995, three of the interpretive waysides are located at the overlook terrace, one near the south end of the Torpedo Storage Building, one near the entrance to Battery Weed, and one along the dock road near the chain link fence. They are approximately thirty by forty inches, constructed of metal and plastic (CLR 2008:173).

SS-10, Dock Utility Pole

Historic Condition:

The dock utility pole at the shoreline was probably installed by c.1907 with construction of the timber dock extension, dock house, and mine boathouse. It probably provided power and communications between the north dock facilities and other locations at Fort Wadsworth (CLR 2008:173).

Existing Condition:

By 1960, the facilities on the north dock that the utility line serviced had been removed. The wood dock utility pole is approximately thirty feet tall with climbing hardware and a single wire remaining attached (Figure 33) (CLR 2008:173).

SS-11, North Dock Bollards

Historic Condition:

The dock bollards were probably installed at the time of the north dock's construction in c.1858. These may have been fabricated from cannon shafts, with a cap installed on the top. There may have been additional bollards, but their number and location are not known (CLR 2008:174).

Existing Condition:

The two dock bollards located on the southeast and southwest corners of the north dock are made of cast iron, approximately three feet tall in a gently tapered column that has the shape of cannon shafts (see Figure 31). The surface of the bollards is lightly rusted and smooth, and they are in good condition (CLR 2008:174).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Chain Link Fencing (no #) [SS-1, Chain Link Fencing]	138332	Noncontributing – Compatible					No
Overlook Telescopic Viewing Stations (no #) [SS-2, Overlook Telescopic Viewing Stations]	138334	Noncontributing – Compatible					No
Overlook Flagpole (no #) [SS-3, Overlook Flagpole]	138336	Noncontributing – Compatible					No
Overlook Gun (no #) [SS-4, Overlook Gun]	138338	Noncontributing – Compatible					No
Cable Testing Trough (no #) [SS-5, Cable Testing Trough]	138342	Contributing					No
Parade Ground Munitions Pads (no #) [SS-6, Parade Ground Munitions Pads]	138344	Contributing					No
Parade Ground Flagpole (no #) [SS-7, Parade Ground Flagpole]	138346	Contributing					No
Park Benches (no #) [SS-8, Park Benches]	138348	Noncontributing – Compatible					No
Interpretive Waysides (no #) [SS-9, Interpretive Waysides]	138350	Noncontributing – Compatible					No
Dock Utility Pole (no #) [SS-10, Dock Utility Pole]	138352	Contributing					No
North Dock Bollards (no #) [SS-11, North Dock Bollards]	138358	Contributing					No

Landscape Characteristic Graphics:



Figure 32. The cable testing trough (SS-5) (upper left of photograph) installed in c.1904, looking north with the circular foundations of the c.1921 cable testing tank in the foreground (A-4). (SUNY ESF, 2007)



Figure 33. The dock utility pole (SS-10) added by c.1907, looking northwest with the seawall and bulkhead for the north dock in the foreground. (SUNY ESF, 2007)

Landscape Characteristic: Archeological Sites

There remain a number of foundations and other remnants of buildings and structures in the Battery Weed headland, most of which have been removed since 1945. Although these do not contribute to the overall character of the landscape, they do have the potential to serve as important interpretive elements and provide information on the historic operation of the fortifications on the headland. These include the following:

A-1, Cable Tank 1 and 2 Foundations

Concrete foundations from two wood-frame cable tank buildings built in 1898-1899 are located in an area approximately one hundred feet long, parallel to the Torpedo Storage Building. Remnants of the mine railway extend up to the south end of the foundations. These foundations are partly concealed by vegetation (CLR 2008:174).

A-2, Cable Tank 3 Foundation

Concrete foundations from a wood-frame cable tank building dating to c.1905 are located in an area just to the west of cable tanks 1 and 2, near the dock road. These foundations are concealed by vegetation (CLR 2008:174).

A-3, Cable Tanks 4, 5 and 6 Foundations

Concrete foundations from three wood-frame cable tank buildings built in c.1905 extend along the exterior of the west wall of Battery Weed, over the west moat wall. The foundations are clearly visible in an area of mown grass (CLR 2008:175).

