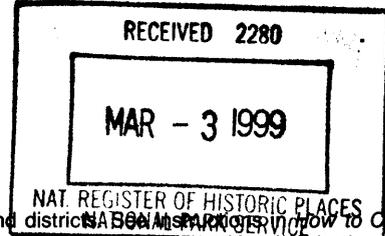


26000907

United States Department of the Interior
National Park Service

National Register of Historic Places
Registration Form



AD

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions on how to complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Fort McHenry

other names/site number Fort McHenry National Monument and Historic Shrine

2. Location

street & number Locust Point, at east end of Fort Avenue not for publication

city or town Baltimore vicinity

state Maryland code MD county Baltimore (City) code 510 zip code 21230

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Ronald M. Greenberg 3-1-99
Signature of certifying official/Title Date
National Park Service
State of Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

<input type="checkbox"/> entered in the National Register. <input type="checkbox"/> See continuation sheet.	Signature of the Keeper	Date of Action
<input type="checkbox"/> determined eligible for the National Register <input type="checkbox"/> See continuation sheet.	_____	_____
<input type="checkbox"/> determined not eligible for the National Register.	_____	_____
<input type="checkbox"/> removed from the National Register.	_____	_____
<input checked="" type="checkbox"/> other, (explain): _____	<u>Edson H. Beall</u>	<u>4/2/99</u>

Additional Documentation Accepted

Fort McHenry
Name of Property

Baltimore City, MD
County and State

5. Classification

Ownership of Property

(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property

(Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property *

(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
004	006	buildings
009	000	sites
032	005	structures
007	004	objects
052	015	Total

Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

001

6. Function or Use

Historic Functions

(Enter categories from instructions)

Defense: fortification/military facility/
battle site/arms storage

Current Functions

(Enter categories from instructions)

Recreation and Culture: monument/museum/
park

7. Description

Architectural Classification

(Enter categories from instructions)

Late 18th century star fort
19th century fortifications and powder
magazine
19th century barracks

Materials

(Enter categories from instructions)

foundation stone; brick
walls brick masonry/stone; earth; concrete
roof earth/tin/slate
other

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

* Please note that the contributing resources generally correspond to Fort McHenry's List of Classified Structures (LCS). In some instances single LCS entries encompass multiple resources (e.g. the water battery guns and emplacements [LCS No. 81221] consists of 11 cannons and 24 gun emplacements, but are counted as one contributing structure).

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [x] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
[x] B Property is associated with the lives of persons significant in our past.
[x] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
[x] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- [] A owned by a religious institution or used for religious purposes.
[] B removed from its original location.
[] C a birthplace or grave.
[] D a cemetery.
[] E a reconstructed building, object, or structure.
[] F a commemorative property.
[] G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance

(Enter categories from instructions)

- Military; engineering
Literature; poetry
Art; sculpture
Conservation; historic preservation
Archeology; historic/non-aboriginal

Period of Significance

(1794-1802) to 1945

Significant Dates

- 1814
1914
1922

Significant Person

(Complete if Criterion B is marked above)

Francis Scott Key

Cultural Affiliation

N/A

Architect/Builder

Rivardi; Tousard; Foncin; Wadsworth

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- [] preliminary determination of individual listing (36 CFR 67) has been requested
[x] previously listed in the National Register
[] previously determined eligible by the National Register
[] designated a National Historic Landmark
[x] recorded by Historic American Buildings Survey # MD-63, 196-200, 204, 1096-1097
[] recorded by Historic American Engineering Record #

Primary location of additional data:

- [] State Historic Preservation Office
[] Other State agency
[x] Federal agency
[] Local government
[] University
[] Other

Name of repository:

Fort McHenry National Monument and Historic Shrine; Library of Congress

Fort McHenry
Name of Property

Baltimore City, MD
County and State

10. Geographical Data

Acreage of Property 43.26

UTM References

(Place additional UTM references on a continuation sheet.)

A1 | 18 | 363420 | 4347240 |
Zone Easting Northing

B7 | 18 | 363600 | 4347160 |

C3 | 18 | 363650 | 4347250 |
Zone Easting Northing

D4 | 18 | 363780 | 4347215 |

See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Steven R. Whissen/Historian

organization Denver Service Center, National Park Service date July, 1997

street & number 12795 W. Alameda Pkwy., P. O. 25287 telephone 303-969-2380

city or town Denver state CO zip code 80225

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items

(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name _____

street & number _____ telephone _____

city or town _____ state _____ zip code _____

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*)

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 1

**Narrative
Description**

Fort McHenry National Monument and Historic Shrine is located within the city limits of Baltimore, Maryland. The 43.26-acre site is situated at the eastern tip of Locust Point. Historically, Locust Point was known as Whetstone Point, the peninsula that projects into Baltimore Harbor dividing the Northwest and Ferry Branches of the Patapsco River. The Northwest Branch is identified today as the Northwest Harbor, and the Ferry Branch is part of the Patapsco River's main estuary.

In most respects, the fort appears today much as it did in 1933 when transferred from the jurisdiction of the War Department to the National Park Service. As originally constructed, the earthen and masonry star fort was laid out as a regular pentagon with a bastion at each angle. The distance between the points of adjacent bastions is about 290 ft. The parade ground is also in the configuration of a pentagon (about 150 ft. per side) within which are the former officers' quarters, barracks, and powder magazine. Among the principal historic structures on the exterior of the fort are the ravelin, the water (outer) battery, and the Civil War powder magazine. More detailed descriptions of the various structures and features of the fort are provided in the following discussion.

The boundaries of the property encompass all the land that originally comprised Fort McHenry at the time of the British bombardment in 1814 and most of the additional acreage acquired by the War Department in 1836. The historic setting of the larger site as it existed during the War of 1812 or the Civil War no longer exists; construction in 1917 and later demolition of U.S. Army General Hospital No. 2 substantially altered the topography and other features/structures external to the star fort. The present landscape surrounding the fort consists of a grass lawn, ornamental fruit trees, and native and exotic shade trees and shrubs. The grounds are carefully managed by the National Park Service as part of overall efforts to commemorate the importance of the site as a national shrine, with no attempt to recreate the landscape as it existed during earlier periods of military occupation. Modern urban and industrial development lies within the viewshed of the fort. The fort is bordered on the north by the U.S. Naval Reserve Center, the U.S. Army Corps of Engineers, and the Baltimore City Fire Department Fireboat Facility. The Southern States Grain Cooperative and the Maryland Port Authority border the fort on the west.

Despite the loss of integrity of the surrounding site and modifications of individual buildings and structures, Fort McHenry's extant resources continue to embody a high degree of integrity reflecting the fort's national importance as a coastal defense work from the period of its initial construction (1794-1802) to the end of improvements constructed immediately

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 2

following the Civil War. After this time, Fort McHenry functioned primarily as a garrison until its closure in 1912, later serving in various capacities that included a World War I hospital and a World War II Coast Guard training facility. The broad significance of the fort is recognized as encompassing these and other later periods. However, the primary physical expression of the fort in its capacity as a coastal defense work is best reflected in the resources constructed between approximately 1800 and 1867.

Description (reference is suggested to the attached diagram of the fort and glossary of fortification terminology)

I. Development History

By the time of its completion in 1802, Fort McHenry had assumed the essential form that has been perpetuated to the present. The earliest known plan of the fort (1803) indicates that at that time the five-bastioned, masonry and earthen star (pentagonal) fortification included two one-story brick barracks, two one-story brick officers' quarters, and a brick powder magazine within the parade grounds. A cistern was located between the enlisted men's barracks (later removed in 1819). Two gun embrasures (openings) passed through the flanks of each bastion. A ditch or dry moat surrounded the fort on all but its southeastern side. The plan showed trees planted at regularly spaced intervals on the terreplein of the bastions and curtain walls, around the perimeter of the parade ground, and bordering the entrance road to the fort. Based on early sketch drawings, the majority of these trees appear to have been Lombardy poplars. The sally port was originally a simple uncovered entrance, and a bridge spanned the moat in front of the sally port and connected with the road to Baltimore. The postern tunnel served as a passageway and primary drain from the parade to the exterior of the fort and passed below the curtain wall between bastions 4 and 5. Upper and lower water batteries were in place to the east of the fort.

Other than routine maintenance and repairs, Fort McHenry was not substantially modified over the ensuing eleven years until the improvements made in 1813 during the War of 1812. The deficiencies noted in the fort at that time by Colonel Decius Wadsworth, Chief Ordnance Officer of the War Department, led to construction of the ravelin outside the sally port to bolster protection of the entrance. The ravelin was constructed according to Wadsworth's recommendations, and thereby attained the distinction as the fort's first significant architectural feature designed by an American-trained engineer. Additional modifications of the star fort included filling the gun embrasures on the bastion flanks; platforming the bastions and repositioning the gun emplacements to allow firing "en barbette" (over the parapet walls); construction of brick traverses at the interior entrance of the sally port and in front of the parade magazine; and excavation of a well on the parade grounds to replace the earlier cistern. The ditch was deepened and an earthen counterscarp was raised on the far side opposite the scarp wall. The exterior ground surface beyond the counterscarp was graded to serve as a "glacis" (defensive earthen slope). Although no longer

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 3

extant, there is a strong possibility based on later map evidence that a "caponniere" or covered passageway was constructed. The caponniere (a feature recommended by Col. Wadsworth), would have permitted a protected means of communication between the fort and the outer batteries, accessed via the postern tunnel.

The 1814 bombardment, and particularly a direct hit upon the powder magazine, focused attention on the urgent need for bombproofing measures to better protect munitions and troops. Work began immediately after the bombardment on the construction of an arched brick structure over the existing magazine, two underground personnel bombproofs on either side of the sally port, and a bombproof structure over the well. An 1819 map of the fort prepared by Captain William Poussin, U.S. Topographical Engineers, further indicates that by that date the sally port was covered by an arched roof, and the brick traverse at the interior entrance of the sally port had been removed. A small structure that served as a guardhouse (1806) is also depicted at the north end of the commanding officer's quarters, and another guardhouse (1814-1837) was in place between the enlisted men's barracks at the former location of the cistern.

During the 1820s, Fort McHenry was in a general state of disrepair. Extensive masonry problems were evident, particularly in the scarp walls, resulting from moisture entering through gaps in the brick and coping stone where the pointing had washed out. Overcrowding was another serious problem, and led to the construction in 1829 of second stories over the enlisted men's barracks and officers' quarters. While the placement of second stories was not a particularly sound idea from a defensive standpoint, it helped to alleviate overcrowding and was endorsed by the post surgeon on the basis that it would improve air circulation and the overall health of the garrison. Full-length second-floor piazzas (porches) were also constructed on the front of all four buildings. A two-story addition was constructed joining the commanding officer's quarters with the adjacent guard house. The brick traverse in front of the magazine was removed at this time. To correct the problems of moisture infiltration, the earth covering the sally port and personnel bombproofs was temporarily removed and the structures were waterproofed with a layer of sheet lead. A cement wash was applied over the scarp walls of the fort and ravelin.

A number of improvements were made during the 1830s under the supervision of Lieutenant Henry Thompson, U.S. Army Corps of Artillery, who arrived at Fort McHenry in 1833. Among these measures, the parapet was modified in 1834 with the construction of a stone wall on the inner slope around the parade grounds. The parapet was further modified with the construction of a three ft.-high brick revetment (breast-height) wall on the terreplein in 1837 (raised by 18 inches in 1839). The scarp walls received extensive repairs and repointing in 1837. In 1835, two new guardhouse/prison rooms were constructed above the bombproofs on either side of the sally port to replace the former guardhouse located between the enlisted mens' barracks. Additional prison rooms were added in 1857 (three cells on the south side of the sally port and one on the north). By 1837, the trees that were earlier

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetSection number 7 Page 4Fort McHenry
Name of Property
Baltimore City, MD
County and State

planted on the ramparts and the parade were removed.

In 1836, the War Department acquired an additional 15 acres at Fort McHenry, expanding the property from its previous 24 acres. A 10 ft.-high brick wall was constructed in 1837 to demarcate the fort's new western boundary. Wrought iron gates were placed at the wall entrance where the road leading to Baltimore entered the fort grounds. An earlier boundary wall (1817) was dismantled when the new wall was built; the brick and gates from the earlier wall were incorporated into the 1837 wall. Also, between 1836 and 1839, the heavy masonry seawall east of the fort near the water's edge underwent a second phase of construction (initial work on the wall began in 1816). Additional sections of the seawall were constructed up until 1895, extending the overall length of the wall to about three-quarters of a mile.

Work began on the water (outer) battery in 1836 and was completed the following year. The water battery, equipped with 39 gun emplacements, was conceived as a first line of defense between the fort and the seawall, extending from the east face of the ravelin to the left shoulder of bastion 3. Breast-height revetment walls were constructed on the water battery. The walls settled shortly after completion, and were rebuilt and raised in 1839. Two shot furnaces were constructed within the water battery in 1842, features that were later demolished during the Civil War upon the fort's adoption of rifled artillery. To permit the movement of troops and supplies between the fort and the water battery, the ravelin entrance was reconfigured and the road which originally passed through the ravelin to the sally port was filled-in. Gun emplacements were also installed on the ravelin, on the shoulders of the fort bastions, and in the dry moat between bastions 1 and 2.

Minor improvements continued to be made throughout the 1840s and 1850s, ironically bringing the fort closer to a state of defensive readiness at a time when its strategic function appeared to be waning. However, the Civil War dramatically refocused attention on Fort McHenry's importance and led to the next significant phase of development. During the early stages of the war, the gorge (the area between the sally port and the ravelin) and the water battery were enclosed with a palisade or fence consisting of closely spaced wooden stakes. An abatis (line of felled trees and sharpened branches) was placed in the dry moat and at the base of the water battery's glacis.

More substantial improvements followed including the reconfiguration of the sally port bombproofs to serve as powder magazines; construction of a new artesian well on the parade to supplant the one constructed prior to the 1814 bombardment; and construction/modification of gun emplacements for improved armaments, particularly Rodman cannon. At the beginning of the Civil War, the Rodmans were considered the ultimate achievement in the long tradition of smoothbore (muzzle-loading) armament design, and were standard ordnance for all coastal fortifications. In 1863, a detached powder magazine of brick and concrete was constructed on the grounds west of the fort in response to the increased demands for powder storage.

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 5

Just as perceived deficiencies during the War of 1812 led to improvements immediately afterwards, Fort McHenry received extensive new construction in the aftermath of the Civil War. In 1866-67, the water battery was modified with the construction of two magazines, two bombproofs and a free-standing earthen traverse. The water battery magazines and bombproofs also functioned as traverses. An additional magazine was constructed in the ravelin. In 1873, a steam pump was installed for the well which necessitated the construction of a pump house and storage tanks. Water pipes were placed throughout the fort. The system was eventually replaced in 1884 when the fort was connected to Baltimore's water supply system. Much of the repair work undertaken during the 1870s and 80s was directed towards correcting ongoing drainage and sewage disposal problems.

Construction began in 1872-73 on a new water battery northeast of the fort near the seawall. Plans for this massive earthen work called for the placement of 25 15-in. Rodman guns. Funding was suspended in 1875, and although work on the battery evidently continued for three more years, it was never completed. It was removed in 1928.

