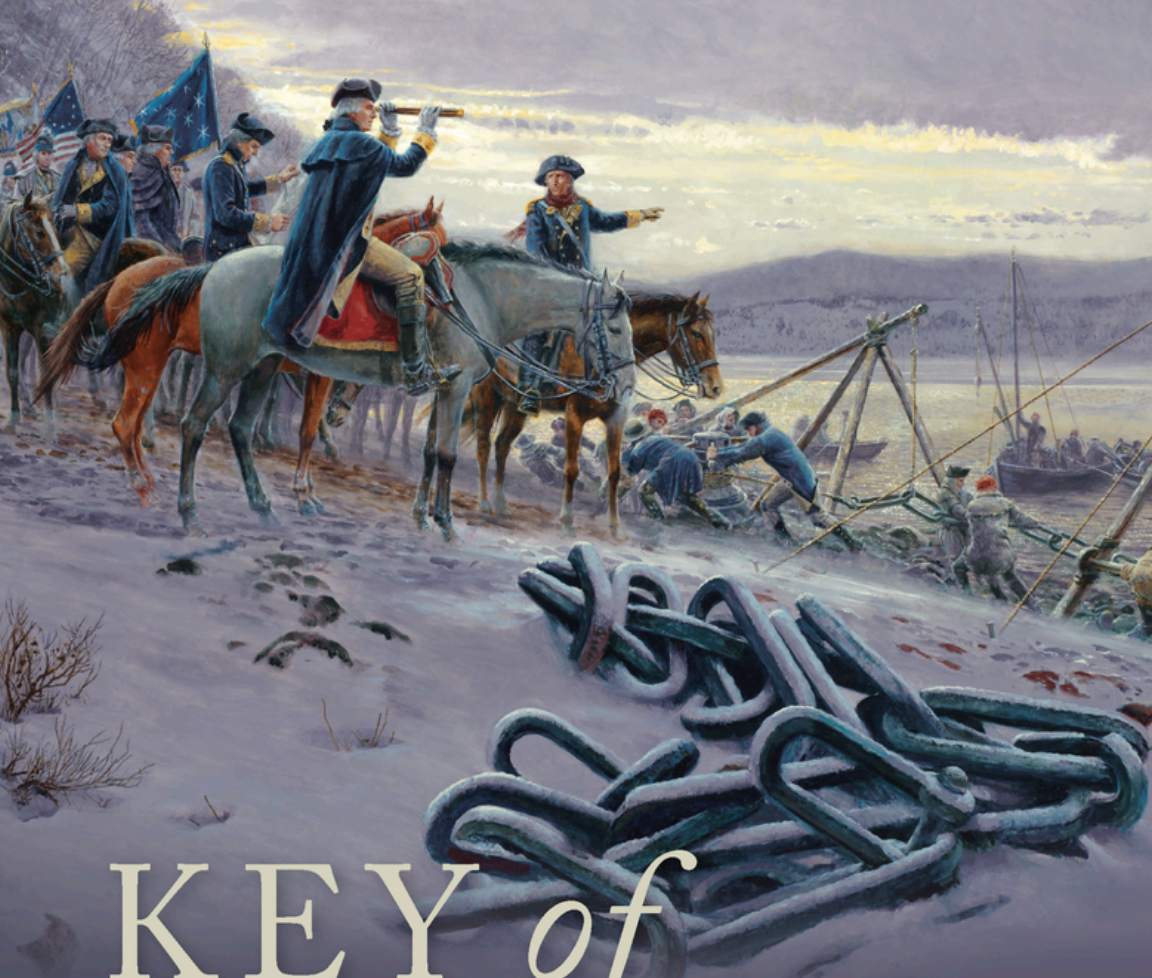

KEY *of* AMERICA

FORTRESS WEST POINT AND THE HIGHLANDS DEPARTMENT IN THE AMERICAN REVOLUTION

James M. Johnson

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Key of America: Fortress West Point and the Highlands Department in the American Revolution
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First published by the West Point Press, West Point, NY, in 2025.

Printed in the United States of America.

ISBN: 978-1-959631-23-1 (paperback)
ISBN: 978-1-959631-24-8 (ebook)

LCCN: 2025933301

Cover design: Erin Kirk
Book design: Liliana Guia

Note to Readers
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The cover is dedicated to Mort Künstler, for sixty years the legendary artist of significant historical events in American history, who died on 2 February 2025.

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PREFACE TO ORIGINAL EDITION

The construction of Fortress West Point during the American Revolution was actually the gradual evolution of several fortifications comprising a defensive network in the New York Highlands designed to deny the Hudson River to the British. Familiar to most Americans as the location of the United States Military Academy, West Point's role during the Revolution is generally associated with Benedict Arnold's treasonous attempt to sell the post to the British and the large chain that was stretched across the river. During the nineteenth century very little was written to record the details of that feat or the construction of the concomitant fortifications. The only significant work published was by Captain Edward C. Boynton, Adjutant of the Military Academy in 1863. No other work appeared until Dave Richard Palmer's monumental *River and the Rock* in 1969.

Over the last two centuries records have been lost or destroyed, and the fortifications themselves have deteriorated. Nevertheless, the ruins at West Point are probably the best of any constructed by the Patriots and are so well preserved that renewed interest in preparation for the Bicentennial was only natural. Historical research and archaeological techniques joined in the attempt to verify, illuminate, and broaden the base of information required to write a concise history of fortification construction. Several individuals assisted with the research and archaeological surveys and excavations intended to eliminate gaps in the historical record and to develop the entire construction story. Merle G. Sheffield's research on Fort Constitution, under the auspices of the Constitution Island Association, facilitated a monograph on the fortification of the island by Charles E. Miller, Jr., portions of which are included in Chapters II, III, XIII, and XIV. Donald V. Lockey conducted extensive research on the fortifications at West Point proper and prepared a draft of his findings and conclusions, major portions of which are included in Chapters IV, V, VI, and VII. Archaeological reports by John H. Mead, Edward B. Jelks, and J.C. and Virginia S. Harrington on Constitution Island, as well as those by John Mead, Daniel G. Crozier, and Jacob Gruber on structures at

West Point, were critical for authentication of original sketches, plans, and maps of the fortifications, and to broaden our understanding and depth of knowledge concerning individual features and construction techniques at the different works.

To compile the large amount of material acquired, as well as eliminate some remaining gaps in the historical record, the Department of History at the United States Military Academy undertook preparation of this monograph under the editorial direction of Joseph Visconti, Jr., and the executive guidance of Roy K. Flint, Deputy Head of the Department. The result is a compendium that presents the most up-to-date findings from current historical and archaeological research. It reflects the effort to discover and explain the origin and form of the United States Army's oldest, permanently garrisoned post. Moreover, it dramatizes those unique factors that compelled an anachronous approach to the construction of Fortress West Point. This work not only fills a void in the history of West Point's wartime construction, but also corroborates the *American* technique of fortification construction articulated by Dave Richard Palmer. As such, Fortress West Point represents an American heritage and identity independent from Old World influence.

Joseph Visconti
West Point, New York
August 1979

NOTE FROM THE EDITORS OF THE SECOND EDITION

During Academic Year 1987–1988 the Military History Division of the Department of History decided to conduct a staff ride of the West Point Revolutionary War fortifications during the first semester of the standard military history course. In the process of collecting materials for instructors to use in preparation for this event a Xerox manuscript of this work, *Highland Fortress,* was found, copied, and distributed. Although close to being a finished product, the manuscript was double spaced, had numerous proofreading errors, and had very poor graphics. After the successful completion of the staff ride, we decided to edit the manuscript as a resource for use in future staff rides. The nature of this editing has been primarily restricted to correcting proofreading mistakes, putting the document in an attractive format and improving the quality of the drawings and photographs. We have made very few changes to the basic text and endnotes. Nor have we had time to check every reference against the original source. There is much we would liked to have done had there been more time. The intent was not to produce a staff ride manual for West Point but faithfully to reproduce the work our predecessors left in 1979.

Tom Veleker
Larry Ghormley
West Point, New York
May 1988

PREFACE TO THE CURRENT EDITION

During the Bicentennial of the United States, the Department of History at the United States Military Academy assigned three officers, Joseph Visconti, Donald V. Lockey, and Charles E. Miller, Jr., the task of writing a study "to verify, illuminate, and broaden the base of information required to write a concise history of fortification construction" as a follow-on to Dave R. Palmer's *The River and the Rock* (1969). Since the Department of History first printed the Miller, Lockey, and Visconti manuscript, "Highland Fortress," in 1979, instructors in the Department of History have used it as a resource to help them explain to cadets the significance of West Point's fortifications to the winning of the American Revolution. The inclusion in the core course, "The History of the Military Art," of the staff ride of the fortifications in Academic Year 1987-88 enhanced the value of the "book" to officers seeking details about individual redoubts and batteries. So successful was the first staff ride that immediately after its conclusion, then Majors Tom Veleker and Larry Ghormley decided to put the manuscript into a more useable format. Since then, scores of officers, cadets, and civilian professors have benefited from its insights.

Since I first used the "Highland Fortress," I had nurtured the idea that this remarkable story should be available to a wider audience of those interested in the American Revolution, the Hudson Highlands, and West Point. I proposed such a project for my academic sabbatical, and it was approved as an early contribution to the 2002 celebration of the Bicentennial of the United States Military Academy. Years have passed since my sabbatical, but I have continued my research and writing on Fortress West Point in the Hudson Highlands during the American Revolution.

I have kept the conceptual core of the original work intact to fulfill the authors' purpose. Based on extensive research in archives, historical societies, and collections, I have edited and rewritten parts of the original text, verified evidence and citations, and added sections and chapters. I have retained the original language in quotations, using *sic* sparingly for clarity.