A-4, Cable Testing Tank Foundations

Two concentric concrete footings are located west of cable tanks 5 and 6. These are remains of a cable testing tank added in c.1921 and removed prior to 1945. The foundations are covered in part by turf (CLR 2008:175).

A-5, Cofferdam Remnants

Structural remnants parallel to the seawall on the beach south of Battery Weed may be remnants of the cofferdam built in c.1846-71. The stone remains are located below the high water line approximately fifteen feet to the south and east sides of the seawall around Battery Weed (CLR 2008:175).

In addition to visible remnants, there are also many subsurface archeological remains in the Battery Weed headland. Archeological investigations by the Navy and National Park Service over the past two decades reveal some level of general environmental sensitivity for prehistoric use of the bluff edge and base for resources procurement, but the potential for presence of intact or significant resources has been limited by the historical construction episodes. Construction of Batteries Catlin and Bacon between 1898 and 1904 probably destroyed most of the earlier batteries, and additional resources most likely have been destroyed by construction of the mine defense complex buildings and structures. However, there is some potential for resources associated with the early British block house and with the first Fort Richmond to be present beneath or immediately adjacent to Battery Weed. Prior archeological investigation also has identified some potential for evidence of later features including support buildings associated with the construction of Fort Wadsworth/Battery Weed, the cofferdam remnants, and water-control features within the filled moat (CLR 2008:175).

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Cable Tanks 1 and 2 Foundations [A-1, Cable Tanks 1 and 2 Foundations]	138376	Undetermined					No
Cable Tank 3 Foundation [A-2, Cable Tank 3 Foundation]	138378	Undetermined					No
Cable Tanks 4,5 and 6 Foundations [A-3, Cable Tanks 4,5 and 6 Foundations]	138428	Undetermined					No
Cable Testing Tank Foundations [A-4, Cable Testing Tank Foundations]	138432	Undetermined					No
Cofferdam Remnants [A-5, Cofferdam Remnants]	138434	Undetermined					No

Condition

Assessment Interval (Years): 3

Next Assessment Due Date: 07/23/2028

Condition Assessment and Impacts

Condition Assessment: Fair

Assessment Date: 07/23/2025

Condition Assessment Explanatory Narrative:

The site's major resources – the Battery Weed fort, parade ground, and overlook – are in good condition, but there is deterioration of secondary resources such as the batteries and mine casemate buildings and structures. Additionally, the growth of vegetation on the slope and around the battery and casemate has limited some of the site's key views and spatial relationships. Vandalism and graffiti are major issues on all structures. The north dock and seawall ruins are in a deteriorated state.

Condition Assessment: Fair

Assessment Date: 09/17/2021

Condition Assessment Explanatory Narrative:

Provisional. The condition reassessment for this CLI has been delayed due to Covid-19 travel restrictions and staffing shortages. In the meantime, the most recent condition assessment will remain in place until it is reassessed as part of a comprehensive update of the entire CLI. Planning and scheduling this update will occur in FY 2022.

Condition Assessment: Fair

Assessment Date: 08/19/2009

Condition Assessment Explanatory Narrative:

The condition of the landscape at the time of this report's completion is evaluated as "fair." The site's major resources – the Battery Weed fort, parade ground, and overlook – are in good condition, but there is deterioration of secondary resources such as the batteries and mine casemate buildings & structures. Additionally, the growth of invasive vines on the slope has limited some of the site's key views and spatial relationships.

Impacts

Type of Impact: Erosion

Other Impact: n/a

External or Internal: Internal

Impact Narrative: Erosion around the seawall is an ongoing problem at this coastal site. Measures are currently underway to stabilize this area, but will always need to be monitored, especially after storm or wind events.

Date Identified: 07/23/2025

Type of Impact: Exposure to Elements

Other Impact: n/a

External or Internal: Internal

Impact Narrative: Corrosion is an ongoing problem to buildings, structures, and other landscape features at this coastal site, and should be carefully monitored.

Date Identified: 07/23/2025

Type of Impact: Improper Drainage

Other Impact: n/a

External or Internal: Internal

Impact Narrative: Drainage of sea and storm water around the seawall are an ongoing issue at the site. Measures are currently underway to stabilize this area, but will always need to be monitored, especially after storm or wind events.