Extensive modifications to the officers' quarters and enlisted men's barracks occurred in the 1890s. By this time, most of the garrison was housed outside the fort compound. In 1894, the second story of the junior officers' quarters was removed and the building converted into a bakery. The front porches of the commanding officer's quarters, junior officers' quarters, and enlisted men's barracks no. 2 were also removed. The commanding officer's quarters were thoroughly remodeled; an ordnance storehouse was placed in the first floor and subsistence supplies were stored on the second floor. The quartermaster's office and supplies were installed in the former barracks (no. 2).

Fort McHenry's function as a military post ended in 1912. Its last active garrison, the 141st Company Coast Artillery Corps, was relocated to Fort Strong, Massachusetts. An immigration station was constructed in 1913 on a portion of land near the east seawall that was provided to the U.S. Treasury Department by the War Department; the building was later used as a receiving ward for the World War I hospital and is presently used and operated by the U.S. Naval Readiness Reserve Center outside the park boundary.

In 1914, Fort McHenry was leased to the City of Baltimore as a municipal park, and subsequently a public beach and swimming pool were opened in the northwest corner of the park. The Civil War powder magazine served as a bathhouse. The centennial observance of the 1814 bombardment provided an occasion for the placement of several commemorative monuments and plaques at the fort. The large statue of Orpheus (authorized in 1914 but not placed until 1922 in the center of the entrance drive) was a significant artistic work from this period. The Armistead Monument, placed on the outer battery, was another significant work commemorating the bombardment.

Fort McHenry returned to military control in 1917 with the establishment of U.S. General Hospital No. 2. The grounds and the dry moat were seriously

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 6

impacted by the construction of roads and hospital buildings close to the scarp walls and at the base of the water battery's glacis. Several underground utility lines were constructed across the parade that exited through the sally port. Fortunately, the quartermaster officer in charge of construction recognized the fort's importance as a historic landmark, and ensured the avoidance of the principal above-ground structures. However, several 19th century structures located outside the fort walls were removed at this time including the 1813 hospital, the 1843 officers' stables and the 1864 storehouse; foundations of these structures exist in many instances below the fill dirt imported on-site by the Army. Eight former buildings from U.S. General Hospital No. 2 exist outside the park boundary under the ownership of the U.S. Navy, the U.S. Army Corps of Engineers, and the City of Baltimore.

Following Fort McHenry's authorization as a national park in 1925, the War Department undertook restoration of the fort that reached perhaps its greatest level of activity in 1928-29. Although the 1873 water battery was removed, the War Department generally attempted to restore the fort to its appearance at the time of its greatest physical development under active military occupation, and not specifically to its appearance during the 1814 bombardment. Among the significant repairs and restorations made at this time were reconstruction of the dry moat; cleaning of the sally port bombproofs; cleaning and masonry repair of the water battery magazines and installation of iron gates; and various repairs, repointing and rebuilding of the parade walls, scarp walls and the water battery breast height walls. The parade buildings received exterior wall repairs and rebuilding along with new metal roofs, reconstruction of the piazzas and the second floor of the junior officers' quarters. Extensive interior restoration was also completed, and electric service was installed in all fort buildings. A parking lot was constructed near the south face of the ravelin.

A second phase of memorial commemoration occurred at Fort McHenry in 1931-32 in observance of the 200th anniversary of George Washington's birth. Various patriotic organizations dedicated interpretive markers to Baltimore's 1814 defenders and planted trees for each state in the Union. The Washington Elm was planted at this time; the tree recently died and was removed in 1995.

The National Park Service (NPS) assumed the management of Fort McHenry in 1933. Masonry repointing already underway since 1929 by the Works Progress Administration continued until 1935. In 1935, the NPS installed major utility lines through the ramparts of the fort including a steam line and an electric corridor connected to a high tension transformer vault. Construction of the electric corridor required the removal of a section of original terreplein breast-height wall near bastion 1. A section of wall from the sally port ramp was also removed at this time, as were several ca. 1840 traverse stones from bastion 5. The stones and debris were deposited in the water off the southwest seawall.

Following World War II (during which time Fort McHenry functioned as a U.S.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 7

Coast Guard training station), the nation's post-war economic boom and new-found leisure time for the motoring public led to profound visitation increases for National Park Service units. In 1956, the NPS instituted a program known as "Mission 66" to address these pressing demands for visitor services and park improvements. As part of these program objectives, Fort McHenry's first visitor center was constructed in 1964 along with a new parking lot, a maintenance facility and two park residences.

Over the duration of its site administration, the NPS has endeavored to perpetuate the condition and appearance of the fort from the time the agency acquired the property. Efforts have been underway since the 1970s to correct the ongoing problems of displaced and deteriorated masonry resulting from moisture build-up and freeze/thaw episodes. These efforts have included the construction of drains both at the base and through the scarp wall. Long spans of the deteriorated water battery breast-height wall were rebuilt with modern materials in the 1980s. Additional rehabilitation of the fort is presently underway.

(Note: National Park Service identification numbers and List of Classified Structures (LCS) numbers are provided where applicable for the following inventoried structures, buildings and objects at Fort McHenry)

II. Contributing Resources

A. Sites

1. **Fort McHenry National Monument and Historic Shrine** - The overall 43.26 acres encompassing Fort McHenry National Monument and Historic Shrine represent a historic site composed of numerous historic, archeological and cultural landscape resources that chart the course of Fort McHenry's evolutionary development. These resources comprise the structural design elements and materials that have gone into the fort's construction, and the artifacts and other elements of material culture associated with the various periods of construction and occupation. Several twentieth century additions to the fort grounds, particularly commemorative markers and statuary, reflect the importance of memorial activities at Fort McHenry.

Other than the existing structures and buildings comprising the historic fortifications and external walls [i.e., the star fort, outer (water) battery, the Civil War powder magazine, seawall, and boundary wall], few remnants of the cultural landscape have survived associated with the late 18th and 19th century development of Whetstone (Locust) Point for military defense purposes. Construction of U.S. Army General Hospital No. 2 in 1917 for the convalescence of World War I veterans, and removal of the hospital buildings by 1929, resulted in extensive disturbance to the landscape surrounding the fort. Among the external features disturbed by the construction and grading undertaken during this period were the glacis (the earthen defensive slope that formerly extended from the water battery to the seawall)

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 8

and dry moat around the perimeter of the star fort. Aerial photographs taken of Fort McHenry during the 1920s underscore the extent of development associated with the Army hospital, showing barracks and other buildings occupying virtually all available space outside the fort to the water's edge.

With efforts underway from the latter 19th century to commemorate the significance of the defense of Fort McHenry, Francis Scott Key and the writing of "The Star-Spangled Banner," the landscape underwent further changes reflecting the memorialization of the site. Various statues and markers were placed in 1914 during the centennial observance of the bombardment. Placement of the Statue of Orpheus (authorized by Congress in 1914, but not placed on site until 1922), altered a portion of the entrance road with the construction of a circular drive around the base of the statue. The statue was moved to its present location in 1963 to accommodate improved access to the new parking lot and visitor center. During the 1932 Bicentennial celebration of George Washington's birth, other markers and monuments were placed on the grounds along with the planting of commemorative trees (e.g., the Washington Elm and cherry trees planted by the school children of Baltimore).

The statues and markers at one time contributed to a designed landscape associated with the memorialization of the fort. However, they have been relocated in many instances, sustaining a loss of integrity in terms of location and setting. Many of the original commemorative trees have died; the Washington Elm died in 1995 and was removed that year. While the markers and statuary continue to evoke the broad historical significance of the park's periods of memorial activities, and in some instances retain historical/artistic significance in their own right, they do not contribute to an intact cultural landscape representative of the memorial periods.

While many of the detailed elements of Fort McHenry's cultural landscape have lost integrity, the site continues to exhibit several broader landscape characteristics that provide insight into the selection and development of the site for defensive purposes. The tip of Whetstone Point offered substantial strategic advantages for the defense of Baltimore by commanding the approaches to the Northwest and Ferry Branches of the Patapsco River. This was as true in 1776 during the Revolutionary War when Fort Whetstone was first constructed on the site, as it was throughout the long span of Fort McHenry's subsequent military service. The topography of Whetstone Point is characterized by gently sloping low-lying land, without the natural protection of cliffs or rocky escarpments. While this permitted unobstructed views towards the downriver approaches to Baltimore, the site required extensive constructed works to compensate for the lack of natural defenses. Under the prevailing 18th and 19th century theories of coastal fortifications, these consisted of a succession of features designed to repel or impede an enemy's advance: the shore-line and

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 9

upper gun batteries, the elevated slope (glacis), the ditch (dry moat) with its counterscarp, and ultimately the fort ramparts situated on higher ground.

Today, although many of the defense works external to the fort have been removed or modified, the large-scale spatial organization of the site remains intact in many respects. For example, the fort retains its historic geographic orientation towards Baltimore, the Northwest Harbor and Ferry Branch. The sloping grass-covered area outside the fort walls is at least partially representative of early military efforts to maintain the openness of the area between the fort and the water's edge for defensive purposes. Consequently, a general sense of the strategic importance of the site and the reasons behind its selection for fortifications is readily conveyed to the park visitor.

The clustered arrangement of officers' quarters, barracks, and powder magazine on the parade grounds, all protected by the earthen and masonry ramparts, has remained a distinguishing characteristic of the fort throughout its history. Despite substantial alterations and subsequent restorations of individual buildings, and the modifications that accompanied armament and other structural/technological improvements, the War Department never undertook measures to substantially reconfigure the fort proper from its late 18th century pentagonal design. The fort retains and continues to convey the intent of its original design as a tightly contained and functionally integrated coastal defense work and garrison.

The 10 ft.-high brick wall presently marking the western boundary of the monument grounds was constructed in 1837 following the War Department's acquisition of additional lands in 1836. It not only serves as a formal demarcation of the western property line, but provides the approaching visitor the first physical feature clearly symbolic of the former military presence and control of the site. The boundary wall also provides a ready visual indicator of the maximum spatial extent of the fort grounds attained by the 1830s.

The asphalt entrance road (a continuation of Fort Avenue) follows the historic alignment of the original access road to the fort from Baltimore. While a section of the alignment was eliminated to accommodate the modern curved extension to the visitor parking area, a paved footpath follows a continuing portion of the historic alignment north of the ravelin. No readily observable evidence of the original roadbed remains.

The National Park Service presently maintains the grounds to perpetuate the memorial character of the national monument. Grass lawns extend from the boundary (entrance) wall to the seawall, with clusters of native and exotic trees and shrubs. Several small trees have recently been planted near the eastern tip of the point. Remnant survivors of the cherry trees planted in 1932 remain near the Civil

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 10

War powder magazine. Circulation networks consist of the two-way paved entrance road to the visitor parking lot, paved roads to the maintenance areas, and several pedestrian walkways. Walkways provide access to the star fort, visitor center, and the Civil War powder magazine. They extend along the seawall around the perimeter of the property from the picnic area near the boat dock on the north, to a marsh area on the southwest. Non-contributing park housing and maintenance facilities are clustered at the west end of the property north and south of the entrance.

2. Archeological Resources

Several archeological investigations have been undertaken at Fort McHenry beginning in the 1950s and continuing to the present. These investigations have provided a more complete understanding of the fort's construction, the significance of its various structural and architectural features and the evolutionary sequence of development. For the most part, investigations have been initiated in response to the immediate requirements of maintenance/construction projects in efforts to mitigate the impacts associated with these undertakings.

Where sufficient integrity exists, Fort McHenry's archeological resources contribute to the overall National Register significance of the property. Archeological resources have frequently been identified in association with extant historic buildings and structures, for the most part consisting of footings, builder's trenches, artifacts and stratified soil deposits. In other instances, investigations have uncovered the remains of demolished structures that are identified in the historical record but no longer exhibit surface features, existing solely of below grade remnants and associated artifacts (e.g., privies, parade cistern, shot furnace, gun mounts, etc.). Outside the fort walls, the locations of several investigated structures in existence at the time of the 1814 bombardment (e.g., tavern, hospital, barracks, and stables) are marked and outlined with bricks.

In many cases, ground disturbance associated with the construction and removal of U.S. General Hospital No. 2 has likely impacted the archeological integrity of these resources. Among the early structures adapted for use by the hospital and then later removed were three 1843 stables (located in the northeastern portion of the 1836 addition to the fort's grounds). Two of the stables were used as prisons during the Civil War; all three served as barracks afterwards and continued in this function throughout the operation of the hospital. Numerous foundations of the World War I hospital buildings, themselves worthy of archeological consideration, remain in the grassy area outside the star fort and water battery.

A summary of the archeological information gathered for Fort McHenry was compiled in "Review and Synthesis of Archeological Documentation, Fort McHenry National Monument and Historic Shrine (18BC13),

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 11

Baltimore, Maryland," John Milner and Associates, Inc., 1993. Additionally, an overview is in progress that will update and supplement data on the fort's archeological resources: "'On the shore dimly seen...": an Archeological Overview, Fort McHenry National Monument and Historic Shrine (18BC13)," (draft), Cheek, Balicki and Pousson, 1997.

Although a number of former structures have been identified in the historical record, most have not been archeologically investigated. The significance and contributing status of these potential resources are therefore presumed until such time as future investigations and assessments are completed. The following (former structures for which substantial archeological information has been collected from documentary evidence and test excavations) are identified as contributing sites:

- a. **Parade Cistern** - A cistern was placed between the enlisted men's barracks at the time Fort McHenry was constructed (ca. 1800). For a number of years prior to the War of 1812, however, the garrison relied on water brought in from a well in Baltimore. Archeological investigations in 1978 identified remains of the cistern. Its brick exterior measured 16 ft. X 27 ft., and its interior chamber (10 ft. X 21 ft.) was enclosed with 3 ft.-thick brick walls. The cistern was disturbed by the placement of a septic tank, the construction (ca. 1814-19) of a structure that by 1833 briefly served as a guardhouse, and later by the construction of a shot furnace (1836-37) over the site.
- b. **1813 Parade Well** - In 1813, as part of the war preparations, a well was dug a few feet north of the parade cistern. The upper portion of the well (12 ft.-wide X 40 ft.-deep) was shored with wood in the fashion of a mine shaft. Tongue and groove sheet piling was then driven to extend the well to an overall depth of 95 ft. A brick bombproof vault was constructed over the well immediately after the 1814 bombardment. The bombproof vault was removed prior to 1840, although the well (providing 18 gallons per minute of pure drinking water) remained in use until ca. 1870. The well was eventually supplanted by another artesian well constructed in the center of the parade at the beginning of the Civil War. Archeological investigations of the 1813 well were also undertaken in 1978, identifying it as a slightly elliptical brick cylinder (internal diameter 6 ft.; external diameter 9 ft.) covered by a brick dome. A footing for the support pillar of the 1814 bombproof was also identified.
- c. **Ravelin ("Old") Barracks** - Utility excavations in 1963 encountered the brick foundation remains of a former barracks located between 40 and 90 ft. northeast of the ravelin's salient. Subsequent archeological investigations determined that the structure was 18 ft.-wide X about 48-50 ft.-long. A herringbone-pattern brick floor was

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number 7 Page 12

Fort McHenry
Name of Property
Baltimore City, MD
County and State

found near the base of the northwestern foundation. The barracks was presumably constructed in the late 18th century, either for Fort Whetstone (1776-82) or as part of the initial construction of Fort McHenry (1795-96). It was removed by 1813 as a probable consequence of the ravelin's construction. Artifacts found in association with the barracks support a late 18th/early 19th century period of occupation.