I have broadened the scope of the work to include the important works of the larger system of fortifications in the Hudson Highlands in the Highlands Department. In my years-long effort, I have also tested some of the conclusions of the first edition. My hope is that readers will understand how significant the Highlands Department and Fortress West Point were in the American Revolution, and why this beautiful terrain was so appropriate as the site of the United States Military Academy.

James M. Johnson
Danville, Kentucky

PROLOGUE

The West Point Military Reservation, home of the United States Military Academy, lies on the banks of the Hudson River in the Hudson Highlands some fifty miles north of New York City. Present-day visitors immediately encounter athletic fields, gray academic buildings, barracks, and the young men and women of the United States Corps of Cadets. But there is another West Point. A walk along Trophy Point and Fort Clinton's parapet or a drive up Crown Hill to Fort Putnam introduces the public to the original West Point—a West Point where Flirtation Walk (Chain Battery Walk) was not used by romantically inclined cadets, but by war-weary Continental soldiers hauling cannons and powder along the supply road to defend the Great Chain across the Hudson that would hold the new nation together. West Point's service to the nation began in the American Revolution long before it became a training and educational institution for future Army officers. Today it is the oldest active military post in the country to have flown the nation's flag.

The story of the Hudson Highlands and West Point during the Revolution was one of constant fear that British troops would seize the Hudson River–Lake Champlain line, thus separating the colonies/states and facilitating their defeat. The consequent fortification of the Hudson Highlands at and around West Point was the Americans' response to such a British threat. So important were the Highlands that the Continental Congress on 8 November 1775 created the Highlands Department: "That a commander with the rank of a Colonel, be appointed to take the command of the fortifications or fortresses on the Highlands on Hudson's river." On 16 January 1776, the New York Committee of Safety would designate militia Colonel Isaac Nicoll to command the troops at Fort Constitution making him the de facto commander of the Highlands. Always anchored on the forts in the Highlands, from Fort Constitution then to Fortress West Point to Forts Clinton and Montgomery to Fort Independence, the department stretched from the Fishkill Supply Depot and Newburgh on the north to the "lines" on the Croton River to the south.

George Washington understood the significance of the Hudson River since he had visited New York City in 1756 and 1773. As a delegate to the Continental Congress, he served on a committee "appointed to consider what posts are necessary to be occupied in the Colony of New York, and by what number of troops it will be necessary they should be guarded." The committee contained all the New York delegates: George Clinton, Robert R. Livingston, Philip Schuyler, Lewis Morris, and Henry Wisner. Congress also appointed members from other colonies to create geographical balance: George Washington of Virginia, Thomas Lynch of South Carolina, and Samuel Adams from Massachusetts.[1] After Congress directed the New York Provincial Congress to build the fortifications on the Hudson, Washington would be their champion throughout the war. As the conflict progressed, Congress would authorize, and General George Washington, as commander in chief, would appoint major generals to the departmental command. Washington would appoint Major General William Heath to be the first general officer as the departmental commander on 12 November 1776.[2] After an inauspicious beginning, from 1778 until the end of the war the works at West Point would pose a challenge to the British so formidable that they chose never to attack them.

Upon completion, Fortress West Point appeared to be the result of a long-range plan for a deep defensive network, but in reality, it represented a piecemeal approach that fed on itself as new defenses were continually added to make the overall system more tenable. Thanks to the practical minds that prevailed over those who envisioned grandiose schemes, West

1. Worthington C. Ford, ed., *Journals of the Continental Congress, 1774–1789*, 2:52-3, https://www.loc.gov/resource/llscdam.lljc002/?st=gallery. Washington made no mention of being chairman of the committee, although he was mentioned first in the entry on 15 May 1775, *Diaries of George Washington*, ed. Donald Jackson, 3:330–31.

2. "Instructions to the Commissioners," 16 Jan. 1776, New York Committee of Safety to Colonel Isaac Nicoll, 26 Mar. 1776, Peter Force, ed., *American Archives*, 4:1051, 5:1405, https://digital.lib.niu.edu/islandora/object/niu-amarch%3A80120, https://digital.lib.niu.edu/islandora/object/niu-amarch%3A100642, https://catalog.hathitrust.org/Record/000346548; *Journals of the Continental Congress*, 3:338, http://rs5.loc.gov/cgi-bin/query/r?ammem/hlaw:@field(DOCID+@lit(jc00342)); Washington to Heath, 12 Nov. 1776, "Instructions to Major General William Heath, 12 Nov. 1776," Papers of George Washington, Founders Online, National Archives, https://founders.archives.gov/documents/Washington/03-07-02-0105. Major General Alexander McDougall would assume command of the Department for the second of six times on 16 Mar. 1778, Washington to McDougall, see George Washington Papers, Series 4: General Correspondence, manuscript/mixed material, https://www.loc.gov/resource/mgw4.047_1173_1177/?sp=2. For a complete list of Highlands Department commanders, see https://en.wikipedia.org/wiki/Departments_of_the_Continental_Army#Highlands_Department.



Image P.1: *George Washington as a Colonel in the Virginia Regiment*, 1772, by Charles Willson Peale. (Courtesy of Washington and Lee University, University Collections of Art and History.)

Point evolved into a secure position that could delay a British naval and land force moving north from New York City until the state militias of New York and Connecticut or the Continental Army could respond.

The strength of West Point as an obstacle to British navigation discouraged attack after May 1778, particularly since the British had experienced defeat at Saratoga in October 1777. In concept, they could lay siege to West Point and eventually reduce it by traditional methods, but a rapid relief force of militia, followed by the Continental Army, would create an entirely untenable situation. The fortifications at West Point were not as impressive or formidable as those in Europe, nor were they always properly maintained. Nevertheless, backed by additional nearby military forces, the garrison of West Point became a major impediment to the strategy of divide-and-conquer along the Hudson River–Lake Champlain line. Of equal importance, it freed the Continental Army to venture beyond the Hudson Highlands and to shadow the British whenever necessary, without leaving the river open to a sudden British advance.

The history of the construction of the individual fortifications comprising the fortress complex of West Point and its supporting works in the Highlands reveals errors, innovations, and grand design, but mostly a practical respect for the restrictions imposed by cost, time, and the nature of the workforce. The ruins visible today reveal the major importance attributed to the Highlands during the Revolution and generate appreciation for the hardships endured by soldiers and workers who toiled without benefit of modern machinery in a primeval landscape. Of equal importance, the planning, building, and equipping of the fortifications reveal how an eighteenth-century society and economy were able to translate critical objectives into accomplishments in a revolutionary environment.

The fortifications in the Highlands, designed predominately by European military engineers, grew out of their understanding of the permanent land fortifications built by their continental counterparts during the seventeenth and eighteenth centuries. Usually constructed in time of peace to guard against invasion, permanent fortifications increased the effectiveness of the defending troops while economizing forces to support a shift of strength to some other critical point. Although the works at West Point were not the massive structures generally found in Europe, they were more than mere field fortifications. Built in haste, they acquired a semblance of permanence as the war evolved and the need to defend the Highlands continued. Consequently, discussion of the forts, batteries, and redoubts requires

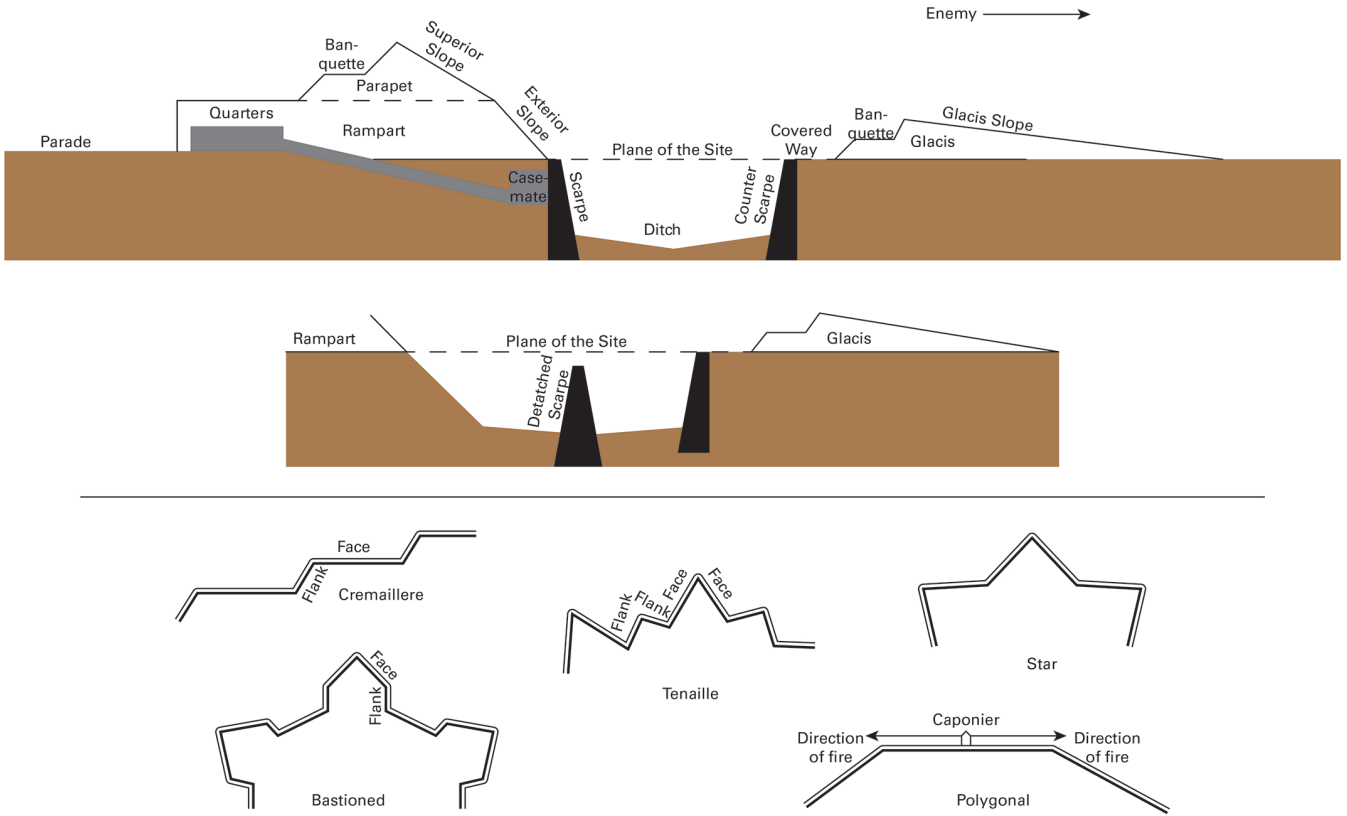

Image P.2: Profile of a typical eighteenth-century European fortification. (Courtesy of the West Point Digital History Center from *Notes on Permanent Land Fortifications*, Department of Military Art and Engineering, USMA, 1958.)

a basic understanding of the nomenclature associated with such fortifications, as well as the general features normally encountered.