Date Identified: 07/23/2025

Type of Impact: Vandalism/Theft/Arson

Other Impact: n/a

External or Internal: Internal

Impact Narrative: Missing shutters on the Battery Weed fort as well as other structures have allowed access to vandals. In some instances, vandals have set fires.

Date Identified: 07/23/2025

Type of Impact: Vegetation/Invasive Plants

Other Impact: n/a

External or Internal: Internal

Impact Narrative: Invasive trees, shrubs, vines and other vegetation have shrouded some of the site's historic buildings, structures, landscape features, and key views. This vegetation has also begun to cause extensive damage to the mortar and the various structural components that make up the fortifications.

Date Identified: 07/23/2025

Type of Impact: Inundation/Sea Level Rise

Other Impact:

External or Internal: External

Impact Narrative: An increase in the elevation of the mean sea level (MSL) in the Narrows may cover typically dry land around the Battery Weed fort.

Date Identified: 07/23/2025

Type of Impact: Inundation/Storm Surge

Other Impact:

External or Internal: External

Impact Narrative: Amplified tides during severe low pressure weather systems may overtop the sea wall and flood Battery Weed.

Date Identified: 07/23/2025

Type of Impact: Structural Deterioration

Other Impact:

External or Internal: Internal

Impact Narrative: Numerous historic buildings are structurally deficient

Date Identified: 07/23/2025

Treatment

Stabilization Measures

Treatment Documents

Treatment Type: Rehabilitation

Treatment Completed: No

Document Type: Cultural Landscape Report

Title:

IRMA Link:

Narrative:

Extensive treatment recommendations for the Battery Weed headland are presented in the 2008 report, "Cultural Landscape Report for the Battery Weed Headland, Fort Wadsworth, Gateway National Recreation Area." The year 1945 provides an appropriate benchmark for treatment of the landscape of the Battery Weed headland. It represents the end of the period of active military use and is consistent with the end of the period of significance recommended in the Draft Site Management Plan (CLR 2008:205).

Previous planning reports including the 1979 General Management Plan (GMP) and the 1995 Draft Site Management Plan do not prescribe a specific treatment approach for the landscape of the Battery Weed headland. However, in keeping with the general management approach of the plans, the CLR recommends Rehabilitation as the primary treatment to allow the park to meet objectives to both preserve and enhance the property for public visitation. Rehabilitation as the primary treatment does not preclude application of the other standards on a feature-level basis. Preservation should be the baseline treatment for all landscape features, including buildings and structures. In addition to Preservation, Rehabilitation could include resurfacing of park roads to improve accessibility, restoration of the partially ruined Mine Casemate, reconstruction of lost cable tank buildings, or addition of new facilities such as restrooms or a transportation shelter provided they are designed in a manner that is compatible with the historic character of the landscape (CLR 2008:204-205).

Current planning efforts anticipate the development of a new GMP for Gateway National Recreation Area that will supersede the 1979 General Management Plan. It will become the primary planning document for Fort Wadsworth and the Battery Weed headland over the next two to three decades. Completion of the updated General Management Plan is not expected for another five years. Given this, this treatment plan refers to the 1995 Draft Site Management Plan as the most current planning document for the Battery Weed headland (CLR 2008:203).

Proposed construction projects at the Battery Weed headland that will directly impact the landscape include "Rehabilitation of Battery Weed Seawall and Dock" (PMIS 16634) and "Manage Vegetation at Endicott-Era Batteries" (PMIS 47251). Other projects at the site include: "Repair And Rehabilitate Battery Weed Lighthouse" (PMIS 13258); "Restore Battery Weed Gatehouse" (PMIS 17271); "Rehabilitate Torpedo Building into Visitor Use Facility" (PMIS 16639); and "Reproduce 10 Cannons & Carriages for Exhibit at Battery Weed" (PMIS 11410).

Approved Treatment Costs

Cost Narrative:

Bibliography and Supplemental Information

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Landscape Documents:

File Name	Date	Attachment Type
GATE_Battery Weed-Floyd Bennett-Fort Hancock Post Grounds-Fort Tilden_CLI Updates Notes_2025.pdf		

Source