d. Gun Shed and Store House - The functional integration and proximity of these two structures (about 10 ft. apart) have led to their archeological consideration as one contributing site. The structures were built in 1807-08 north of the fort and along the fort's property line. The northwest walls of the structures were eventually incorporated into the fort's 1817 boundary wall. The structures existed into the 1870s, and possibly as late as 1888 when replacement structures were built. Both brick structures were one and one-half stories in height, and served multiple purposes: the upper half-story of the gun shed was evidently used for storage, and the ground floor of the store house was used variously as a stables, artillery shed and barracks. Full-length additions were placed on the northwest sides of both structures shortly before 1873, doubling their size. Although an accurate appraisal of dimensions has been complicated by various structural additions and wall realignments, the gun shed measured about 101 ft. X 21 ft., and the store house about 75 ft. X 24 ft. Most of the artifacts collected from the various archeological excavations of the structures were found to be deposited along with later fill material, and do not substantially contribute to the site's interpretation.

e. 1813 Hospital - This structure (located about 160 yards north of the present ravelin) provided over a century of service at Fort McHenry; it first served as a hospital from 1813 to 1840, next as the commanding officer's quarters from 1840 to 1912, and finally as the post exchange from 1917 to 1923 during the operation of U.S. General Hospital No. 2. It was demolished sometime between 1925-26 when most of the World War I hospital structures were removed. The original structure measured 57 ft. X 20 ft. Later additions that modified and extended the structure's dimensions included porches on the southeast and northwest sides (1829), a kitchen and service area on the northeast end (1872-73), and a parlor with upper sleeping quarters on the southwest end (1875-76). Archeological investigations in the 1960s did not reveal intact foundation remains, although brick porch footings, wall remnants associated with the additions, and extensive masonry debris were identified. Most of the recovered artifacts were introduced to the site in imported fill, and lacked useful archeological context.

f. Married Soldier's Quarters - This structure is presumed to have been constructed shortly after 1819, and was removed in 1867. A porch was added in 1829. It was first depicted on an 1834 plan, and

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 13

described in a letter accompanying the plan as a wood one-story married soldier's quarters consisting of 6 rooms, each about 14 ft. x 14 ft. The structure was converted to officers' quarters by the time of the Civil War, and was last depicted on an 1866 plan. Archeological monitoring and testing in 1975 resulted in the identification of brick pavement remnants adjacent to the structure, sections of the brick perimeter wall footings, and remnants of two of the structure's three double fireplaces and chimneys. Artifacts were recovered that were temporally consistent with the presumed period of construction.

g. 1817 Boundary Wall - This was the original wall that extended along the fort's western boundary between 1817 to 1837. Acquisition of additional lands led to the construction in 1837 of a new wall further to the west, and materials from the original wall were salvaged and incorporated into the new wall. Footings of the original wall have been exposed in several archeological investigations conducted in the late 1950s and the 1960s. Where identified, the footing (about 2.5 ft.-wide X .5 ft. thick) typically consisted of a mass of lime mortar poured in a trench and embedded with brick fragments. Investigations have attempted to confirm the wall's alignment in conformance with early plans, and it appears that the 1834 Lee plan is probably more accurate in this regard than the 1819 Poussin plan that also depicts the alignment.

h. Tavern - A former tavern was constructed sometime during the mid-1790s adjacent to the southwest side of the entrance road to the fort, and immediately outside the fort's property boundary. The tavern was situated on a privately-owned tract of 4.5 acres. The two-story brick structure measured about 54 ft. X 30 ft. The 1803 and 1806 plans for Fort McHenry depict the tavern, and also another smaller structure (possibly a stable) on the opposite side of the road. The tavern was leased to the fort between 1833 and 1836, although it is not known to what use the structure then served. It is presumed to have been demolished in 1837 when the post was enlarged and the new boundary wall was constructed. Archeological investigations of the tavern site were conducted in 1958 and 1966. Segments of foundation were identified (undressed dark igneous rock laid in lime mortar). A portion of the fill deposited in the cellar was also examined, consisting primarily of densely-packed construction debris (brick, stone, mortar and plaster fragments).

(number of contributing sites: 9)

B. Contributing Structures

1. Star Fort Ramparts - The ramparts are comprised of several structural components constructed variously of earth and brick/stone masonry. In profile these exhibit an irregular stepped appearance. Proceeding from the exterior of the ramparts inward, the principal

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 14

components are the scarp wall, earthen parapet, breast height wall, earthen terreplein, and parade wall.

1A. Scarp Wall (FOMC 12; LCS no. 00352) - The scarp walls are the exterior walls of the star fort comprising the outer part of the bastions and the curtain walls separating adjacent bastions. These walls are battered (sloping inward from the ground up) and vary in height between 9 ft. 8 in. and 13 ft. 6 in. They are constructed of English bond brick facing, several courses thick, over an inner wall of mortared stone. Sandstone quoins are present at each external angle of the scarp. The foundation consists of roughly dressed and irregularly laid granite. Stone counterforts buttress the inner wall of the scarp. The scarp walls were originally capped with coping stones that soon deteriorated and were completely replaced with new granite coping in the 1830s. While the overall configuration of the scarp walls has not been altered, regular repair and replacement of the brick facing because of deterioration have resulted in little remaining original brick fabric.

As is true of the various masonry walls throughout the fort, the scarp walls do not exhibit a uniform appearance. This is partly a consequence of the repeated episodes of brick replacement and resulting variations in color and texture. Variations are also attributed to the brick manufacturing processes employed during the early period of the fort's construction. Brick was then fired at lower temperatures with heat often unevenly distributed within the kiln. This produced differences in oxidizing/reducing atmospheres that accounted for color variations within a single lot of bricks; the variations would be magnified over multiple brick lots, even though all may have been installed within a relatively short period.

1B. Parapet - The sodded earthen parapets of the ramparts originally sloped gradually upwards from the scarp wall and then steeply down from the peak to the infantry banquette. Erosion has contributed to the modification of the parapet profile over the years. An attempt to prevent erosion was made in 1844 with the clapboarding of the parapet's inner slope. The parapets were also originally designed with two embrasures (openings) through the flanks of each bastion to permit artillery fire. These were later filled-in in 1813. While the locations of all gun embrasures have not been positively identified, archeological excavations conducted in 1994 identified the location of an original embrasure on the left flank of bastion 3; the location agreed with that depicted on the 1803 plan of the fort.

1C. Breast-height Wall (FOMC 12.A; LCS no. 81247) - The parapets were significantly modified in 1837 by construction of the brick breast-height wall on the inner slope. This wall was later raised by 18 in. in 1839, bringing the height to about 3.5 ft. Zinc sheathing and sandstone coping were also installed at the top of the wall at that time. The wall was intended to protect the infantry from enemy fire

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 15

and to retain the earth of the sodded interior parapet. Other than subsequent repairs necessitated by water damage, the breast-height wall has remained relatively unaltered.

1D. Terreplein - The terreplein (the broad surface of the rampart extending originally from the infantry banquette below the breast-height wall to the parade wall) underwent several episodes of modification. The terreplein within the bastions was altered in 1813 with the placement of wooden platforms to allow artillery fire over the parapet walls. Construction of the breast-height wall (1837-39) and subsequent infantry banquette (1840) further altered the terreplein along the bastions and curtains. Gun emplacements and traverses were installed on the terreplein that also experienced modification as a consequence of armament improvements. Twenty original brick traverse remnants of the 1842 gun mounts remain below grade along the southern terreplein between bastions 3 and 5.

1E. Parade Wall (FOMC 17; LCS no. 81212) - The stone parade wall of random-coursed ashlar with stone coping was constructed in 1834 around the perimeter of the parade ground. The wall varies in height from about 2 ft. near the sally port to over 6 ft. behind barracks no. 2. It separates the parade from the adjacent earthen terreplein, that previously sloped to the level parade surface. A portion of the wall behind the powder magazine is brick and was constructed in the immediate aftermath of the 1814 bombardment as part of measures to bombproof the magazine. In 1962, the park removed 10 ft. of the parade wall adjacent to the sally port.

2. Postern (FOMC 25; LCS no. 81215) - The postern tunnel, centered below the rampart between bastions 4 and 5, was the fort's primary drain. It was designed to carry water runoff from the parade to outside the scarp wall. Originally larger, the vaulted brick passageway was reduced in size in 1837 to its present dimensions (about 2 ft. 3 in. - wide X 4 ft. 7 in. - high). Granite lintels and support surrounds are present at the gated interior and exterior openings. An 18 in. drainpipe was placed below the floor of the tunnel in 1836 that delivered runoff to the harbor. The postern also provided a secondary means of access and communication between the fort and outer defense works. If a caponniere (protected covered passageway) was in fact constructed as part of the 1813 improvements recommended by Col. Wadsworth, access between it and the star fort would have been via the postern. Following construction of the water battery in the 1830s, access between the battery and the fort would also have been by way of the postern.

3. Moat (FOMC 16; LCS no. 07751) - Remnants of the dry moat or ditch exist on the north and northwest sides of the fort adjacent to the scarp wall, and by the north wall of the ravelin. The moat is presently about 4 ft. - deep and 25-40 ft. - wide. It is an original feature of the defense works, by 1803 surrounding all but the fort's

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 16

southeastern side. The 1819 Poussin map depicts the moat completely around the fort and the ravelin. The moat has undergone several alterations, notably by filling and alignment modifications undertaken in 1929 during the War Department's restoration activities, construction and demolition of the World War I hospital, and by the introduction of a parking lot and roadway adjacent to the ravelin.

4. Ravelin - The ravelin is a detached, triangular-shaped earthen and masonry structure constructed in 1813-14 to bolster defense of the exposed sally port. Both faces of the ravelin are about 133 ft. long. The road that led to the fort from Baltimore crossed the dry moat at the north face and passed through the ravelin, exiting at the gorge and crossing to the sally port. Wooden bridges were constructed across the moat and gorge to permit access. The road through the ravelin was also filled-in in 1839 and the entrance through the north face bricked-up.

4A. Ravelin Scarp Wall (FOMC 13; LCS no. 07750) - The ravelin's battered brick scarp walls are similar in appearance to those of the star fort, varying in height between approximately 8 and 10 ft. However, the ravelin scarp walls were constructed on a brick foundation instead of stone and were buttressed with brick counterforts. Sandstone quoins are present at the exterior angles of the scarp, with granite coping at the top of the walls.

4B. Ravelin Breast-height Wall (FOMC 13.B; LCS no. 81245) - In 1837, 3 ft.-high brick revetment walls were constructed on the raised inner slope of the ravelin's parapet. In common with the breast-height walls of the star fort, these walls were raised by 18 in. in 1839. Seven gun emplacements were constructed along the breast-height walls on the ravelin's terreplein at that time. Remnants of the infantry banquettes that separated the gun emplacements are still evident on the Ravelin.

4C. Ravelin Gun and Emplacements (FOMC 13.A; LCS no. 81218) - In 1865, near the end of the Civil War, a gun emplacement for a 15-in. Rodman gun was constructed at the salient of the ravelin, supplanting three earlier emplacements and necessitating rebuilding of the revetment wall at that location. A 15-in. Rodman gun cast in 1865 is currently positioned at the salient, the only gun now mounted on the ravelin. In addition to the Rodman and its emplacement, four 1839 gun emplacements (granite pintle blocks, 8 ft. 6 in. X 9 in., with traverse circles) remain on the ravelin.

4D. Magazine No. 1 (FOMC 20; LCS no. 81217) - As part of the post-Civil War improvements undertaken in 1866, magazine no. 1 was constructed in the ravelin. This underground powder magazine consists of a two-chambered brick barrel vault (approx. 38 ft. X 20 ft.). Two entryways from the gorge provide access to a vestibule, from which two flights of brick steps descend to the magazine.

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 17

5. Water (Outer) Battery - Construction of the earthen parapet and revetment wall of the water battery was carried out between 1836 and 1837 under the direction of Lt. Henry Thompson, U.S. Army Corps of Artillery. The battery extends from the east face of the ravelin to the left shoulder of bastion 3. Although technically not a true water battery in the traditional sense of being constructed near the water's edge, its purpose was nevertheless to provide a first line of defense between the fort and the seawall. Thirty-nine gun emplacements were built within the battery between 1837 and 1838. Two shot furnaces were added in 1842, structures later demolished as a consequence of improvements carried out towards the end and immediately following the Civil War. Archeological testing conducted in 1993 uncovered foundation remains of one of the shot furnaces, located opposite the salient of bastion 5. In 1866, two underground magazines, two underground bombproofs, and a free-standing earthen traverse were constructed within the battery. The magazines and bombproofs are brick chambers covered with sodded earthen mounds that were intended to protect, respectively, powder and troops; they also functioned as traverses. In common with other masonry structures elsewhere in the fort, the magazines, bombproofs, and breast-height wall have experienced deterioration associated with moisture and poor drainage.

5A. Water (Outer) Battery Breast-height Wall (FOMC 14; LCS no. 07755) The brick revetment wall is about 1000 ft.-long, and averages about 4 ft. in height. A steep earthen slope (glacis) originally extended from the top of the parapet to the seawall. This feature was severely modified and impacted in 1917 by construction of U.S. General Hospital No. 2. Settlement of the breast-height wall shortly after construction necessitated rebuilding efforts in 1839. The new wall was built 18 in. higher than the original with a corresponding increase in the height of the parapet. Recent archeological investigations have demonstrated that the 1839 reconstruction altered only the top section of the wall and its outer face, and that the original 1837 wall and foundation were retained. The entire revetment wall was repaired and repointed in 1929. Extensive rebuilding of portions of the wall using modern materials occurred in the 1980s, with removal of original stone foundations. Despite the rebuilding efforts, the brick wall retains its exterior appearance and configuration from the post-Civil War period.

5B. Water (Outer) Battery Guns and Emplacements (FOMC 14.A; LCS no. 81221) - In 1865, four emplacements for 15-in. Rodman guns were constructed in the water battery. Construction of these emplacements required the removal or modification of several 1830s/40s emplacements and the modification of adjacent sections of revetment wall. There are presently 11 Rodman guns with iron carriages mounted on display in the battery: 4 (8-in.), 3 (modified 10-in. to 8-in.), and 4 (15-in.). In addition to these guns and their emplacements, 13 unmounted emplacements exist above ground in the water battery consisting of

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 18

granite pintle blocks and traverse circles.

5C. Magazine No. 2 (FOMC 21; LCS no. 81224) - Located opposite the postern tunnel, magazine no. 2 (1866) consists of a 3-chambered brick barrel vault (49 ft. X 20 ft.) with an iron-gated entry vestibule.

5D. Magazine No. 3 (FOMC 22; LCS no. 81225) - Magazine no. 3 (1866) is located opposite the right face of bastion 4. It is also a 3-chambered brick barrel vault (approx. 37 ft. X 25 ft.). Two arched entry portals with iron gates lead to two vestibules, each providing access to the main chamber.

5E. Bombproof No. 1 (FOMC 23; LCS no. 81222) - Bombproof no. 1 (1866) is located opposite the right face of bastion 5. It is a brick barrel-vaulted chamber (14 ft. X 28 ft. X 8 ft. 10 in.-high).