Permanent fortifications reflected a response to advances in the development of artillery, as did the techniques and methods of laying siege to a fortified place. During the period from 1500 to 1850 when smooth-bore artillery was predominant, defenders had to erect earthworks to keep the attacker's guns outside the reach of the defended area. The high masonry walls of pre-artillery stone castles and walled cities had not been able to withstand the punishment of "modern" weapons. The attacker, on the other hand, not immune to the defender's artillery, began digging approach trenches to bring his forces safely within assault distance of the defender's main wall. As George A. Rothrock observed, engineers responded to the effects of artillery fire "by dropping the entire complex into a hole in the ground."[3] Now built of earth rather than masonry, the rampart and parapet would absorb the attacker's solid shot and avoid the splintering effect experienced with stone walls. Additionally, the earthen works lowered construction costs as the parapets became thicker to protect against the improved penetration capabilities of new cannons.

Marshal of France Sebastien LePrestre de Vauban, chief engineer to Louis XIV, was the proponent and architect of the bastioned fortress. One of the greatest military engineers of all time, he also set the standard for offensive siege operations designed to reduce such forts. His system of "approaches" and "parallels" enabled the attacker to establish his artillery within effective range to create a breach in the defenders' parapet.

Vauban used several key principles to guide his craft that provided a useful framework by which to judge the fortifications of the Highlands. First, in the construction of both fortresses and siege lines, he argued that the defensive works must conform to the existing terrain. He wrote that one must "Profit from all natural cover, defiles, marshes, rivers, streams, and woods which can strengthen the lines or shorten the work of building them." Fundamentally, "High positions command lower positions." While he offered a warning against symmetry in the context of siege lines, his admonition "to take every advantage of the terrain" could be applied with profit to fieldworks. In addition, he was an advocate of enfilading fire: "Fire which rakes you obliquely, enfilades you, or rakes you from the rear is so much to be feared that the batteries from which it comes may be said to command

3. Sebastien LePrestre de Vauban, *A Manual of Siegecraft and Fortification*, trans. George A. Rothrock, 4.

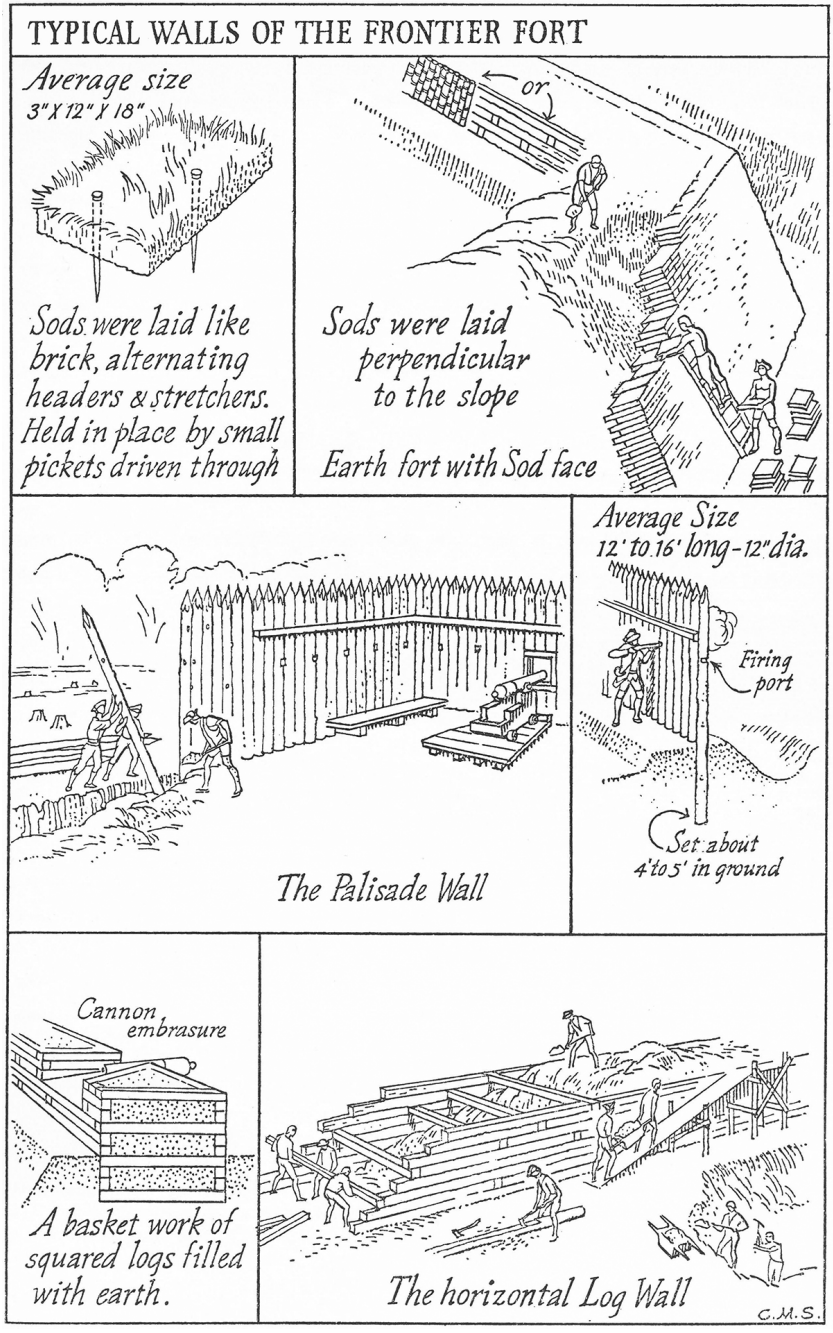

Image P.3: Typical walls for a frontier fort. (Reprinted from Charles Morse Stotz, *Defense in the Wilderness in Drums in the Forest*, rev. ed., 1958; reprinted, Historical Society of Western Pennsylvania, University of Pittsburgh Press, 2005, p. 81.)

your trench." Finally, he established a model to which he felt military engineers should aspire, although he found "few who are able and deserving of the title": "their science demands a great deal of courage and spirit, a solid genius, perpetual study and consummate experience in all the principal parts of war."[4]

Within the context of Vauban's axioms, writers adopted standard terminology to describe the elements of fortifications. The principal parts of a defensive work's profile were the "ditch," the "rampart," the "parapet," and the "glacis." The retaining wall along the interior face of the ditch was called the "scarp," while the "counterscarp" was along the exterior. The rampart was a mound of earth thrown up to protect defenders from artillery and musket fire and to give the fortification command over the approaches to the works. The parapet raised the rampart to give the defenders protection and immediate command by fire over the enemy. The glacis was graded soil cleared of trees and brush, sloping away from the rampart; it constituted the first line of defense as it exposed attackers to musket and cannon fire. The outline of the entire fortification wall was called the *enceinte* and could follow several different traces. The "bastioned trace" or *trace italienne*, however, was one of the best known and was used widely in France during the reign of Louis XIV. Bastions and other irregular traces, including small forts called redoubts, provided enfilading fire along the ditch or face of the adjacent wall. Usually projecting outward from an angle in the *enceinte*, the bastion consisted of two "faces" meeting in a salient angle that commanded the glacis, and two "flanks" able to place fire along the adjacent wall of the *enceinte*. Fieldworks also relied upon fascines (bundles of sticks), gabions (baskets), abatis (sharpened branches of trees), and chevaux-de-frise (sharpened stakes) and were connected by curtains (walls).[5] Such were the terms of reference for the fortifications of the Highlands.

By 1870, however, rifled artillery with its increased range, accuracy, and destructive power caused a change in the design of European fortifications. The style used so effectively by Vauban was no longer practical. For different

4. Vauban, *Manual of Siegecraft and Fortification*, viii, 30, 157, 169; for a discussion of Vauban and his methods, see Christopher Duffy, *The Fortress in the Age of Vauban and Frederick the Great 1660–1789, Siege Warfare*, 2:71–97.

5. Christopher Duffy guides the reader through the building of a fortress in *Fire and Stone: The Science of Fortress Warfare 1660–1860*, 19–80. For an American perspective, see Willard B. Robinson, *American Forts: Architectural Form and Function*, 11–12, 50–56. Also see Marguerita Z. Herman, *Ramparts: Fortifications from the Renaissance to West Point*, 39–58, 98–104.