5F. Bombproof No. 2 (FOMC 24; LCS no. 81223) - Located opposite the salient and left face of bastion 4, bombproof no. 2 (1866) is similar in configuration to bombproof no. 1. It measures 14 ft. X 30 ft. X 8 ft. 10 in.-high.

5G. Traverse (FOMC 26; LCS no. 81216) - A free-standing traverse consisting of a 10 ft.-high earthen mound is located opposite the left face of bastion 5. At its base, the traverse measures about 20 ft. X 30 ft. It was intended to protect the ravelin, sally port and water battery from enfilade fire. Construction of the traverse and magazine nos. 1 and 2 supplanted several earlier gun emplacements and a section of the revetment wall.

6. Powder Magazine (FOMC 02; LCS no. 00355; Building B) - This is the original fort powder magazine, constructed ca. 1800. The one-story brick structure (approx. 30 ft. X 40 ft.) has a single entrance on the south elevation. The magazine was originally not bombproof, and damage sustained during the 1814 bombardment prompted the construction immediately afterwards of a vaulted arched roof of brick and slate with reinforced brick walls. These measures gave it somewhat of a gambrel roof or barn-like appearance. A brick traverse was constructed in front of the magazine as part of the defensive preparations during the War of 1812; this was later removed. The magazine was evidently used until the late 19th century.

7. Sally Port and Guardhouses (FOMC 06; LCS no. 00354) - The sally port is the fort's primary entrance. The 1803 plan map of the fort depicted the sally port as a simple open passage through the scarp wall between bastions 1 and 5. The entrance was gated and a bridge spanned the moat in front. Subsequently (as depicted on the 1819 Poussin plan), a vaulted brick arch was constructed over the sally port by that date designed by Maximilien Godefroy, professor of Civil and Military Architecture at St. Mary's College. Underground personnel bombproofs were constructed on either side of the sally port

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 19

in the immediate aftermath of the bombardment, later converted to magazines during the Civil War. In 1835, guardhouses (16 ft. X 24 ft.) were built on either side of the sally port. In 1857, three additional prison cells were added to the south guardhouse and one to the north guardhouse. The guardhouses were later used for offices and storerooms. Heavy wooden doors are at either end of the sally port, as well as at the interior arched entrances to the bombproofs. From the 1860s to the present, the sally port has also served as the fort's primary utility corridor. The sally port floor has been altered several times throughout the 19th and 20th centuries (most recently in 1982) and a variety of surfacing materials have been used such as brick, oyster shell and macadam. The present paving consists of brick laid in a herringbone pattern. The sally port was restored as part of the overall fort restoration undertaken by the War Department between 1928 and 1929.

8. Flagpole (FOMC 15; LCS no. 00357) - The present flagpole is a 1989 reconstruction replacing an earlier reconstruction of 1959. It is located on the parade near the sally port where its position was identified on the 1803 plan map. It stood at this location until 1839, when it was relocated to bastion 5 where it remained until 1959. Archeological investigations conducted at that time recovered the original brace support for the flagpole, confirming its location on the parade. The flagpole was then reconstructed in its original location. The overall height of the flagpole is 89 ft. It consists of two round timber masts (fashioned from 120-year-old Douglas Fir) spliced and braced at a bridge 55 ft. above the ground. The pole is stabilized by steel guy lines attached to a 9 ft.-square wood platform at the base. The platform is non-historic, constructed in 1959 to serve for ceremonial occasions.

9. Parade Walkways (FOMC 18; LCS no. 81213) - Brick walkways laid in a herringbone pattern connect the parade buildings. The configuration of the walkways corresponds to that identified on an 1834 plan drawing, although it is unknown if the walks were bricked at that time. However, brick walkways in a herringbone pattern are evident in a photograph of the parade grounds taken sometime between 1883-1894. Brick gutters presently run along the base of the parade wall, intended to drain surface water to the postern tunnel. Plan maps of the fort, including the earliest from 1803, depict drain gutters in place within the parade prior to construction of the parade wall in the 1830s. These drains followed the same general alignment as at present.

10. Parade Drive (FOMC 19; LCS no. 81214) - The parade drive is a circular gravel driveway (12 to 30 ft.-wide) entering from the sally port and encircling the grassy area in the center of the parade. The drive is first depicted on an 1888 plan of the fort, and was originally surfaced with oyster shells. The alignment of the drive is historic.

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetSection number 7 Page 20Fort McHenry
Name of Property
Baltimore City, MD
County and State

11. **Civil War Powder Magazine** (FOMC 07; LCS no. 07756) - This one-story gabled brick/concrete magazine and its detached 8 ft.-high exterior wall were constructed in 1863-64 approximately 600 feet northwest of the star fort. The structure measures about 80 ft. X 40 ft., and the detached wall about 62 ft. X 96 ft. A single entrance door is on the northeast face, and a square brick tower at the southwest end serves as a ventilating shaft. Between 1914 and 1917, the City of Baltimore leased Fort McHenry as a city park, and converted the Civil War powder magazine to a bathhouse. This resulted in extensive alteration of the magazine's south courtyard and the courtyard's surrounding wall. During World War II, the interior served as a target pistol range for U.S. Coast Guard officers. Despite the alterations, the structure is considered a rare architectural example of this type of detached magazine from the Civil War period. It was adapted in 1974 for storage of furnishings and collections from Fort McHenry and from Hampton National Historic Site.

12. **Boundary Wall and Entrance Gates** (FOMC 08; LCS no. 07757) - A 10 ft.-high brick wall built in 1837 extends along the western boundary of the park 240 ft. north and 575 ft. south of the entrance. The wall is capped with granite coping, and strengthened at intervals by square brick piers, 26 in.-wide. It was constructed to demarcate the boundary of the fort following the acquisition of additional land in 1836. An earlier boundary wall constructed in 1817 marked the western boundary of the fort as it existed at the time of the 1814 bombardment. Both this earlier wall (dismantled when the 1837 wall was built) and its successor served no defensive purpose. Paired wrought iron gates (non-historic; replaced following recent damage by automobile impacts) are at the main entrance supported by granite piers. There are also two wrought iron pedestrian gates of similar construction.

In 1878, the War Department leased 2.75 acres within the northeast sector of Fort McHenry to the Baltimore Drydock Company. As a result of a 1990 Congressional Act that eliminated the possibility of transferring this acreage to the park, some 300 ft. of the 1837 boundary wall existing in this area remains in private ownership. It is threatened with removal with no protection under existing historic preservation laws.

13. **Boundary Fence** (FOMC 08.A; LCS no. 81244) - A boundary fence constructed by the War Department in 1926 demarcates the boundary between Fort McHenry and the U.S. Navy installation on the north. The iron picket fence is about 5 ft.-high and about 953 ft.-long, with brick/concrete end piers.

14. **Seawall** (FOMC 09; LCS no. 07758) - The seawall is a heavy masonry retaining wall, about three-quarters of a mile in length next to the water's edge. Initial construction of the wall began in 1816, with a second phase of construction between 1836 and 1839. Work on

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 21

additional sections continued until 1895. The wall is constructed of cut granite stones set flush with the earthen sod embankment behind the wall. The eastern half of the wall was reset in 1974-75, and rip-rap was added as protection at that time. The wall was severely damaged by Tropical Storm David in 1979 that displaced numerous coping stones. Repairs were made in 1985 to a wall section near the city pier.

15. **Fort Avenue** (FOMC 30; LCS no. 81229) - Although since modified, this road was the original access and supply route to the fort from Baltimore and existed at the time of the fort's construction and the subsequent 1814 bombardment. Because of modifications in road materials and width, the alignment is the only remaining historic element. There are about 670 ft. of original road alignment within the park boundaries. The paved asphalt entrance drive with concrete curbs and gutters follows the historic alignment for 570 ft. from the park entrance to the curve leading to the visitor parking area. A paved footpath follows another portion of the alignment for 100 ft. from the marble posts marking the historic lane to the former Washington Elm tree north of the ravelin. All visible traces of the historic roadbed have been eliminated along the course of the alignment.

16. **Seawall Trail** (FOMC 31; LCS no. 81230) - This 6 ft.-wide X 3360 ft.-long asphalt pedestrian trail borders the seawall. It was originally constructed in 1917-1919 as a paved recreational path for the patients and staff of the World War I hospital. It was altered in 1926 and 1963 with curved alignments at the parking lot and west boundary wall.

(number of contributing structures: 32)

C. Contributing Buildings

1. **Commanding Officer's Quarters** (FOMC 01; LCS no. 07752; Building A) This two-story brick building was constructed ca. 1800 and measures approximately 79 ft. X 18 ft. It is located on the north side of the parade ground between bastions 1 and 2. It was originally one-story with a gable roof and dormer windows. A second story was added with full-length covered piazza on the front facade as part of extensive remodeling in 1829. A two-story addition was also constructed in 1829 connecting the building to the adjacent guardhouse; the guardhouse was subsequently converted to a kitchen. In 1894, the quarters were again remodeled in conversion to a supply storehouse/office, and the piazza was removed. In 1929, as part of the War Department's restoration of the fort, the piazza was restored and deteriorated sections of the brick exterior walls were rebuilt and repointed. New tin roofs, gutters and drainspouts were installed at that time. The building presently exhibits an unadorned appearance with evenly-spaced rounded porch columns and simple porch railing; a raised-seam metal roof over

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 22

the second floor piazza; sash windows of 20 lights on the front and rear; a tin shed roof with stepped parapet end walls and two brick chimneys. The first floor is presently used for interpretive wayside exhibits. The second floor serves as the park's living history storeroom and office.

2. Junior Officers' Quarters (FOMC 03; LCS no. 07553; Building C) - This building (ca. 1800) is located between bastions 2 and 3 and is similar to the other residential quarters in appearance but measures about 62 ft. X 18.5 ft. It was originally one-story with a gable roof and dormer windows. A second story was added with full-length covered piazza on the front facade as part of extensive remodeling in 1829. In 1894, the second floor was removed and the building was converted into a bakery. In 1929, the second floor and piazza were reconstructed. Deteriorated exterior walls were rebuilt and repointed at this time, and a new tin roof, gutters and drainspouts were installed. One of the first floor rooms is presently used for interpretive wayside exhibits and the upstairs for park personnel quarters.

3. Enlisted Men's Barracks No. 1 (FOMC 04; LCS no. 07554; Building D) This building, similar in appearance to the other residential quarters, measures 91 ft. X 22 ft. It is located between bastions 3 and 4. As originally constructed (ca. 1800), it was one and one-half stories with gabled roof and dormer windows. In 1829, the building was remodeled with the addition of a second story, piazza and kitchen on the west end. Deteriorated exterior walls were rebuilt and repointed in 1929, and a new tin roof, gutters, and drainspouts were installed. An interpretive exhibit presently occupies one first floor room, and another first floor room is used for a classroom. Ranger offices, restroom, kitchen and the park library are located upstairs.

4. Enlisted Men's Barracks No. 2 (FOMC 05; LCS no. 00356; Building E) This building (99 ft. X 22 ft.) is also similar in appearance to the other residential quarters. It is located between bastions 4 and 5. As originally constructed (ca. 1800), it was one and one-half stories with gabled roof and dormer windows. A second story was added with full-length covered piazza on the front facade as part of extensive remodeling in 1829. In 1894, its second floor piazza was removed and the building converted to a quartermaster's office and storehouse. In 1929, the deteriorated exterior walls were rebuilt and repointed, the piazza reconstructed, and new tin roofs, gutters and drainspouts installed. Interpretive exhibits are presently on the first floor, and meeting rooms and offices are on the second floor. Archeological investigations were conducted in 1958 of the original (ca. 1800) basement kitchen.

(number of contributing buildings: 4)

D. Contributing Objects

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 23

1. **Armistead Monument** (FOMC 10; LCS no. 07759) - The 9-ft. standing figure of Maj. George Armistead, fort commander during the 1814 bombardment, was sculpted by Edward Berge in 1914. It was erected by the City of Baltimore and the Society of the War of 1812. The bronze statue is mounted on a 9 ft. X 9 ft. X 12 ft. granite base. It was originally located on the parapet of the water battery opposite magazine no. 2, and was moved in 1963 to its present location in front of the entrance to the visitor center.

2. **Statue of Orpheus** (FOMC 11; LCS no. 00353) - The large bronze statue of Orpheus (mythological Greek poet and musician), was sculpted by Charles H. Niehaus, an influential late 19th century neo-classical sculptor. The statue was the winning entry of a design contest authorized by Congress in 1914 to commemorate Francis Scott Key and "The Star-Spangled Banner." After several years delay, the statue was completed and a dedication ceremony was held in 1922, attended by President Warren G. Harding. The 22 ft.-high statue stands atop a 15 ft.-high marble pedestal and 25 ft.-diameter base. It was originally located in the center of Fort Avenue west of the fort, and was moved in 1963 a short distance to its present location east of the Civil War Powder Magazine.

3. **Marble Benches** - Twelve curved marble benches were originally positioned around the statue of Orpheus, along the perimeter of the driveway that formerly encircled the statue in the center of Fort Avenue. The benches were placed in 1922, and were dispersed when the statue was relocated in 1963. Four of the benches are presently around the Orpheus statue, and the remainder are along the seawall trail. The benches are in very good condition, and are regarded as a collection of contributing objects. They are about 6 ft. in length, with decorative carved scrollwork on the 4 pedestal supports.

4. **American Privateers' Monument** (FOMC 27; LCS no. 81226) - This monument consists of an 1814 cannon from an unknown Baltimore ship mounted on a granite base. It was erected in 1914 by the Society of the War of 1812 to commemorate the private armed vessels that were commissioned to capture British ships during the War of 1812. The dedication plaque has been removed. It is located near the southwestern end of the water battery breast-height wall.

5. **British Bomb Monuments** (FOMC 28; LCS no. 81231) - These two monuments consist of 13-in. British mortar and carcass shells from the 1814 bombardment that failed to explode. They are mounted on rough-cut granite shafts. They were erected in 1914 and moved in 1966 to their present location adjacent to the fort powder magazine. The 13-in. carcass shell is the only one known to exist in the United States, and its history is fully documented.

6. **Francis Scott Key Memorial Plaque** (FOMC 34; LCS no. 81248) - This

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 7 Page 24

bronze and marble plaque was designed and sculpted by Charles Niehaus in 1914 commemorating the centennial of the 1814 bombardment and Francis Scott Key's writing of "The Star-Spangled Banner." It is placed in the southeast scarp wall of bastion 1 about 4 ft. above ground level.

7. Collections - Approximately 25,000 items are maintained in Fort McHenry's various museum collections. Among the significant collections are the E. Berkley Bowie Firearms collection (part of this collection is on permanent loan to Gettysburg National Military Park); the Mrs. Reuban Ross Holloway collection of documents and manuscripts pertaining to the adoption of "The Star-Spangled Banner" as the national anthem; a collection of United States flags; and numerous historic photographs documenting the 1917 construction of U.S. General Hospital No. 2 and the W.P.A.'s repair and repointing work in the 1930s. The park also houses extensive artifact collections obtained by the numerous archeological excavations that have been conducted over the years. Several objects from significant periods of the fort (e.g., furniture, armaments, items of clothing, etc.) are exhibited in the visitor center and the parade ground buildings.