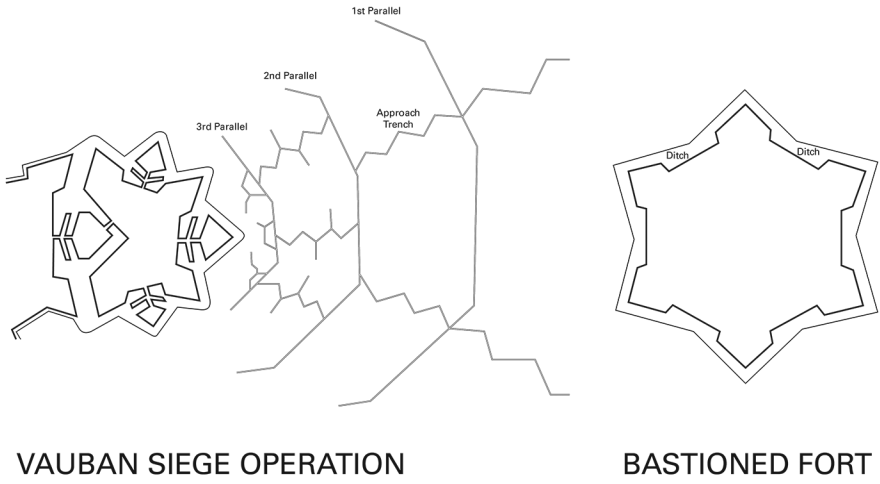

Image P.4: Vauban's approaches and parallels. (Courtesy of the West Point Digital History Center from *Notes on Permanent Land Fortifications*, Department of Military Art and Engineering, USMA, 1958.)

reasons, the change and the course it would follow began to occur at West Point during the American Revolution. The French engineers advising the Continental Army represented what they believed was the Vauban school and generally criticized the approach pursued by the Americans. Although West Point would not affect European design, it was an indication of the trend in future European fortifications.

This study will examine several significant questions that delineate the role that the Hudson Highlands and West Point played in the American Revolution and how American leaders, soldiers, foreign engineers, and artisans designed and built the fortifications there. In other words, it addresses the fundamental question: why did New York and the Continental Army build forts in the Hudson Highlands as a key component of a strategy of a war of posts—a defensive war of maneuver, avoiding major battles insofar as possible? Second, what roles did the various engineers play in the design and construction of the fortifications? Third, in what sequence and for what reasons were the individual works built throughout the Highlands Department? Finally, did Fortress West Point, as the anchor of these fortifications, contribute significantly to the allied victory of France and the United States?

Americans would invest enormous energy and precious resources in the fortifications of West Point and the Hudson Highlands from 1775 until long after the end of the Revolution. Along with General George Washington's

Continental Army, West Point would represent in iron, stone, timber, and earth the strength and resiliency of the American cause. In the final analysis, it made a major contribution to the Allied victory and American independence by countering the British in the decisive seat of the war. Washington called it the "key of America." After all but a few of the Continentals mustered out in 1783, West Point would continue as a post for the United States Army and later host the United States Military Academy, a symbol of a strong national defense to this day.

Within the greater art and science of war, while direct links are difficult to establish, the final complex of fortifications at West Point embodied features that would appear in the fortifications of Europe in the nineteenth and twentieth centuries. West Point was not constructed as a single bastioned fortress to sustain itself for an indefinite period. Rather, it was an innovative defensive system of field fortifications that provided mutually supporting positions, gave all-around depth to the defensive battlefield, and was integrated with mobile forces to reduce the excessive costs and time required to construct the type of massive works employed in European nations. To that extent, West Point was a precursor to the massive "ring" defensive systems that would evolve at Liège, Namur, Verdun, Belfort, and other European fortresses prior to World War I; it reinforced the idea that fortifications were only a supplement or force multiplier that must rely on a mobile and aggressive field army for ultimate success.

KEY *of* AMERICA

CHAPTER 1

THE HUDSON RIVER: SEAT OF THE WAR

While a British regular or Lexington Minuteman fired the first shot of the American Revolution on 19 April 1775, after British forces completed the evacuation of Boston, Massachusetts, on 17 March 1776, the "Seat of the War" would become and remain "the line of the Hudson."[1] From 23 October 1776, when the British gained full control of Manhattan Island, until 25 November 1783, when their last troops relinquished it, they would occupy the city of New York as their central base of operations. The city and the river figured so greatly in American strategy that General George Washington would risk his entire army at Long Island and Manhattan to protect it from Lieutenant General William Howe's mighty invasion force in the late summer and fall of 1776. After Lieutenant General Sir Henry Clinton returned to New York with what had been Howe's field army from Philadelphia, Pennsylvania, in early July 1778, Washington would venture a significant distance from the

1. This chapter is based on Chapter 1, James. M. Johnson, "'Making the best use of your joint forces': Joint and Combined Operations on the Hudson River, 1777 and 1781," advanced research project, Naval War College, 15 June 1995, and the original Chapter 1, "The Reason Why," of the "Highland Fortress" manuscript. I have retained original sources unless they have become outdated; whenever possible, I have replaced evidence from secondary sources with that from primary sources. The best way to characterize the Hudson River and New York is "the seat of the war"; for the discussion, see Earl of Dartmouth to Lieut.-General Thomas Gage, 2 Aug. 1775, K. G. Davies, ed., *Documents of the American Revolution, 1770–1783*, 11:63–64; also in Clarence Edwin Carter, ed., *The Correspondence of General Thomas Gage, 1763–1775*, 2:205. Gage answered the query in Gage to Dartmouth, 1 Oct. 1775, Davies, 11:135, and Carter, 1:418. For a discussion of the "line of the Hudson" strategy, see Dave Richard Palmer, *The Way of the Fox*, 41–49, and his earlier *The River and the Rock*, 46–47. Also see Edward C. Boynton, *History of West Point*. Palmer attributes the name of the strategy to Sir John Fortescue in *A History of the British Army*, 3:168; Fortescue, however, used it only as a point of reference—"By occupying the line of the Hudson these Colonies could be practically isolated and reduced"—as he assessed General Gage's strategy. Piers Mackesy coined his own phrase for this British plan: "the Hudson Valley plan"; see "British Strategy in the War of American Independence," *Yale Review*, 52:549. He elaborated on the strategy, without the label, in *The War for America 1775–1783*, 42. For the most recent coverage, see Christopher DiPasquale, *An Object of Great Importance*.

Hudson Highlands with the Main Army of the Continental Army only once for the remainder of the war—to defeat Lieutenant General Lord Cornwallis at Yorktown; he would generally maintain the bulk of his troops in the geographic corridor formed by the Reading Prong from Danbury, Connecticut, to West Point to Morristown, New Jersey.[2]

Political events in New York in the run-up to colonial independence mirrored those in Massachusetts. From 1770 through 1773, relations between the colonies and Britain were relatively stable, but events in late 1773 changed that. The newly enacted Tea Act, offering East Indian tea at reduced prices (and including a tax), inspired "tea parties" throughout the colonies, including the Hudson River Valley. The most famous, of course, occurred at Boston Harbor on 16 December 1773, where members of the Sons of Liberty dressed as Mohawks and dumped British tea overboard.

The Coercive Acts of 1774, implemented to punish Boston following its Tea Party, ignited resistance throughout the colonies. New Yorkers had their own tea party on April 22, when "Mohawks" dumped tea from the ship *Hook* into New York Harbor, forcing another ship, the *Nancy*, to return to England. In communities up and down the Hudson, committees of safety, correspondence observation, and inspection sprang into action to challenge recent British policies.

Characteristic of this resistance was the Kingston Committee of Safety's anger over Parliament's attempt to establish "the Romish Religion in America," a feature of the Quebec Act of 1774. The Kingston committee was equally shocked by the "avowed design of the [British] ministry to raise a revenue in America." The New Windsor Committee of Observation articulated its fear of Parliament's desire to levy taxes "on us without our consent" and for asserting absolute legislative authority over the colonies. The committee resolved that such powers were "subversive of our natural and legal rights as British subjects, and that we would be deficient in point of duty to our King and the British Constitution were we to yield in tame submission to them." As war began in New England in 1775, the people of the Hudson River Valley began to choose sides. Throughout the war, there were pockets of Loyalism in the region, but devotion to the Revolutionary cause remained strong.[3]

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2. Key dates and events were verified in Calvin D. Linton, ed., *The Bicentennial Almanac*, 18, 20, 24, 34.

3. This section is extracted from Thomas S. Wermuth and James M. Johnson, "The American Revolution in the Hudson Valley—An Overview," in James M. Johnson et al., eds., *Key to the Northern Country*, 2–3; this book covers many aspects of the American Revolution in the Hudson River Valley.

What was so critical about New York and the Hudson River in the strategic thinking of British and Americans leaders that they made it the central theater of operations—the "seat of the war"—for most of the conflict? The Hudson River would become the "seat of the war" because Washington and his opponents from Gage to Howe to Clinton found that the river offered compelling advantages based on military geography, communications, population, political ties, agriculture, industry, and logistics that fit within a military strategy of a war of posts that they would each adopt in turn as the war progressed.

By the fall of 1777, the political aim of Great Britain pursued by King George III, his key ministers, his generals, and his admirals was to crush the rebellion of the colonies in North America. As early as 7 February 1776, General Henry Clinton had translated this to mean that he was "to gain the hearts & subdue the minds of America."[4] With the adoption of the Declaration of Independence, Whigs (or Patriots) in the American colonies, represented by the Continental Congress and served by Washington in his capacity as commander in chief, had the clear objective of severing their political ties with the mother country and pursuing a new course as a sovereign nation. This clash of vital national interests, in modern parlance, led the leaders of both sides to resort to military means to fulfill their political ends. First, General Thomas Gage, then General William Howe and his brother, Admiral Sir Richard Howe, and finally General Henry Clinton for the British and Washington for the Americans had to design a military strategy that would accomplish their respective political mandates.