Over 100,000 documents relating to Fort McHenry's historical development are also maintained on-site. These were compiled from original sources by the National Park Service as part of the Historical and Architectural Research Project (HARP). Undertaken between 1957 and 1958, this was a concerted effort to collect and research important historic, archeological and architectural information pertaining to the fort.

(number of contributing objects: 7)

E. Noncontributing Buildings

1. Visitor Center - The 2400 sq.-ft. visitor center was constructed in 1963-64 during the period of development in the National Park Service known as "Mission 66." It houses a 65-seat auditorium, lobby/exhibit area, restrooms, concession-operated gift shop, and NPS administrative offices and storeroom. The one-story masonry and steel structure with brick veneer is located approximately 300 ft. north of the fort. It exhibits a functional contemporary design typical of late 1950s and early 1960s modern architecture.

2. Maintenance Shop - The maintenance shop (a 2400 sq.-ft. structure built in 1963-64) is located in the northwest corner of the monument grounds adjacent to the park housing complex. It contains two small offices and shop/storage rooms. The one-story masonry veneer building (approx. 50 ft. X 110 ft.) has an attached one-story metal panel clad addition (approx. 30 ft. X 50 ft.) forming an ell. A brick wall runs along the south elevation concealing maintenance operations and the park housing area.

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetSection number 7 Page 25Fort McHenry
Name of Property
Baltimore City, MD
County and State

3. **Employee Housing/Offices** - A one-story brick and wood frame Mission 66 duplex is located adjacent to the maintenance shop. The gabled, ranch-style building was constructed in 1963-64, with three bedrooms in each unit. Each unit (6 bays wide X 2 bays deep) measures about 55 ft. X 25 ft. Both units were originally used as residences, but currently only the south unit is used for that purpose; the north unit functions as adjunct administration and maintenance offices.

4. **Utility Garage** - A new metal garage (60 ft. X 120 ft.) was constructed in the southwest corner maintenance area of the park in 1996. It replaces a former one and one-half story, wood-frame garage with board and batten siding constructed in 1940 on the same site. The removed garage was determined ineligible for the National Register of Historic Places in May, 1995. A 175 ft.-long paved roadway leads to the garage and the storage building (no. 5, below).

5. **Storage Building** - This building is located near the utility garage (no. 4, above) in the southwest corner of the park. The building was constructed in 1980 with concrete masonry unit (CMU) side walls; the front and roof are open. It is used for materials storage.

6. **Comfort Station** - A one-story wood frame restroom (18 ft. X 58 ft.) is located near the new picnic area and boat dock. The hipped roof building (constructed in the late 1980s) has entrances at either end with screened enclosures. A central entrance provides access to plumbing and waste systems.

(number of noncontributing buildings: 6)

F. Noncontributing Structures

1. **Modern Boundary Fence** - This fence (constructed in 1973) extends east for 580 ft. from the northern end of the historic brick boundary wall to a brick corner pylon, and then northerly to the seawall. It separates the park from parcels owned by the Army Corps of Engineers and the Baltimore Fire Department. The 5 ft. 5 in.-tall fence consists of 10 ft. sections of wrought iron spikes anchored in preexisting concrete footers. It was designed to replicate the existing historic boundary fence and replaced a chain link fence dating from the 1930s to the 1950s.

2. **Boat Dock** - A ca. 1977 boat dock and pier (located outside the park boundary near the end of the seawall) is incorporated into the park's visitor circulation system. It is owned by the City of Baltimore and leased by the city to the Harbor Shuttle. A small picnic area is located near the dock with uncovered picnic tables. A paved footpath leads to the area from the fort.

3. **Parking Lot and Entrance Drive** - The visitor parking lot and connecting portion of the entrance drive were constructed as part of

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetSection number 7 Page 26Fort McHenry
Name of Property
Baltimore City, MD
County and State

the Mission 66 improvements undertaken in the park between 1963 and 1964. The landscaped lot measures approximately 350 ft. X 350 ft. and is paved with bituminous asphalt. The modern section of the entrance drive curves for 300 feet, connecting the parking lot to the primary entrance drive (the alignment of historic Fort Avenue). A grass turf parking area is located to the west and adjacent to the paved parking area to handle overflow vehicle parking during peak visitation events.

4. U.S. Coast Guard Tower - This is a 60 ft.-high steel navigational aid equipped with a flashing green range light. It is located on a 30 ft. X 30 ft. site near the seawall east of the star fort. The tower provides a vital navigational and safety service for ships entering Baltimore harbor during darkness. While the present tower is modern, navigational towers have been placed in the general area since the 1890s.

5. Utility Corridors - Several utility corridors cross the grounds of the national monument including: 1). a 1911 right-of-way easement held by the City of Baltimore for two underground electrical lines, 2). a 1925 right-of-way easement held by the U.S. Coast Guard for the electrical line serving the light tower, 3). a 1947 right-of-way easement held by the City of Baltimore for two sealed water mains, 4). a right of way held by the U.S. Navy for the water main supplying the U.S. Naval Reserve Center, and 5). sealed underground steam lines from the U.S. Naval Reserve Center passing through the curtain wall between bastions 1 and 2.

(number of noncontributing structures: 5)

G. Noncontributing Objects

1. War of 1812 Commander Memorial Tree Plaques - These 32 concrete markers with bronze plaques were erected by various War of 1812 organizations to commemorate commanders of the war. The markers were placed in 1932-33 adjacent to commemorative trees that were planted at that time on the fort grounds. The original trees died and have been replaced. The markers were moved in 1962 across the road to their present location near the Civil War powder magazine. They represent elements of a commemorative landscape that has lost integrity and their associated significance has been diminished.

2. State Tablet Monuments - These are concrete commemorative markers with brass plaques placed in 1932 by various War of 1812 groups and dedicated to each state of the nation; Hawaii and Alaska were dedicated in 1964. They are located along the drive from the entrance gate. Like the memorial tree plaques, they represent elements of a commemorative landscape that has lost integrity and their associated significance has been diminished.

3. Washington Elm Tree Marker - This concrete marker with bronze

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number 7 Page 27

Fort McHenry
Name of Property
Baltimore City, MD
County and State

plaque was placed in 1932 by the Maryland Society of the Daughters of the American Revolution. It commemorates the 200th anniversary of the birth of George Washington. The Washington Elm contracted Dutch Elm disease and was removed in November, 1995. The tree removal was undertaken in accordance with NPS procedures implementing Section 106 of the National Historic Preservation Act of 1966, as amended. The marker was removed and placed in the park's museum collection.

4. Modern Benches - Seventeen concrete modern benches (constructed in the 1940s and 50s) are distributed throughout the site. Although designed to replicate the general scale and appearance of the historic marble benches, they do not exhibit the decorative detail of the marble benches.

(number of noncontributing objects: 4)

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetSection number 8 Page 28Fort McHenry
Name of Property
Baltimore City, MD
County and State**Significance (Summary)**

Fort McHenry, constructed between 1794 and 1802 to guard the entrance to Baltimore harbor, is recognized as one of the finest surviving examples of coastal fortifications built during the First American System. This system of federally-funded forts spanned the Atlantic seaboard and the Gulf of Mexico to protect strategic ports from foreign invasion. The site derives preeminent national significance from its pivotal role in the defense of Baltimore during the War of 1812, withstanding a 25-hour British naval bombardment on September 13-14, 1814. From its establishment until 1912, Fort McHenry remained an active military post. Between 1917 and 1923 it served as a receiving hospital for the convalescence of World War I veterans. In 1925 Congress designated the fort a national park and "perpetual national memorial shrine" under the administration of the War Department. The enabling legislation specifically called for the fort's preservation and restoration. Several undertakings to address this mandate were carried out by the War Department and later by the National Park Service following transfer of the property to the Department of the Interior in 1933. These efforts are significantly linked to the historic preservation philosophy of the time and the growing recognition that the federal government should play an active role in the protection and interpretation of the nation's important historic sites. In 1939, the fort was redesignated as Fort McHenry National Monument and Historic Shrine, the only park in the nation to bear this dual distinction. During World War II, the fort served as a U.S. Coast Guard training facility. For its primary association with these historical events, Fort McHenry meets criterion A for listing on the National Register.

Francis Scott Key, detained off-shore by the British during the 1814 attack on the fort, witnessed the bombardment and was moved to write the poem, "The Star-Spangled Banner." The poem eventually became the national anthem in 1931. For its association with Key, whose inspired poem has endured as a profound work of patriotic literature and music from the time of its public release immediately after the battle, Fort McHenry meets criterion B for listing on the National Register.

The fort underwent several episodes of construction and modification, both before and after the War of 1812. Although substantially altered in many respects from its appearance at the time of the 1814 bombardment, the essential configuration of the star fort has survived to the present. The modifications that have occurred provide insights into the dynamic interplay

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number 8 Page 29

Fort McHenry
Name of Property
Baltimore City, MD
County and State

of technological innovation and political events that over the better part of the last century shaped military designs for coastal fortifications. Therefore, as an expression of the evolution and advances in defense engineering from the late 18th to late 19th centuries, Fort McHenry also meets National Register criterion C.

Resources that further contribute to Fort McHenry's national significance under criterion C include the various statues and commemorative plaques/markers placed at the fort during later periods of memorialization. Among these, the Statue of Orpheus is recognized as a significant artistic work by the renowned neo-classical sculptor, Charles Niehaus. Authorized by Congress in 1914, the statue was dedicated in 1922 to Francis Scott Key and the defenders of Baltimore who participated in the Battle of North Point and the defense of Fort McHenry in 1814. Other important works, placed during the centennial commemoration of the bombardment by various War of 1812 organizations, include the Armistead monument, the American privateers' monument and the British bomb monuments. The 1932 bicentennial celebration of George Washington's birth marked another milestone of memorialization by War of 1812 organizations. This event prompted the planting of trees with memorial plaques dedicated to the fort's commanders during the battle, and the placement of state tablet monuments and the Washington Elm Tree marker. The various plaques and landscape features associated with the 1932 bicentennial celebration have lost historical integrity and no longer contribute to the National Register significance of the property.

Fort McHenry also meets national register criterion D for its demonstrated ability to yield substantial archeological information regarding the nature and evolution of the fort's various structures and buildings. Important data expanding knowledge of the everyday life of the fort's historic occupants can also be gained from an evaluation of the cultural material acquired during the course of archeological investigations.

Historic Context

The development of fortifications on Whetstone Point (now known as Locust Point) was an outgrowth of the growing economic importance of Baltimore as a manufacturing/distribution center and transportation hub. Founded in 1729, Baltimore grew from a small port supported primarily by tobacco exports, to a major urban center by the time of the American Revolution. The Revolution played a significant role in boosting Baltimore's prosperity; the city's iron and ship building industries, and agricultural processing mills were major suppliers of the Continental Army and Navy. The Baltimore Turnpike linked the city to Cumberland, Maryland, providing a direct route for the transport of agricultural produce and other commodities from the interior. After 1815, with the road's extension from this point west as part of the National (Cumberland) Road, Baltimore's position as a vital distribution center was further strengthened. By the end of the 18th century, Baltimore had become the nation's third largest commercial city, engaged in a flourishing overseas trade with Europe and the West Indies.

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 8 Page 30

Early in the course of the American Revolution, the Maryland Council of Safety recognized that Baltimore was vulnerable to naval attack. In response to this threat, the Council initiated the construction of Fort Whetstone in 1776. The fort was supported by two fortified gun (water) batteries near the shore line that were intended to provide a first line of defense against naval assault. Although detailed plans or descriptions of the fort and water batteries have not been found, early maps and other evidence indicate that the fort was constructed of earthen embankments in the configuration of a star fort but without true bastions. It was located on the eastern tip of Whetstone Point at approximately the same site as its successor, Fort McHenry. In the waning stages of the Revolution, with the threat of invasion less an immediate concern, some of Fort Whetstone's cannon were removed for use elsewhere. Evidence also suggests that the fort may never have been completed.

Fort Whetstone was constructed by local residents and militia untrained in the construction of defense works and without the guidance of military engineers. As a result, design problems were inherent at the outset that left the fort essentially indefensible. However, the fort was never tested under siege, and was eventually abandoned by the military and sold to private interests after the Revolutionary War. The mining of iron ore also resumed on Whetstone Point after the war, an activity that preceded the construction of fortifications.

In 1793, the young revolutionary government of France went to war with Great Britain. Repercussions of the conflict threatened American neutrality and the interlude of peace that followed the American Revolution. The French were first to antagonize the American government when their emissary, Citizen Edmond Genêt, arrived in Charleston, South Carolina. Disclosure of his plans, including the outfitting of French warships in American ports, revealed a flagrant disregard for America's Neutrality Act. This affair was followed by the British seizure of hundreds of American ships engaged in trade with the French West Indies. Anti-British sentiments were further stirred by British support of Indian tribes resisting American expansion on the Northwest frontier.

The heightened international tensions of the period led to the signing of Jay's Treaty in 1794 between Great Britain and the United States. Negotiated by Chief Justice of the United States, John Jay, the treaty improved relations to some extent with Great Britain. However, it was denounced by many in the United States who felt that the agreement seriously undermined American neutrality, and unfairly benefitted Britain over France.

On March 20, 1794, as a precautionary measure against the instability of international affairs, Congress passed an act authorizing a program of coastal fortifications. Referred to as the First American System, this series of forts was constructed between 1794 and 1806 to protect strategic ports and harbors along the Atlantic seaboard and the Gulf of Mexico. Although funding proved inadequate, the system marked the first time that federal funds were allocated for the construction of coastal defense works.

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 8 Page 31

The government contracted with independent military architects to prepare designs because no engineering department then existed within the United States military. Many of these architects were French immigrants, formally trained in the prevailing European theories of fortification. They were permitted a wide degree of latitude in selecting plans, methods and materials. As a result, and in the absence of any unifying federal guidelines, the various forts were dissimilar in form. The forts were also not particularly durable, consisting primarily of earthworks.

A French military engineer and immigrant to the United States, Major John Jacob Ulrich Rivardi, was appointed by the Secretary of War, Henry Knox, to plan the fortifications for both Baltimore and Alexandria, Virginia. His assessment of Fort Whetstone, abandoned and in disrepair, identified several design deficiencies; e.g., the line of artillery fire from the fort was oblique, and the entrant and salient angles (that is, respectively, the angles of enemy artillery fire into the fort and across the points of the bastions) could not be defended. To correct these problems, he recommended the construction of a new star fort and water battery at the site of the earlier fort. Upon the approval of the governor of Maryland, Rivardi undertook architectural responsibility for the initial stages of construction. He was assisted by his construction supervisor, Samuel Dodge.

Construction of the water battery began in 1794, but little progress or expenditures were made on the overall fortifications between 1794 and 1797. Although instructed to keep his designs simple and to hold total construction costs to \$4,225, Rivardi came under criticism for the pace and scope of the work. Maryland congressman and Revolutionary War veteran Samuel Smith considered Rivardi's plans too grandiose.

In 1798, Rivardi was replaced by another French engineer, Major Louis Tousard. Tousard's appointment was made at a time of renewed tensions between the United States and France. The so-called Quasi-War of 1798 to 1800 was precipitated by French capture of American ships on the high seas, and what the United States considered an insulting French response to a proposed diplomatic settlement (the "XYZ Affair"). The conflict led to the establishment of the U.S. Department of the Navy and a renewed program of naval ship building. The limited and undeclared naval war brought an end to the previous four years of American neutrality, and led to an informal alliance between Great Britain and the United States.