Gage, Howe, Clinton, and Washington, as military commanders, shared a common tradition insofar as the forms of strategy available to them.[5] From their classical education, they knew that successful generals from Alexander the Great to Hannibal to Caesar had destroyed the armies of their opponents, today's military strategy of annihilation. Sir William demonstrated his understanding of that concept during the course of the Parliamentary inquiry into his conduct of the war in 1779:

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4. Report of conversation with Clinton, Lord Drummond, and Lord Tryon, 7 Feb. 1776, in Sir Henry Clinton Papers, Clements Library; also quoted in Stephen Conway, "To Subdue America," *William and Mary Quarterly* 43:381.

5. Ira D. Gruber, "Long Island," in Heller and Stofft, *America's First Battles, 1776–1965*, 4–5. For more elaboration, see Gruber, "British Strategy," in Don Higginbotham, ed., *Reconsiderations of the Revolutionary War*, 30–31, in which he argues that overall British strategy was "ambiguous" involving wars of posts and "the aggressive war of movement and battles."

> And as my opinion has always been, that defeat of the rebel regular army is the surest road to peace, I invariably pursued the most probable means of forcing its Commander to action under circumstances the least hazardous to the royal army; for even a victory, attended by a heavy loss of men on our part, would have given a fatal check to the progress of the war, and might have proved irreparable.[6]

For Howe, this strategy remained theoretical since he failed to take opportunities around New York City and New Jersey in 1776 and Philadelphia in 1777 to crush the rebel army. Clinton, perhaps because he shared Howe's concerns about losses, never once in his tenure as commander in chief fought a pitched battle with his complete army against Washington's Continental Army; the rear-guard action at Monmouth Court House, New Jersey, in June 1778 would be the closest he would come. Washington, on the other hand, accepted battles against Howe to protect first New York City and then Philadelphia. Clinton and Washington, after the battles of Brandywine and Germantown in 1777, showed a predilection toward a different form of strategy for the remainder of the war—a war of posts.

This second strategic alternative was common in the wars of the eighteenth century on the Continent—a war of posts; today such a strategy would be labeled exhaustion since its object was to destroy the enemy's will to continue the conflict. This strategy owed its foundation to the likes of Vegetius, the Marquis de Feuquières, and Marshal Maurice de Saxe, who had influenced commanders with their ideas about sieges, maneuver, and attrition.[7] Captain George Smith in his 1779 *An Universal Military Dictionary* laid out the guidelines for a war of posts under the term "defensive war"; using this strategy the general should:

> Chuse advantageous camps, proper to stop the enemy, without however being obliged to fight them; to multiply small advantages; to hem in the enemy in their forages, and to oblige them to do so with great escorts; to attack their escorts; to render the passages of rivers or defiles as difficult as possible; to force them to keep together: . . . in short, in the beginning, his chief aim should be, to acquire the enemy's respect by his vigilance and activity, and by forcing him

6. Sir William Howe, *The Narrative*, 19; also quoted in Maldwyn A. Jones, "Sir William Howe: Conventional Strategist," in George Athan Billias, ed., *George Washington's Generals and Opponents*, 65.

7. Gruber, "British Strategy," in Higginbotham, *Reconsiderations*, 20–21.

> to be circumspect in his marches and manner of encampment, in order to gain time himself, and make the enemy lose it.[8]

Smith went further to draw the conclusion that "a *defensive war* requires more military judgment than that of an offensive one."[9] One of Smith's peers, Major Thomas Bell, provided the rationale for Smith's view that prevailed in Europe at the time: "'Battles have ever been the last resource of good Generals. . . . The fighting of a battle only because the enemy is near, or from having no other plan of offence, is a direful way of making war.'"[10]

With occasional diversions against the opposing main army, the respective commanders in chief of the American and British armies in North America generally subscribed to the strategy of a war of posts. Washington, on 8 September 1776, after he had failed disastrously in his pursuit of battle at Brooklyn on Long Island, characterized what he was prepared to do in the future as a defensive war:

> In deliberating on this great Question, it was impossible to forget that History—our own experience—the advice of our ablest Friends in Europe—The fears of the Enemy, and even the Declarations of Congress demonstrate that on our side the War should be defensive, It has been even called a War of posts, that we should on all occasions avoid a general Action or put anything to the risque unless compelled by a necessity into which we ought never to be drawn. The Arguments on which such a System was founded were deemed unanswerable & experience has given her sanction—With these views & being fully persuaded that It would be presumption to draw out our young Troops into open Ground against their superiors both in number and discipline, I have never spared the Spade & Pickax: I confess I have not found that readiness to defend even strong posts at all hazards which is necessary to derive the greatest benefit from them.[11]

8. Captain George Smith, *An Universal Military Dictionary*, 253.

9. Smith, *Dictionary*, 253.

10. Major Thomas Bell, *A Short Essay on Military First Principles* (London, 1770), quoted in Jones, "Sir William Howe," quoted in Billias, *Washington's Generals*, 66–67.

11. Washington to the President of Congress, 8 Sept. 1776, George Washington, *The Writings of Washington* (ed. Fitzpatrick), 6:28. Also available in George Washington, *The Papers of George Washington* (ed. Abbot et al.) at Founders Online, National Archives, https://founders.archives.gov/documents/Washington/03-06-02-0203; and from the Library of Congress, George Washington Papers, https://www.loc.gov/collections/george-washington-papers/about-this-collection.

He would violate his own pledge of "never" in campaigns only twice: at Brandywine and Germantown in the fall of 1777 and at Yorktown against only Cornwallis's army in October 1781. His battles at Trenton, Princeton, and Monmouth Court House confronted only detachments of the enemy's main force, not the principal army itself.

Concerned about losses of manpower and the potential of handing independence to the Americans with a climactic loss on the battlefield, the British commanders in chief thought along the same lines as Washington even while allowing subordinates such as Cornwallis and after 1780 the turned Brigadier General Benedict Arnold to execute more aggressive campaigns. Sir William Howe's British biographer characterized him as a "conventional strategist" who was drawn to a war of posts. He doubted Howe's assertion that he had always made the Continental Army "his primary objective"; he concluded rather that Howe had directed his efforts toward "occupying territory" and that his "strategic planning was based on the assumption that the civilian population could be cowed into submission by an overwhelming display of force."[12] Based on his experience at Bunker (Breed's) Hill, the possible "heavy loss of men" and the potential for a "fatal check" weighed on Howe's thinking even as he singled out the rebel army as the most important objective (Carl von Clausewitz's "center of gravity" in his book *On War*).[13]

Following Howe, Sir Henry Clinton in every major operation oriented on key posts such as those in the Hudson Highlands, Peekskill and King's Ferry, or seaports (Charleston, South Carolina, or Newport, Rhode Island) that were necessary to maintain the occupying forces and the lines of communications with England. By December 1778 the British strategy was so obvious to the American leadership that Alexander Scammell, the Adjutant General of the Continental Army, noted that "Great Britain is now reduced to a defensive plan of operations."[14] By that point, the French had altered the strategic equation. This common strategic tie to a war of posts would define the Hudson River, the Hudson Highlands, and New York City, with their links to the sea, as pivots around which the armies would maneuver for the remainder of the war.

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12. Jones, "Sir William Howe," in Billias, *Washington's Generals*, 39.

13. Carl von Clausewitz, *On War*, trans. and ed. Michael Howard and Peter Paret, 595–96.

14. Transcription, Alexander Scammell to Dr. Samuel L. Scammell, 30 Dec. 1778, Scammell Letters, USMA Library. A "proposal for getting possession of the Highland, and keeping post at Peekskill," 5 Feb. 1778, singled out Peekskill as "a place of Arms for any future Operation up the North river"; see Sir Henry Clinton Papers, 31:5, Clements Library.

As the opposing commanders tried to exploit or deny the advantages offered by the Hudson River as a theater of operations in their war of posts, they had to come to grips with the realities that military geography imposed. Today, more than two and a half centuries after the last of the colonial wars, it is difficult to look at the United States with its broad interstate highways and large centers of population and realize that in 1775 colonial America was a wilderness with muddy trails and vast distances between sizable population centers. Those rudimentary roads that did exist tended to follow the coastline or river valleys, and the limited number of bridges that existed "spanned only the narrowest streams near the larger settlements."[15] Conditions were such that it required seven days on horseback just to travel from New York to Philadelphia or New York to Boston by road.[16]

In a country where transportation was so restricted, the inhabitants were forced to rely on waterways for the movement of goods and services. For that reason, the largest population centers were located along navigable waterways, and the flow of the white man's civilization followed the rivers inland.[17] Merchants knew only too well the advantages of water transportation compared to wagon or packhorse. In fact, the rivers of colonial America were the only effective highways for commerce or for war. Small boats of all shapes and varieties could handle larger and bulkier loads than any packtrain or wagon. Sometimes portages were necessary where waterfalls, rapids, or shallow water made further navigation hazardous. Overland portage between different tributaries usually covered only a few miles and represented an acceptable inconvenience compared to the overall journey. Any army that operated in the wilderness either relied on water routes for transportation of supplies or built its own roads. Even plunder could only be found along the rivers.

In addition to the open sea and the Saint Lawrence River, the only waterways in the Northeast that were navigable for a significant distance were the river routes between Albany and Oswego (Lake Ontario) or Albany and Montreal. In short, these river routes were the only way to move west or north into Canada. The westward trip from New York City involved sailing

15. John H. Munson and John B. Garver Jr., *Field Guide to the Hudson Highlands and Fortress West Point*, 17.

16. Dave Richard Palmer, "West Point: The Key to the Continent?," (MA thesis), 6–7.

17. Lester J. Cappon, ed., *Atlas of Early American History*, 23, 25. See also the 1790 census map found in Francis A. Walker, *Statistical Atlas of the United States at the Ninth Census, 1870*, Plate XVI.

northward to Albany, then west on the Mohawk River to Rome, then along a swampy creek to Lake Oneida, and finally onto the Oswego River and into Lake Ontario. The great north-south waterway linking New York City to Montreal in Canada followed the Hudson River–Lake Champlain Valley. The portages along that route were minor, and travel generally followed the Hudson River to Lake George, then to Lake Champlain, out the Richelieu River at the northern end of the lake, and into the St. Lawrence and Canada near Montreal.[18] Many of the campaigns of the colonial wars were fought to control the two river routes because they were the only useable non-oceanic avenues of approach for the English into Canada or for the French into the English colonies.[19]

As in the colonial era, depending upon the military strategy of the antagonists in any given year, the Hudson, or the North River as it was also called, by way of Lake George and/or Lake Champlain, and its Highlands served as an invasion route to or from Canada or a line of communications linking respective forces or denying them such advantage. Nature, through major geological events, including differential erosion and glaciers of the Pleistocene ice ages, had carved out the course for a waterway of some 315 miles to flow from Lake Tear of the Clouds to the Atlantic Ocean.[20] The tidal estuary, with measurable salinity as far north as Newburgh Bay and affected by tidal change as much as 4.6 feet in Albany, was navigable for some 146 miles from New York City to that town; because it was tidal, the Lenapes and Mahicans (Mohicans) referred to it as *Mahicannituck*, "great waters constantly in motion" or "the river that flows two ways."[21]

Alexander Colden, the Surveyor General of New York, wrote in 1773 that the Hudson "affords a safe and easy Passage for Vessles of considerable Burthen up to Albany, about 180 Miles from Sandy Hook." He also reported that "Hudson's River generally freezes fast to some Distance below Albany

18. For a description of the journey from Constitution Island to Montreal, see the diary of Charles Carroll in L. A. Leonard, *Life of Charles Carroll of Carrollton*, 280–308.

19. For an overview of the major issues of the colonial era, see John Ferling, *Struggle for a Continent*; for greater depth see Douglas Edward Leach, *Arms for Empire* and *Roots of Conflict*.

20. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Survey, *United States Coast Pilot*, 14th ed., 256; Munson and Garver, *Field Guide*, 1, 5, 8.

21. *United States Coast Pilot*, 256; Arthur G. Adams, *The Hudson*, 14; New York State, Department of Environmental Conservation, "The Hudson Estuary," https://dec.ny.gov/nature/waterbodies/oceans-estuaries/hudson-estuary.

before the middle of December; but no quantity of Ice is form'd within 30 Miles of the City of New York, earlier than some Time in January. The Navigation is open again quite to Albany in March."[22] During the periods when the river was navigable, Henry Knox noted that a ship leaving Sandy Hook "at the close of the day" could reach West Point "before the next morning."[23]

Geological forces had also created numerous natural barriers to east-west travel. These included the mountain ranges now known as the Appalachians, Catskills, the Shawangunks, and the Hudson Highlands of the Reading Prong of the New England Province. Except for the Hudson Highlands, the countryside along either bank was gently rolling and easy for armies to traverse to attack the fortifications designed to deny the Hudson to the Royal Navy. The Highlands themselves intersected the river from Dunderburg Mountain on the south to Mount Beacon on the north, forming a formidable mountain barrier twelve miles long. Stretching from western New England southwest across southeastern New York into northern New Jersey and northeastern Pennsylvania, the Appalachians do not rival the Rockies in altitude but are as difficult to cross as almost any mountain range in the United States.[24] The Highlands themselves represented a particularly rugged stretch of the Appalachian barrier.

Cut by innumerable streams, steep mountains, sharp east-west ridgelines, and deep valleys and covered with a luxuriant growth of vegetation, the topography of the Highlands was a major impediment to overland movement. Gaps created by the Hudson, Ramapo, and Delaware Rivers provided the only crossing points through this Highlands barrier. While there were minor roads along stretches of the respective river banks, there was only a single major south-north artery—"a high road or King's Highway"—on each side of the river. Richard Smith reported in his diary in 1769, "There is a high Road from New York to Albany on both sides of the River, but that on the East side is most frequented; both Roads have a View now and then of the River." To the east was the Albany Post Road linking Poughkeepsie to King's Bridge and Manhattan via Fishkill, Peekskill, and Philipsburg. A

22. A. Colden, "Report to his Excellency William Tryon," in C. Colden, *Letters and Papers*, 7: 192, 197.

23. See "Report Secy at War, 31 July 1786" in the Henry Knox Papers, on microfilm, USMA Library, 2. For a description of a journey from New York City to Albany, see Francis W. Halsey, ed., *A Tour of the Hudson*, 69–84.

24. Stowe and Weller, "Revolutionary West Point," *Military Affairs* 19, no. 2: 83; and U.S. Military Academy, *The United States Military Academy and Its Foreign Contemporaries*, 1–2.

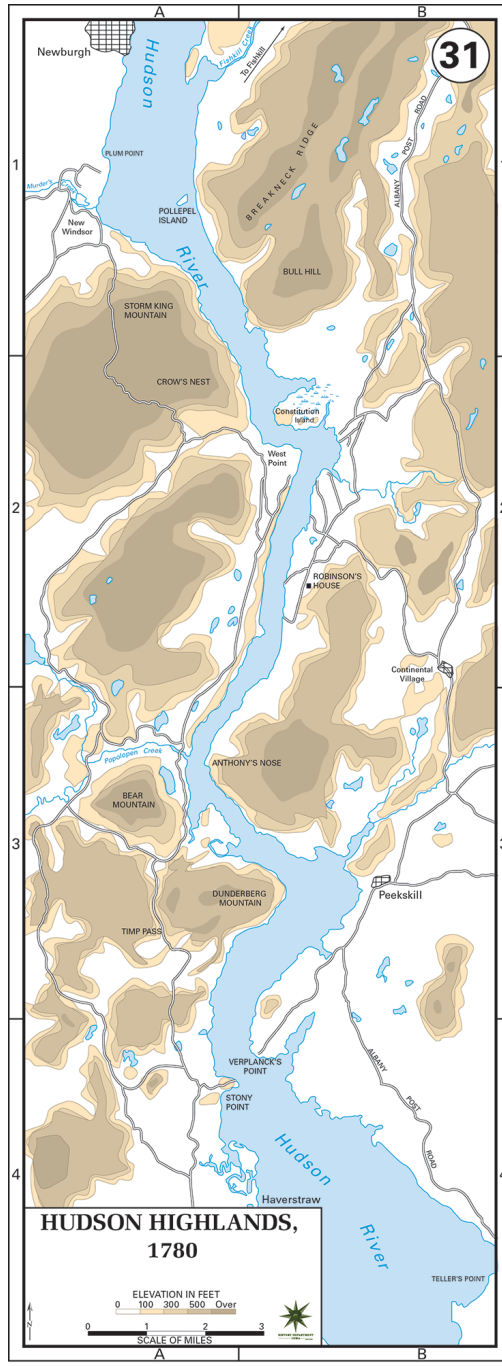

Image 1.1: The Hudson Highlands, 1780. (Courtesy of the U.S. Military Academy's Digital History Center, Department of History.)

similar route to the west followed the Ramapo Valley from Paramus through the Clove (from Suffern north along today's New York Thruway) to New Windsor.[25] The former, the primary route on the east side of the river, was in a poor state of repair in 1776 even by colonial standards.[26] East-west travel relied upon the two ferries at the extremes of the Highlands: one between Fishkill Landing and Newburgh and the major crossing, King's Ferry between Stony Point and Verplanck's Point.[27] By controlling key locations, such as the Highlands and the Clove to the west, for example, Washington could render the three major valleys between the Hudson and Delaware Rivers that expedited friendly movement in the northeast-southwest direction virtually "immune from attack by the British."[28]

The attacker, however, would lack the room to maneuver and deploy forces to exploit his numerical superiority. An attacker attempting to assault an alerted river fortification by land would find it extremely difficult to reach his objective before the local militia and/or Washington's Main Army could reinforce the threatened garrison. To gain passage through the mountains and overcome an aroused American defense would have required an overwhelmingly large British force that could be supplied only by means of the river itself. Opposed by the Continental Army, the prospects of success for such a deliberate advance in the rugged terrain of the Highlands would have been questionable.

In short, any British commander who tried to gain control of the Hudson would find himself in a vicious circle if American commanders remained alert. Opening the river to the Royal Navy required that the army clear water obstacles and American shore fortifications. Given the limited troops

25. Halsey, *Tour of the Hudson*, 75; Patrick Ferguson, "Part of the modern counties of Dutchess, Putnam and Westchester," and "Distances North River"; Beverley Robinson, "Valley of the Hudson River," Sir Henry Clinton Papers, Clements Library, #187, 189, and 196; Claude Joseph Sauthier, "A Map of the Province of New-York," 1776, and "A Topographical Map of Hudson's River," 1776, USMA Library; Stowe and Weller, "Revolutionary West Point," *Military Affairs* 19, no. 2:82–85, 93–94; Palmer, "The Key to the Continent?," 6–7; A. Elwood Corning, *Washington at Temple Hill*, 4; Helen Wilkinson Reynolds, *Dutch Houses in the Hudson Valley*, 28; George W. Roach, "Colonial Highways," *New York History* 40:99–100; and for the best synthesis, see Alan and Barbara Aimone's unpublished article, "Eighteenth Century New York," 15–16.

26. See New York Assembly, "Military Roads," in Frederic G. Mather, ed., *New York in the Revolution*, 49–50.

27. For the route (along present US 202) from Stony Point to Morristown, NJ, see Howard C. Rice Jr. and Anne S. K. Brown, eds. and trans., *The American Campaigns of Rochambeau's Army*, 2:49–60, maps 49, 62.