The conflict with France spurred Congress in 1798 to appropriate \$250,000 for improvements in coastal defenses. Under Tousard's direction, dramatic progress was made on the construction of what continued to be called Fort Whetstone. Approximately \$18,000 was spent on the fortifications by the end of the year. However, Tousard's direct oversight of the fort was brief. In the same year (1798) he was placed in charge of all United States seacoast defenses, an unusual appointment in that it was made at a time when other French engineers were dismissed on suspicion of their loyalties to France. Tousard, however, had demonstrated his American patriotism by serving in the Continental Army during the Revolution, and had been promoted to the rank of

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetSection number 8 Page 32Fort McHenry
Name of Property
Baltimore City, MD
County and State

lieutenant colonel for his gallantry.

Jean Foncin, the third French engineer to direct construction, arrived in Baltimore in 1799 as Tousard's replacement. Foncin was critical of certain design elements introduced by his predecessors, and persuaded his superiors to endorse his plans for revisions. While the details of Foncin's modifications are not well known, the present five-bastioned star fort represents to a large extent the legacy of his architectural design skills. The largest annual outlay for construction expenditures (\$53,000) was made in 1800. Under Foncin's tenure, the fort was essentially complete by 1802, and was officially known by that time as Fort McHenry in honor of Colonel James McHenry of Maryland, Secretary of War from 1796 to 1800.

At the beginning of the 19th century, a brief lull in international tensions led to the curtailment of federal funds for fortifications. However, the resumption of European hostilities in 1803 between France and Great Britain once again threatened to draw in the United States. The British policy of boarding American merchant ships and impressing their crews into service for the Crown was seen by Americans as a clear violation of their declared neutrality. In 1807, the policy was pushed to extreme limits when the British ship Leopard, in search of deserters, opened fire on the U.S. frigate Chesapeake at the entrance to the Chesapeake Bay. The event drew widespread appeals for a declaration of war, but Presidents Thomas Jefferson and later James Madison hoped to coerce a peaceful settlement through economic sanctions and an embargo on American shipping. British and French interference with America's foreign trade, and continuing American expansion on the Northwest frontier further exacerbated relations between these nations.

A new program of seacoast fortifications (designated the Second American System) was authorized in response to the renewed threats of war and invasion. Unlike those of the First American System, the second generation forts of the period 1807 to 1814 were designed and constructed under a more coordinated effort by the military with architects and engineers trained in the United States. The Second American System provided for both the upgrading of existing defenses and new fort construction to protect the growing number of strategic port cities and harbors along the Eastern seaboard. Despite the military's coordinated efforts, wide variations continued to occur among the forts of this period.

The failure of economic sanctions to produce a settlement and the continuation of American grievances against Great Britain led to the emergence of a dominant pro-war faction among Republicans in Congress. In 1812, this faction (the "War Hawks") prevailed with President Madison's reluctant endorsement of a declaration of war against Britain. The United States entered the conflict both financially and militarily ill-prepared and with public opinion severely divided.

Despite these handicaps, Fort McHenry received extensive new construction and modifications in 1813 to correct perceived design deficiencies. Chief

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 8 Page 33

Ordnance Officer of the War Department, Col. Decius Wadsworth, is credited with the design/construction of the ravelin, recognized as the fort's first significant architectural feature designed by an American-trained engineer. Because of the changes made to the fort at this time (e.g., construction of the ravelin outside the sally port entrance, platforming of the bastions, etc.) Fort McHenry bears elements of both First and Second American Systems.

Early in the War of 1812, the British blockaded the entrances to the Chesapeake and Delaware Bays in response to the capture of British merchant ships and their cargoes by American privateers. However, the British were preoccupied with subduing Napoleon's forces in Europe and were initially unable to devote serious attention to the American "annoyance." After forcing Napoleon into exile in the spring of 1814, the British deployed a force of some 5,000 army and navy veterans against the United States in mid-August. Under the joint command of Maj. Gen. Robert Ross and Vice Adm. Alexander Cochrane, the British occupied Washington D.C. and burned several public buildings, including the White House. After this success, they directed a combined land and naval attack on Baltimore.

Under the command of Maj. Gen. Samuel Smith, Baltimore was well-prepared for the British assault. A line of defense works was erected at the east end of the city, and some 15,000 militia and regular army units were mustered for the city's defense. Fort McHenry and its two water batteries, commanded by Maj. George Armistead with 1,000 men, was crucial to the defensive network, securing the harbor channels leading to the city from the south. The defenders obstructed the mouth of the Northwest Branch with a line of gunboats and the hulks of intentionally scuttled merchant vessels.

On September 12th, British troops forced the withdrawal of American defenders at the Battle of North Point, a land engagement east of Baltimore. Advancing towards Baltimore the next morning, the British halted within two miles of the city while awaiting the results of the naval attack. The bombardment of Fort McHenry began at dawn on the 13th and continued for 25 hours. Two American officers were killed and several artillerymen wounded when two shells exploded on the southwest bastion. Despite the heavy shelling (estimated by Maj. Armistead at between 1500 and 1800 shells directed at the fort, 400 falling within the defense works), the only American casualties were four killed and 24 wounded. The parade powder magazine took a direct hit during the bombardment, severely damaging the building but not the powder stored within.

The British commanders, recognizing that the fort was capable of withstanding a prolonged attack, ordered a diversionary flanking sortie at midnight by way of the Ferry Branch west of the fort. This tactic proved unsuccessful. Part of the invading party mistakenly entered the wrong waterway and failed to reach their planned landing destination. They, along with other invading forces, were repelled by the combined fire of Forts McHenry, Covington, Babcock, and Look-Out.

The British bombardment ceased at 7 a.m. on September 14th, marking the last

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetSection number 8 Page 34Fort McHenry
Name of Property
Baltimore City, MD
County and State

time in the fort's history that it would come under enemy fire. Fort McHenry's defenders had effectively prevented British ships from entering the Northwest Branch, and the grand strategy for the seizure of Baltimore was thwarted. A significant far-reaching consequence of the battle was that it strengthened the negotiating position of the American peace commissioners, already meeting in Belgium since August. The Treaty of Ghent, ending the War of 1812, was signed on December 24, 1814.

As the British forces withdrew on the morning of September 14th, Fort McHenry's large American flag was hoisted defiantly. The flag (originally 42 ft. X 30 ft.) displayed the 15 stars and 15 stripes officially sanctioned by the United States between 1795 and 1818. It is exhibited today in the Smithsonian Institution's Museum of American History in Washington, D.C.

A young Georgetown (Washington D.C.) attorney, Francis Scott Key, witnessed the bombardment and purportedly observed the large flag later raised over the fort while detained by the British aboard an American truce ship. Key had come to Baltimore to arrange the release of his elderly friend, Dr. William Beanes of Upper Marlboro, Maryland. Beanes, whose home was earlier occupied by the British commander, Gen. Ross, prior to the Battle of Bladensburg outside Washington, had been apprehended on allegations that he had violated an oath of good behavior. Key, accompanied by Col. John Skinner (U.S. Commissioner General of Prisoners), set sail from Baltimore on September 5th and intercepted the British fleet in the Chesapeake Bay two days later. After negotiations aboard the flagship Tonnant, Adm. Cochrane agreed to release Dr. Beanes. However, because the Americans had gained knowledge of the British attack plans, they were detained aboard their small American vessel, anchored to the rear of the British fleet.

The intense anxiety felt by Key and his companions as they witnessed the bombardment was ultimately replaced by relief and joy upon recognition that Fort McHenry had withstood the attack. Key was inspired to pen the words to the poem that eventually became the "Star-Spangled Banner." He wrote the first words as the British ended their siege, adding more lines during his two-day return voyage to Baltimore. He revised and completed the draft in his hotel room. Although details are sketchy and conflicting, the poem was evidently presented to his wife's brother-in-law, Judge Joseph H. Nicholson, of Baltimore. Nicholson was so greatly moved that he had the poem printed in handbill form and distributed to the citizens of Baltimore on September 17th under the title, "Defence of Fort McHenry." The first newspaper publications of the poem appeared in the Baltimore Patriot & Evening Advertiser on September 20th, and the following day in the Baltimore American and Commercial Daily Advertiser. The name of the poem was changed shortly thereafter to "The Star-Spangled Banner."

The melody to which the poem was ultimately adapted and sung was attributed to an earlier (ca. 1770) composition entitled "To Anacreon in Heaven" by the Englishman, John Stafford Smith. It was written on the occasion of the founding of the Anacreontic Society in London, a social club dedicated to the early Greek lyric poet, Anacreon. The tune was also evidently an

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 8 Page 35

Irish/British drinking song, with different (and undoubtedly bawdier) lyrics. In any event, the melody was widely popular in America at the time that "The Star-Spangled Banner" was written, and was known and imitated by Francis Scott Key in his composition.

Key continued his successful law practice in the aftermath of the War of 1812 and was appointed U.S. attorney for the District of Columbia during the administration of Andrew Jackson. He remained deeply religious, and an active supporter of various social aid organizations. "The Star-Spangled Banner" attained widespread popularity across the country immediately following its release, and various arrangements were circulated. It acquired a prominent position among national songs by the time of the Civil War. In 1918, a bill was introduced in Congress to proclaim it the national anthem. This measure met strong opposition over the next several years, particularly among groups objecting to certain lyrics in the song that were considered antagonistic to Great Britain, and others who felt its purported drinking song associations violated moral standards. However, with the mounting support of civic and patriotic organizations, "The Star-Spangled Banner" was finally named the official national anthem by an act of Congress on March 3, 1931.

Although the 1814 bombardment successfully demonstrated Fort McHenry's ability to withstand a naval artillery attack, the bombardment exposed certain weaknesses of the fort that were improved and corrected over the ensuing decades. In 1817, the federal government enacted a new program of coastal fortifications (the Third American System) that extended over the next 50 years to 1867. The military initiated this system not in response to immediate threats of foreign invasion, but as a further means of upgrading and integrating its network of seacoast defenses. Besides the construction of new forts, technological advances in fortification design were incorporated into existing forts. Fort McHenry received several modifications during this period including the construction in the 1830s of the water (outer) battery, the breast-height walls of the parapet and the parade walls.

Fort McHenry remained a vital component of Baltimore's defenses at the time of the Civil War. The earlier construction of supplemental Third-System fortifications such as Fort Carroll, located about 4.5 miles down the Patapsco River to the southeast, lessened the pressure on Fort McHenry. However, the latter continued to be seen as critical to the defense of Baltimore both from naval and landward attack. Expedient improvements were made to Fort McHenry at the beginning of the Civil War, followed by more permanent improvements during the war and immediately after. The fort became a powerful symbol of federal authority and control, particularly early in the war when the sympathies of Baltimore's population rested strongly with the Confederacy. As stark testimony to its altered role of defending against internal threats, the fort's armaments were directed at the city to deter the possibility of a pro-Confederate siege or uprising. The fort served as a place of temporary incarceration for some 23,000 Confederate military and political prisoners, and as an important staging

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetSection number 8 Page 36Fort McHenry
Name of Property
Baltimore City, MD
County and State

area for the outfitting and embarking of Union troops and supplies.

During the Civil War, Third-System masonry forts were demonstrated to be vulnerable to long-range rifled artillery, developed shortly before the war. Because this jeopardized Fort Carroll as a first line of defense for Baltimore, construction began in 1872 on an extensive new water battery at Fort McHenry to counter the perceived artillery threat and to bolster its defense in the event Fort Carroll fell. Although this battery was intended to be equipped with 25 15-in. guns, construction ceased in 1878 and was never completed. All appropriations for coastal defenses ended in 1875 at a time when the threat of war and invasion was perceived as minimal.

From the end of the 1870s to 1912, Fort McHenry functioned primarily as a garrison, having outlived its effectiveness as a coastal defense work. In the 1880s, armament improvements were made to selected coastal fortifications under the recommendations of a special review board headed by Secretary of War, William C. Endicott. However, Fort McHenry was not among the forts to receive these improvements. The construction in the 1890s of Forts Smallwood, Howard, and Armistead at the confluence of the Patapsco River and Chesapeake Bay, and their subsequent replacement by further advances in military defenses, rendered Fort McHenry obsolete as a fortification. It briefly served, however, as a recruiting base during the Spanish-American War of 1898.

Fort McHenry was unoccupied from 1913 to 1914 following the official end of its use as an active military post in 1912. From 1914 until 1917 it was leased to the City of Baltimore and used as a city park. In 1917, following America's entry into World War I, the U.S. Army established a large military hospital at Fort McHenry known as U.S. General Hospital No. 2. The complex consisted of 104 new buildings constructed on the fort grounds. The hospital held the capacity for treating some 3,000 patients, under the medical attention of 200 doctors, 300 nurses and hundreds of support personnel. Although the grounds were extensively altered by construction of the hospital, the star fort itself and the exterior Civil War magazine were not seriously impacted. The hospital remained in operation until 1923.

In 1925, Fort McHenry was designated a national park and "perpetual national memorial shrine" under the administration of the War Department. The army initiated efforts to restore the fort and grounds, and completed demolition of the World War I hospital buildings around 1929. In 1933, Fort McHenry passed from the War Department to the Department of the Interior, and was placed under the administration of the National Park Service. The fort was redesignated a national monument and historic shrine in 1939.

Between 1942 and 1945, Fort McHenry served as a training station for the United States Coast Guard. The Coast Guard was assigned the responsibility of protecting the nation's port facilities and docked vessels during World War II. At Fort McHenry, a primary area of instruction was on-ship fire fighting and prevention measures. Twenty temporary buildings were constructed for the training station on the grounds near the east seawall;

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 8 Page 37

these were all removed upon decommissioning of the station at the end of the war.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section number 9 Page 38

Fort McHenry
Name of Property
Baltimore City, MD
~~County and State~~

Brown, Sharon A., and Susan Long

- 1986 "Historic Structure Report: Administrative, Historical and Architectural Data Sections, Seawall: Fort McHenry National Monument and Historic Shrine, Maryland." National Park Service, Denver Service Center, Denver, CO.

Cheek, Charles D., and Joseph Balicki

- 1993 "Review and Synthesis of Archeological Documentation, Fort McHenry National Monument and Historic Shrine (18BC13)." Prepared for the National Park Service by John Milner Associates, Inc., Alexandria, VA.

Cheek, Charles D., Joseph Balicki, and John Pousson

- 1997 "'On the shore dimly seen ...': An Archeological Overview, Fort McHenry National Monument and Historic Shrine (18BC13), Baltimore, Maryland." (draft). Prepared by John Milner Associates, Inc., Alexandria, VA, and the National Park Service, Applied Archeology Center, Silver Spring, MD.

Current, Richard N., et. al.

- 1975 American History: A Survey, Volume I. Alfred A. Knopf, Inc., New York.

Grieves, Worrall, Wright and O'Hatnick

- 1992 "Fort McHenry National Monument and Historic Shrine The Comprehensive Plan: Fabric Analysis and Treatment Recommendations." Prepared for the National Park Service by Grieves, Worrall, Wright and O'Hatnick, Architects, Baltimore, MD.

Lessem, Harold I., and George C. Mackenzie

- 1954 "Fort McHenry National Monument and Historic Shrine, Maryland." (reprinted 1961). National Park Service.