28. Munson and Garver, *Field Guide*, 11–13.

available for British commanders to seize the Highlands, the only feasible courses of action after the river was blocked were either to obtain surprise, draw the Continental Army and militia away before an attack, or achieve a coup through the treachery of some American leader.[29]

The Hudson served as a nexus of the population, industrial, and agricultural centers of New England and the Middle Atlantic states, which had a direct effect upon possible political allegiances. It drew early explorers, traders, and settlers to its banks so that by 1770 New York's population numbered some 162,920 Whites and Blacks. From a general populace that placed the entire colony only seventh of thirteen in number of residents, New York City at 18,000 people in 1760 would rank as the second most populated city in the provinces behind Philadelphia.[30] Population followed the Hudson north as well. Alexander Colden reported that "the Counties of New York, West Chester, Dutchess, Orange and Ulster are all well filld with Inhabitants; no large Tract of usable Land, being any where throughout all these Counties, without Cultivation."[31] To the Hudson's north and east recruiters could draw upon the manpower of Massachusetts, New Hampshire, Rhode Island, and Connecticut from an overall population in 1770 of 572,048, and to its south and west the 595,583 residents of New Jersey, Delaware, Pennsylvania, and Maryland.[32]

British control of the Hudson would greatly reduce the size of Washington's Continental Army. The isolation of New England's "hot bed of rebellion" from the rest of the country would deny the Americans their largest source of military manpower. The facts that the Continental Army routinely operated between Philadelphia and the Hudson and that Massachusetts provided more than twice the regular troops of any other state (Connecticut was second) depict the direct relationship between the strength of Washington's Continental Army and unrestricted east-west movement across the Hudson.[33]

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29. For good, short accounts of the British Army in the Revolution, see Don Higginbotham, *The War of American Independence*, 123–25; and John R. Alden, *A History of the American Revolution*, 247–51. For a detailed look at the Continental Army, see Charles Patrick Neimeyer, *America Goes to War*.

30. U.S. Department of Commerce, *Historical Statistics*, 1168; Robert B. Roberts, *New York's Forts in the Revolution*, 261; Cappon, *Atlas of Early American History*, 23, 25.

31. A. Colden, "Report to his Excellency William Tryon," in C. Colden, *Letters and Papers*, 197.

32. C. Colden, *Letters and Papers*, 197; U.S. Department of Commerce, *Historical Statistics*, 1168.

33. Henry B. Carrington, *Battle Maps and Charts of the American Revolution*, 653; Washington to Putnam, 2 Dec. 1777, Washington, *Writings* (ed. Fitzpatrick), 10:129–30.

By dividing the vast recruiting grounds surrounding New York, the Hudson gave its possessor power over the base of the military strength available to it and expedited or hindered the movement of militia and regular units from one theater of operations or department to the next. British control of the Hudson would have severely limited Washington's flexibility to respond to enemy incursions against the populace. With the river in enemy hands, it would have been difficult for major portions of the Army to shift rapidly from one theater or region to another. Conversely, American control of the river allowed the French and American armies to march rapidly to Yorktown in 1781.[34]

There were political implications as well. Because the river formed the southern boundary of New England, the British felt that control of it would allow them to mount military operations to isolate from the southern rebels what they thought was the center of the rebellion in Massachusetts and its neighbors. Victory in the French and Indian War had also given the British political authority over Canada—a base from which such operations and forays by its Native allies could be mounted.

Control of the North River kept the route to Canada in American hands. The mere fact that the Americans controlled that approach fixed British troops in Canada to protect that colony from another American invasion. (Major General Richard Montgomery and Colonel Benedict Arnold had tried in 1775.) Besides increasing British defensive problems, the potential to invade Canada also gave Washington a strategic option that increased his general flexibility.[35]

From Canada the British supplied their Native allies in New York with military hardware and gunpowder brought inefficiently into the Mohawk Valley, requiring several portages and changes in transport. Additionally, ice closed the St. Lawrence for a longer period than the Hudson each year. Control of the Hudson would have greatly increased the efficiency of this British supply effort.[36] Not only would the supply routes have been open for a longer period of time, but goods moving on them would have made fewer transfers from one means of transportation to another. Arms and munitions could have been carried on the same ship from London to Albany, and there

34. Washington, *Writings* (ed. Fitzpatrick), 10:129–30; Rice and Brown, *American Campaigns of Rochambeau's Army*, 1:49, maps 49, 62, entry 22 Aug. 1781; Baron Ludwig von Closen, *The Revolutionary Journal*, 107.

35. von Closen, *The Revolutionary Journal*, 107.

36. Palmer, "The Key to the Continent?," 30–33.

transferred to shallow draft vessels for movement up the Mohawk directly to the Iroquois. One can well imagine the havoc Chief Joseph Brant and his warriors would have caused if the British had controlled the Mohawk and Hudson River valleys.

The effect of the Hudson on military manpower and political support for the war also affected the flow of foodstuffs and industrial products ranging from salt to iron. New York in 1775, for example, exported goods valued at £187,018 to England, exceeding the total of the exports of all of New England (£116,588), and its capital was one of the five major seaports for the colonies.[37] The Hudson was the crucial economic artery for the colony and was a major factor in the overland patterns of trade during the war when the British controlled the port and, with the blockade imposed by their fleets, the coast as well. Between the limits of the British lines near Manhattan northward to Newburgh, teamsters and farmers had to depend on the ferry between there and Fishkill Landing and the King's Ferry between Stony Point and Verplanck's Point to move their goods between the neighboring states. Textiles from Connecticut and iron from the Hudson River Valley southward had to cross the Hudson to reach consumers on the opposite banks. The river affected the transfer of cattle, horses, and grain and its finished product, flour.[38] The control that New Yorkers exerted over the more northern reaches of the Hudson also meant that they could use it for commercial intercourse, filling boats and sloops with goods.

Although most of the people in colonial America tilled the soil in a subsistence economy, intercolonial commerce had developed rapidly between the close of the French and Indian War and the War of the American Revolution.[39] The colonies south of the Hudson had begun to export relatively large quantities of grain and flour, while Connecticut exported livestock. Although merchants and farmers exported the majority of these products outside the mainland colonies (to Europe and the West Indies), they shipped a substantial amount of wheat, corn, flour, and livestock from one mainland colony to another by 1772.[40] Nor was intercolonial trading of agricultural products the only economic change that had taken place in the colonies prior to the Revolution.

37. U.S. Department of Commerce, *Historical Statistics*, 1179–81.

38. Munson and Garver, *Field Guide*, iv; Cappon, *Atlas of Early American History*, 29–30.

39. See Thomas S. Wermuth, *Rip Van Winkle's Neighbors*.

40. Merrill Jensen, "The American Revolution and American Agriculture," 110–13; William S. Sachs, "Agricultural Conditions," 285.

Paper mills, ironworks, rum distilleries, potteries, and textile "factories" had sprung up in New England and New York. These establishments would provide the Continental Army with much of its clothing and equipment throughout the war, a trend that began with the supplying of colonial and royal forces during the French and Indian War.[41] In addition, most of the French munitions and equipment destined for the Americans entered the United States through New England.[42] Some gunpowder was produced in Newburgh and Goshen in Orange County, New York, and in Connecticut and Rhode Island, and two ironworks in Connecticut manufactured cannons.[43] If French supplies, New England's products, and Connecticut's livestock were to reach Washington's army or the more agricultural states, crossing sites on the Hudson had to be held. The grain and flour from the middle states would need to use the same crossings to supply an army in the east and the New England states. The only alternative was the open sea, but British naval superiority limited that option.

If the British could hold the river with enough strength to patrol it adequately, they could cut off supplies to the middle and southern states and that part of the Continental Army west of the river. In a like manner, New England would be denied the flour of the middle states.[44] It was this fear of a break in interstate commerce that caused General Louis Le Bègue de Presle Duportail (Washington's Chief of Engineers) to write in 1779 that if the British gained control of the North River, the Americans could not maintain an army in the field for more than three months and that their will to continue the struggle would not long last.

All the factors bearing on commercial enterprise affected the logistics of the respective armies as well. Denied the produce of the interior as the war progressed, the British had to depend largely on England for the supplies that

41. William S. Sachs, "Interurban Correspondents," 320–21, 328–29.

42. For good summaries of French and other European aid, see Higginbotham, *War of American Independence*, 323–37, and Alden, *A History*, 370–88.

43. Worthington C. Ford, ed., *Journals of the Continental Congress,* 2:392; minutes, 11 Jan. and 14 Oct. 1776, New York Convention, in New York, *Journals of the Provincial Congress, Provincial Convention, Committee of Safety and Council of Safety of the State of New-York. 1775–1776–1777*, 1:245, 673, https://archive.org/details/journalsofprovino1newy/page/244/mode/2up?q=245, https://archive.org/details/journalsofprovino1newy/page/672/mode/2up. For an overview of the gunpowder industry, see Don H. Berkebile, "The Gun Powder Industry in Colonial America," 18, 23, 26–27. For the cannon foundries, see Spencer C. Tucker, "Cannon Founders of the American Revolution," 60:35.

44. Washington to Putnam, 2 Dec. 1777, Washington, *Writings* (ed. Fitzpatrick), 10:129–130; also at https://founders.archives.gov/documents/Washington/03-12-02-0473.

it had obtained locally before the war; commanders had to organize "foraging expeditions" to seize needed livestock, firewood, fresh produce, and forage.[45] American quartermasters and commissaries had to worry about the procurement, processing, and distribution of the staples of logistics, using or passing over the Hudson as Washington and other commanders deployed their armies. Fishkill, on the eastern shore upriver from West Point, in the fall of 1776 became a supply depot specializing in "small Articles of Shirts, Shoes, Hose, &c."[46] Contractors had to mix salt from the coastal works of New Jersey and Virginia with butchered cattle and hogs from New England to produce the salt beef and pork consumed by the Continentals and militiamen on active duty.