Lessem, Harold I., and David A. Kimball

- 1959 "History of Fort McHenry as a National Monument and Historic Shrine." National Park Service.

Lord, Walter

- 1972 The Dawn's Early Light. Harcourt, Brace, & Jovanovich, New York. Reprinted 1993 by the Johns Hopkins University Press, Baltimore, MD.

National Park Service

- 1994 "List of Classified Structures (LCS)." Fort McHenry National Monument and Historic Shrine, updated March 17, 1994.
- 1986 "Statement for Management." Fort McHenry National Monument and Historic Shrine. National Park Service.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number 9 Page 39

Nelson, Lee H.

- 1961 "An Architectural Study of Fort McHenry." Historic American Buildings Survey, National Park Service, Eastern Office, Division of Design and Construction, Philadelphia, PA.

Sheads, Scott S.

- 1986 The Rockets' Red Glare: The Maritime Defense of Baltimore in 1814. Tidewater Publishers, Centreville, MD.
- 1995 Fort McHenry: A History. The Nautical & Aviation Publishing Company of America, Inc., Baltimore, MD.

Svejda, George J.

- 1969 "History of the Star Spangled Banner: From 1814 to the Present." National Park Service, Office of Archeology and Historic Preservation, Division of History, [Washington, DC].
- 1969 "Fort McHenry Military Structures: Historic Structures Report Part I Fort McHenry National Monument and Historic Shrine Baltimore, Maryland Historical Data Section." National Park Service, Office of Archeology & Historic Preservation, Division of History, [Washington, DC].

Thompson, Erwin N., and Robert D. Newcomb

- 1974 "Historic Structure Report, Fort McHenry, Historical and Architectural Data, Fort McHenry National Monument and Historic Shrine, Maryland." National Park Service, Denver Service Center, Denver, CO.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section number 10 Page 40

Fort McHenry
Name of Property
Baltimore City, MD
County and State

UTM References (continued)

E Zone 28; Easting 363880; Northing 4347040

F Zone 18; Easting 363680; Northing 4346750

G Zone 18; Easting 363530; Northing 4346940

H Zone 18; Easting 363300; Northing 4347080

Verbal Boundary Description

The boundary of the nominated property is delineated by the polygon marked by the UTM reference points indicated on the accompanying USGS BALTIMORE EAST, MD. quadrangle map.

Boundary Justification

The boundary of Fort McHenry National Monument and Historic Shrine encompasses the entire 43.26-acre historic site listed on the National Register of Historic Places and administered by the National Park Service. The boundary includes all the land originally occupied by the fort at the time of the 1814 British bombardment and the additional acreage acquired by the War Department in 1836. The 1837 boundary wall demarcates Fort McHenry's present western boundary; a boundary fence follows the property line on the north (extending from the western boundary wall to the water's edge at the eastern end of the site); the seawall at the water's edge marks the site's eastern and southern boundaries.

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number _____ Page 44

Fort McHenry
Name of Property
Baltimore City, MD
County and State

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA

Geographic Organization - Piedmont (Baltimore City)

Chronological/Developmental Periods -

- A. Rural Agrarian Intensification (A.D. 1680-1815)
- B. Agricultural-Industrial Transition (A.D. 1815-1870)
- C. Industrial/Urban Dominance (A.D. 1870-1930)
- D. Modern Period (A.D. 1930-Present)

Prehistoric Period Themes - N/A

Historic Period Themes -

- A. Architecture, Landscape Architecture and Community Planning
- B. Government/Law
- C. Military
- D. Social/Education/Cultural

Resource Type -

- A. Category - District
- B. Historic Environment - Rural; Urban

Historic Function(s) and Use(s) -

- A. Defense: fortification/military facility/battle site/arms storage

Known Design Source -

- A. Architect, Maj. John Jacob Ulrich Rivardi
- B. Architect, Maj. Louis Tousard
- C. Architect, Jean Foncin
- D. Architect, Col. Decius Wadsworth

GLOSSARY OF FORTIFICATION TERMS

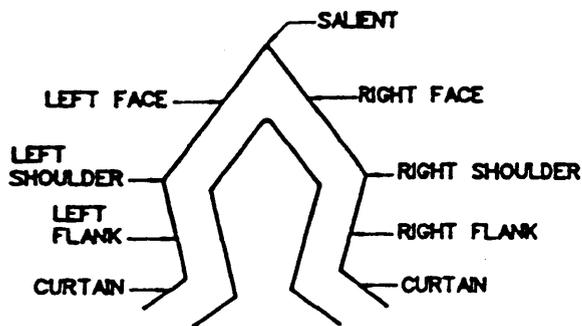
[From "Fort McHenry Natl. Monument and Historic Shrine; The Comprehensive Plan: Fabric Analysis and Treatment Recommendations." Grieves, Worrall, Wright and O'Hatnick. 1992]

The following list is an expansion of the glossary established by Thompson and Newcomb in their *Historic Structure Report: Fort McHenry...*, pp127 ff. Terms used in the descriptions that are also defined in this glossary are italicized.

Banquette The bank of earth in rear of the *parapet* on which infantry troops stand to fire. At Fort McHenry the banquette formed part of the *terreplein* behind the *parapet* of the main works. Refer to the sectional diagram included in the main text.

Barbette See *En barbette*.

Bastion A work consisting of two *faces* and two *flanks*, all the angles being salient. Fort McHenry has five, one at each quadrant of a pentagon. See diagram.



BASTION COMPONENTS

Batter A slope upward and backward from the perpendicular in a wall or pier, usually expressed as the ratio of two numbers. At Fort McHenry the *scarp* walls are battered.

Battery An area protected by two or more guns. See also *Water Battery*.

Bombproof A structure of sufficient thickness and strength that bombs cannot penetrate them. Fort McHenry is known to

have had four for personnel, one on each side of the *sally port* and two constructed in the 1860's in the *water battery*.

Breast-Height Wall The *interior slope* of a fort parapet. Eventually, the breast-heights at Fort McHenry were made of brick.

Clapboarding Surfacing with wood plank, where each plank has one edge thicker than the other, to facilitate horizontal overlapping to form a waterproof exterior surface. At Fort McHenry, the *interior slopes* of the *parapet* above the *breast-height walls* were clapboarded in 1844.

Coping The highest or covering course of a wall. The coping at Fort McHenry is of granite and projects out over the scarp wall. See also, *cordon*.

Cordon 1) An ornamental projecting course along the junction of a *parapet* with a *rampart*. 2) The *coping* of a *scarp* wall, which sometimes projects out beyond the face of the wall by a few inches.

Counterscarp The vertical or nearly vertical side of a *ditch* nearest to the besiegers, and opposite the *scarp* wall. While generally faced or *revetted* in permanent works, it was simply an earthen work at Fort McHenry.

Covert Way (Covered Way) A corridor or *banquette* running along the top of the *counterscarp* protected by an embankment whose outer slope forms the *glacis*. The defending infantry used it as a place of security or as a means of moving from point to point. Because of the lowness and nature of the *counterscarp* at Fort McHenry, the military sometimes considered the *ditch* itself to be the covert way.

Curtain That part of the *rampart* between two *bastions*. Fort McHenry has five curtains.

Demilune See *Ravelin*.

Embrasure At Fort McHenry, an opening in the parapet through which the guns on the *bastions* were pointed.

En Barquette At Fort McHenry, guns on the *bastions* set on platforms high enough as to enable the guns to fire over the *parapet*, rather than be worked through an *embrasure*.

Entrant angle An angle inverted toward or pointing into the fortification.

Exterior slope The slope given to the outside of a parapet. At Fort McHenry there were exterior slopes on the outside of the star fort *parapet*, the water battery *parapet*, and the *ravelin parapet*.

Face / Flank of Bastion The faces were the two parts of the *bastion* that made the *salient angle*. The flanks were the two parts that joined the faces to the *curtains*. Left and right designations are with reference to a person standing inside the fortification looking toward the salient angle.

Glacis A slope of earth, usually turfed, that inclines from the *covered way* towards the country. Its object is to bring assailants into a conspicuous line of fire as they approach the fort; also to mask the general works of the place.

Gorge 1) The rear entrance to a *bastion*; 2) a narrow passage between steep walls. At Fort McHenry, the term gorge was used to refer to the space between the *ravelin* and the fort proper.

Interior slope The inclination toward the inner part of a work which is given to the earth forming the *parapet* or *rampart*, i.e.,

the back side of the *parapet*. Infantry troops lean against the interior slope when firing.

Magazine Storehouse for powder. Fort McHenry has five which survive: one pre-War of 1812 located inside the Star Fort and referred to as the Star Fort Powder Magazine; one constructed 1863-4 and referred to as the Civil War Magazine, and three constructed in 1866: one in the *Ravelin* called Magazine One; two in the *water battery* called Magazine Two and Three.

Pintle blocks Large stones usually of granite containing the pin upon which the cannon carriages would pivot.

Parapet Breastworks of earth, brick, stone, or other material. The main fort, the *ravelin* and the *water battery* at Fort McHenry each had its parapet, made of sodded earth.

Postern A minor passageway, usually vaulted, under the rampart, to afford a communication from the interior into the ditch. Fort McHenry had one: a narrow vaulted passage leading through the rampart between Bastion Four and Five. This originally served as the main drain from the interior; after construction of the 1830's water battery, this tunnel provided communication between the fort and the battery.

Rampart Broad embankment of masonry and/or mass of earth surrounding a fortified place. A rampart forms the body of the place. The *parapet* is on its exterior side. At Fort McHenry, the ramparts are essentially the star fort. The exterior is defined by the masonry *scarp* walls. On the interior the parade ground *revetment* wall separates the parade ground from the *terreplein*.

Revetment wall A retaining wall faced with stone or brick masonry.

Ravelin (or Demilune) A work constructed beyond the main ditch, opposite a *curtain*, composed of two *faces* and forming a *salient angle*. It has its own *ditch* and usually, *counterscarp*. Fort McHenry had one ravelin that provided protection for the *sally port*.

Salient angle The projecting angle formed by the two *faces* of a *bastion* or *ravelin*.

Sally port The gate or passage by which the garrison of a fort may make a sally on besiegers. At Fort McHenry it was the main gateway into the fort. At first it apparently was a single opening through the *ramparts*. Later an arch covered it.

Scarp (or Escarp) The walls of the fort on the inner side of the *ditch*. At Fort McHenry the scarp is brick, and *battered* back 9.4 to one. To the casual visitor, the scarp is the fort when viewed from the outside.

Shoulder angle With reference to a *bastion*, the angled formed by the intersection of a *face* and a *flank* wall.

Star fort An inclosed field work, in shape like the heraldic representation of a star. The first fort at Whetstone Point was probably a true star fort. Today's fort, while often called a star fort, is not truly such; it is a pentagon with five *bastions*.

Terreplein The broad surface which remains on the *rampart* after constructing the *parapet* and the *banquette*. The terreplein at Fort McHenry was not especially broad, and today extended from the parade ground *revetment wall* to the *breast height walls*.

Traverse A mound of earth or masonry, higher than a man, approximately 18 feet thick, placed at intervals on a rampart to stop shot which may enfilade. Currently, Fort McHenry has only one true traverse of this nature, in the 1830's *water battery*. Earlier brick or earthen traverses did exist. The mound-like forms of the *water battery*

bombproofs and magazines provide protection similar to that offered by the traverse.

Traverse circle In gunnery, a circular plate of iron fastened to a bed of solid masonry on which the traverse wheels, which support the gun chassis, roll.

Water battery A *battery* located nearly level with the water. During the War of 1812, Fort McHenry had two water batteries - the lower, on the river's edge; and the upper, which fired over the lower. These fell into disuse and were eventually leveled. In the late 1830's the present day battery, adjacent to the fort, was constructed. This area could more accurately be referred to as an "Outer battery", leaving the term "water battery" for the earlier works. This report has used the term "water battery" for the area, since it conforms to current usage.

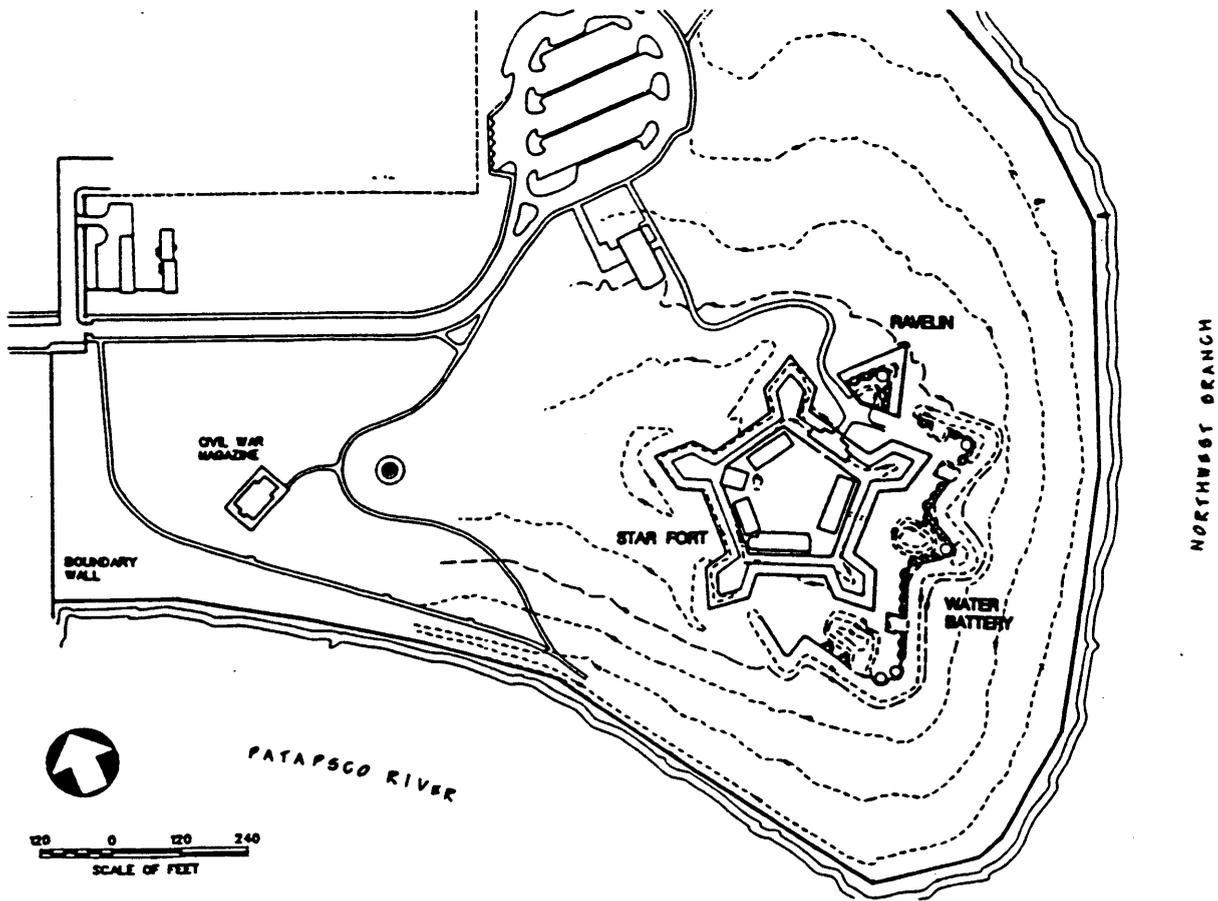


Illustration O.01. Site Plan of Fort McHenry

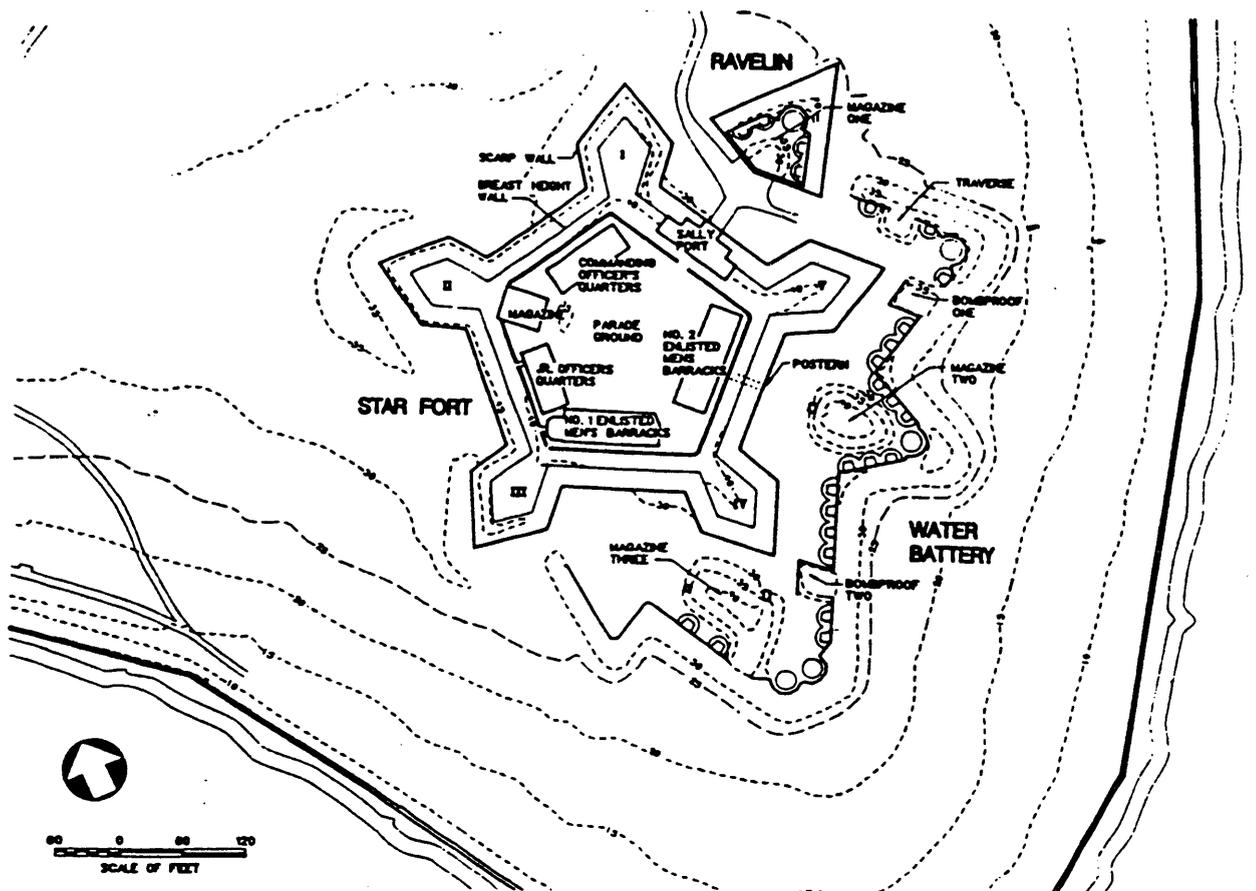


Illustration O.02. Plan of Star Fort and Water Battery.

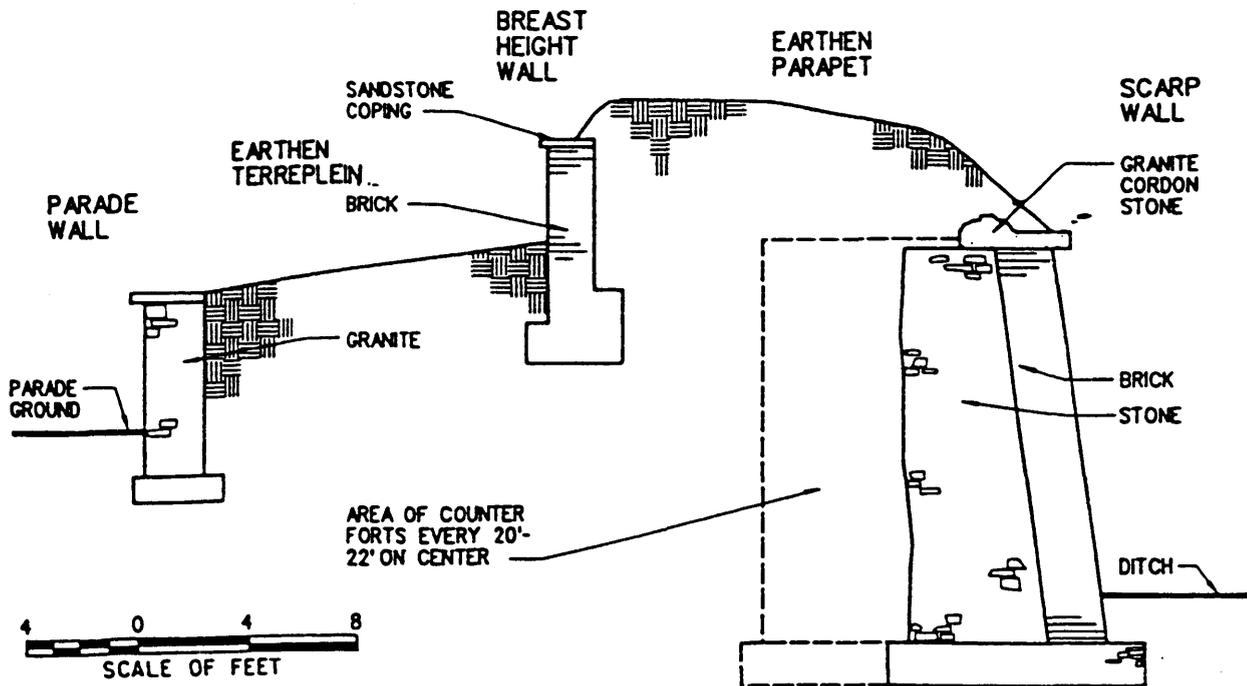


Illustration 1.1. Diagrammatic section through the Star Fort showing the relationship between the scarp wall, breast height wall and the parade wall.

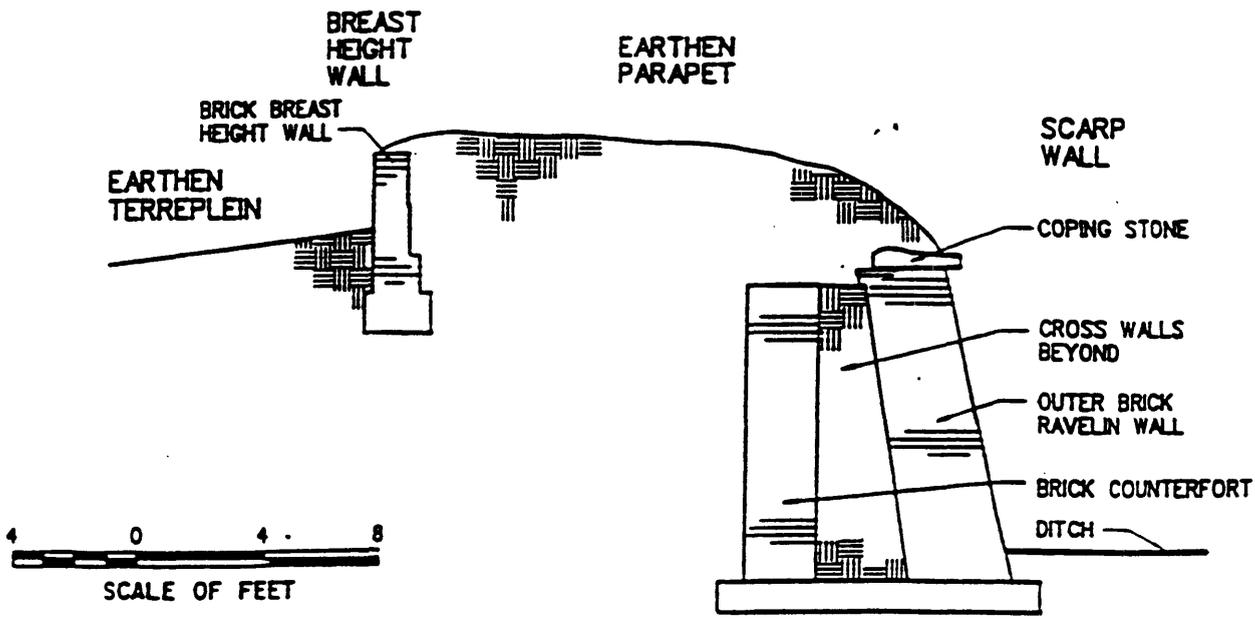


Illustration 2.01. Diagrammatic section through the Ravelin showing the relationship between the scarp wall and breast height wall.



Look 6 Print by E. Searles & Co. 10th St. Charles, R. Balt. Md.

Entered according to Act of Congress in the year 1862 by E. Searles & Co. in the Clerk's Office of the Dist. Court of the

FORT M' HENRY, BALTIMORE, M^D

W. W. MORRIS Col 2^d Artillery Com. of the Fort.

Gen. J. A. DIX, Com. in Chief of this Dep^t.

S. M. ALFORD, Col 3^d N. Y. V.

1862 DRAWING OF CIVIL WAR PRISON

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number _____ Page 41

Photographs

[Photos included with this nomination were taken in August, 1993, by National Park Service employees Stephen M. Clark, Mark W. Luellen, and Patrick S. McDonough, as part of the documentation prepared for Fort McHenry's List of Classified Structures. Negatives are on file with the Cultural Resources Group, Stewardship and Partnerships Team, Philadelphia Support Office, NPS.]

Photo

No.

1. Boundary Wall (FOMC 08; LCS no. 07757) - View from the southwest.
2. Entrance Gate in the Boundary Wall (FOMC 08; LCS no. 07757) - View from the northwest.
3. Fort Avenue (entrance road); (FOMC 30; LCS no. 81229) - View from the southeast.
4. Ravelin Scarp Wall (FOMC 13; LCS no. 07750) - View from the northeast, looking towards the Ravelin's salient.
5. Ravelin Gun and Emplacements (FOMC 13.A; LCS no. 81218) - View from the south; (15-in. Rodman gun positioned at the salient).
6. Magazine No. 1 (FOMC 20; LCS no. 81217) - Gated entrance to the magazine at left of photo; View from the southeast.
7. Moat (FOMC 16; LCS no. 07751) - View from the north; (west side of the star fort).
8. Fort Scarp Wall (FOMC 12; LCS no. 00352) - View from the southeast; (bastion 5).
9. Sally Port (FOMC 06; LCS no. 00354) - North (exterior) elevation.
10. Sally Port (FOMC 06; LCS no. 00354) - South (interior) elevation; guardhouses flank the entrance.
11. Flagpole (FOMC 15; LCS no. 00357) - View from the southwest.
12. Commanding Officer's Quarters (FOMC 01; LCS no. 07752) - View from the south.
13. Fort Powder Magazine (FOMC 02; LCS no. 00355) - View from the east; (Powder Magazine on left, Commanding Officer's Quarters on right).
14. Parade Drive (FOMC 19; LCS no. 81214) - View from the east; (Parade

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number _____ Page 42

Drive in foreground, Powder Magazine in center, Junior Officers' Quarters on left)..

15. Junior Officers' Quarters (FOMC 03; LCS no. 07553) - View from the southeast.
16. Enlisted Men's Barracks No. 1 (FOMC 04; LCS no. 07554) - View from the northeast.
17. Enlisted Men's Barracks No. 2 (FOMC 05; LCS no. 00356) - View from the northwest.
18. Parade Walkway (FOMC 18; LCS no. 81213) - View from the north; (in front of Enlisted Men's Barracks No. 2).
19. Parade Wall (FOMC 17; LCS no. 81212) - View from the northeast; (behind Enlisted Men's Barracks No. 2).
20. Fort Breast-height Wall (FOMC 12.A; LCS no. 81247) - View from the south; (wall section between bastions 2 & 3).
21. Postern (FOMC 25; LCS no. 81215) - View from the southeast; (exterior entrance through the scarp wall).
22. Postern (FOMC 25; LCS no. 81215) - View from the north; (interior entrance through the parade wall).
23. Water (Outer) Battery - View from the south; (northern portion).
24. Water (Outer) Battery Gun and Emplacement (FOMC 14.A; LCS no. 81221) - View from the west; (15-in. Rodman gun at the northern end of the battery).
25. Magazine No. 2 (FOMC 21; LCS no. 81224) - View from the northwest.
26. Magazine No. 3 (FOMC 22; LCS no. 81225) - View from the west; (west entrance).
27. Bombproof No. 1 (FOMC 23; LCS no. 81222) - View from the south; (south entrance).
28. Bombproof No. 2 (FOMC 24; LCS no. 81223) - View from the north; (north entrance).
29. Traverse (FOMC 26; LCS no. 81216) - View from the west; (the traverse is the earthen mound in the left foreground).
30. Water (Outer) Battery Breast-height Wall (FOMC 14; LCS no. 07755) - View from the northeast; (southern terminus).

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Fort McHenry
Name of Property
Baltimore City, MD
County and State

Section number _____ Page 43

31. Civil War Powder Magazine (FOMC 07; LCS no. 07756) - View from the northeast.
32. Civil War Powder Magazine (FOMC 07; LCS no. 07756) - View from the south.
33. Seawall (FOMC 09; LCS no. 07758) - View from the north.
34. Seawall Trail (FOMC 31; LCS no. 81230) - View from the north.
35. Boundary Fence (FOMC 08.A; LCS no. 81244) - View from the southwest.
36. Francis Scott Key Memorial Plaque (FOMC 34; LCS no. 81248)
37. Statue of Orpheus (FOMC 11; LCS no. 00353) - View from the northeast.
38. Armistead Monument (FOMC 10; LCS no. 07759) - View from the southeast.
39. American Privateers' Monument (FOMC 27; LCS no. 81226) - View from the east.
40. British Bomb Monument (FOMC 28; LCS no. 81231) - (One of two; see below).
41. British Bomb Monument (FOMC 28; LCS no. 81231) - (One of two; see above).
42. War of 1812 Commander Memorial Tree Plaque - (Representative of 32 memorial plaques).
43. Washington Elm Tree Marker - (Now in the park's museum collection).
44. Marble Bench - (One of 12 benches dispersed throughout the site).
45. Visitor Center - View from the southeast.
46. Comfort Station - View from the southwest.
47. Employee Housing/Offices - View from the northeast.
48. Parking Area - View from the southwest.
49. Maintenance Shop - View from the northwest.
50. U.S. Coast Guard Tower - View from the east.