After the Battle of Brooklyn in August 1776, the Continental Army was constantly short of food. The Hudson and Mohawk Valleys supplied lumber, flour, grain, and draft animals, as well as fish caught in the Hudson River often substituted for a lack of meat in the soldiers' diet.[47] The Hudson proved vital to the economy and to the armies attempting to exploit it to survive the trying conditions of the war.[48]

Confronting the critical importance of the Hudson River, Washington drew his conclusions about its strategic necessity and began committing resources to it even before he was the commander in chief of Continental forces. He was well aware of the region's role in the French and Indian War when the French and British had fought over Crown Point and Fort Ticonderoga guarding the gates to the Hudson River on the one end and the St. Lawrence on the other. He had visited Manhattan in February and March 1756 en route to and from Boston, staying with future Loyalist Beverley Robinson at his house there.[49] His own military experience on the

45. R. Arthur Bowler, "Logistics and Operations in the American Revolution," in Don Higginbotham, ed., *Reconsiderations of the Revolutionary War: Selected Essays*, 63, 67–68.

46. Washington to George Measam, 18 Jan. 1779, Washington, *Writings* (ed. Fitzpatrick), 14:22.

47. Washington to Maj. Gen. Phillip Schuyler, 12 July 1777, and to George Clinton, 29 Apr. 1781, Washington, *Writings* (ed. Fitzpatrick), 8:380, 22:7–8; Robert Abraham East, *Business Enterprise*, 101; Palmer, "The Key to the Continent?," 27–28.

48. Erna Risch, *Supplying Washington's Army*, 128, 200, 202.

49. See extracts from *The Pennsylvania Gazette*, No. 1418, 26 Feb. 1756, in *The Writings of George Washington*, vol. 1, (1748–1757), The Online Library of Liberty, http://oll.libertyfund.org/?option=com_staticxt&staticfile=show.php%3Ftitle=2349&chapter=221316&layout=html&Itemid=27. Washington also visited New York City from 26–31 May 1773 to enroll his stepson, John Parke Custis, in Kings College (now Columbia University), according to Allan Boudreau and Alexander Bleimann, *George Washington in New York*, 1–5. More information can be found by scrolling through

western frontier during that earlier conflict, therefore, made him a natural to serve on a committee of the Continental Congress in May 1775 that would officially recommend fortifying both shores in the Hudson Highlands. The Continental Congress accepted the committee's findings on 25 May and directed the erection of batteries there "in such manner as will most effectually prevent any vessels passing that may be sent to harass the inhabitants on the borders of said river." Congress also directed New York to send "experienced persons" to find the best location from which to block the river and to plan for the garrisons to "occupy the several posts."[50]

While the Highlands provided the Americans with a nearly ideal position from which they could defend the North River, they also served to secure communications between New England and the Middle Atlantic States. The same ridges and valleys that made it difficult for the British to move northward provided Americans with safe routes linking the northeast to the states west of the Hudson. Whenever the main road from New England to the middle states was cut at King's Ferry, the Americans simply diverted traffic north to Fishkill Landing where they crossed the river and continued southwest behind the Highlands.[51]

The Hudson River is an estuary, tidal throughout most of its length from Albany to the Atlantic, and a fiord (fjord), carved by glaciers to depths below sea level upstream, where current had less effect on sailing ships than did wind and tide.[52] Thus, a defender searching for a place to block the waterway would obviously look for a narrow point: a place where the ebb tide was at its strongest, where air currents were unpredictable and treacherous, and where command of the river offered the defender good fields of fire and protection for artillery from a river assault. In addition, the location selected had to be relatively easy for the militia and Washington's Main Army to reach but difficult for the enemy to approach from New York City.

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extracts from *The Pennsylvania Gazette* at https://oll.libertyfund.org/titles/ford-the-writings-of-george-washington-vol-i-1748–1757.

50. Ford, *Journals of the Continental Congress*, 2:52–53, 57, 59–60; Peter Force, ed., *American Archives*, 2:844–45; Washington, *The Diaries* (ed. Fitzpatrick), 3:330–31; Report of James Clinton and Christopher Tappen to the New York Provincial Congress, 13 June 1775, in Force, *American Archives*, 2:1296, map 736; 30 May and 13 June 1775, New York, *Journal of the Provincial Congress*, 1:20, https://archive.org/details/journalsofprovino1newy/page/20/mode/2up.

51. Stowe and Weller, "Revolutionary West Point," 85, 94.

52. Stephen P. Stanne, Roger G. Panetta, and Brian E. Forist, *The Hudson*, 3–4.

There were three possible sites that could be used to defend the Hudson, each of which featured a sharp bend. Taken from south to north, they were the Dunderberg, Anthony's Nose, and West Point. The Dunderberg site was quickly eliminated as a main defensive position because the river was too wide until the point of the Dunderberg was passed, the winds and tide were more predictable than at the other two locations, and the position was on the southern edge of the Highlands where the British could arrive by land faster than the Americans could.

Anthony's Nose and West Point, on the other hand, met all the criteria. The river at Anthony's Nose was not only narrow and the sailing at that point difficult, but the banks on both sides of the river were extremely rugged, particularly the near-vertical 900-foot peak to the east that engendered the name. The major disadvantage of the Anthony's Nose location was that the trails leading to the mouth of Popolopen Creek on the western shore, where the principal fortifications would be constructed, were not adequate for the transportation of timber and other construction materials from the surrounding hills. Moreover, it would take longer to assemble the militia at forts on the Popolopen than it would at West Point.[53]

West Point enjoyed all the advantages of the Anthony's Nose–Popolopen Creek site, but the desired features were substantially more pronounced. Located in the heart of the Highlands, the west point of the Hudson (Gees or Gee's Point) juts boldly into the river. Any vessel passing had to make a sharp ninety-degree turn to the west, sail a quarter of a mile, and then make another right-angle turn to the north as it continued upriver toward Newburgh and Albany. The two sharp bends, forming an S-shaped curve, were the tightest of any along the Hudson but were not the only sailing nightmare presented by West Point. The channel between the bends was the narrowest in the Highlands (about 500 yards), and tidal effects were greater, particularly the current at ebb tide.[54] In addition, the height of the land at West Point and at Martelaer's Rock (Constitution Island) jutting from the eastern bank was such that northerly and southerly winds produced treacherous air currents that caused loss of headway and steering difficulties for any ship trying to negotiate the east-west reach of the river.

The winds "never blow through the West Point channel in an easterly or westerly direction," so that sailing past the point was difficult under the

53. George Clinton to Washington, 22 Dec. 1777, George Clinton, *Public Papers*, 2:591; Palmer, *River and the Rock*, 139.

54. USMA, *The United States Military Academy and Its Foreign Contemporaries*, 2.

best conditions and, without a southerly wind, virtually impossible for the square-rigged warships of the late eighteenth century. Even with a southerly wind and flood tide, warships would be forced to cut close to the tip of West Point to maintain enough speed to pass the double bend with sufficient velocity to overcome shore batteries and water obstacles. The velocity of the air currents increased in the funnel created by the mountains on both sides of the Hudson (Venturi effect), making them so treacherous at times that such a maneuver would be no guarantee that a sailing vessel would not have to put out long boats, drop its anchor, and kedge to tow itself past Martelaer's Rock.[55]

Moreover, Martelaer's Rock was so located that guns placed upon it could bring any ship approaching West Point under fire at maximum range. Thus, West Point was the ideal position for Americans to guarantee control of the Hudson River during the struggle for independence. The report of Christopher Tappen and future Continental general James Clinton, delegates to the New York Provincial Congress and residents of the Hudson River Valley, on 13 June 1775 reached the same conclusions and set the course for the future as they chose the site that would come to be called West Point.[56]

Although two and a half years would pass before West Point was occupied, the Americans recognized that the Hudson Highlands and West Point in particular held the key to their success. By securing West Point they could use the Hudson to their own advantage and ensure the failure of British efforts to divide and conquer. John Adams showed his understanding of the Hudson's critical nature as he wrote to Washington in January 1776 that "the vast Importance of that City, Province [New York], and the North River which is in it, in the Progress of this War, as it is the Nexus of the Northern and Southern Colonies, as a Kind of Key to the whole Continent, as it is a

55. Information as to the difficulties, problems, and techniques of sailing through the Highlands was obtained in an interview by Joseph Visconti Jr. with Chaplain James D. Ford and Chaplain Nelson W. Koscheski of the U.S. Military Academy on 29 Oct. 1974. At the time of the interview Chaplain Ford had sailed in the Highlands for over ten years. Chaplain Koscheski graduated from the U.S. Coast Guard Academy, where he gained experience sailing on square-rigged ships and on the Hudson in the West Point area. The Venturi effect predicts that, when a fluid flows through a constricted space, its velocity increases and its static pressure decreases.

56. Report of James Clinton and Christopher Tappen to the New York Provincial Congress, 13 June 1775, in Force, *American Archives*, 2:1296, map, 736; New York, *Provincial Congress*, 13 June 1775, 40–41; the report is also in the USMA Library's microfilm holdings of the "Papers of the Continental Congress," 1774–1789, microfilm, roll 81, Record Group 360 (M247), 288–90, map, 286, hereafter cited as "Papers, Continental Congress," USMA Library.

Passage to Canada to the Great Lakes and to all the Indians Nations. No Effort to secure it ought to be omitted."[57] Although the British never definitively tested the decisiveness of the Hudson River as the means to end the war, American leaders, from Washington down, felt that the loss of the Hudson would deal a fatal blow to their cause. As the commander in chief wrote at the end of the war:

> The importance of this last mentioned Post [West Point], is so great, as justly to have been considered, the key of America; It has been so pre-eminently advantageous to the defence of the United States, and is still so necessary in that view, as well as for the preservation of the Union, that the loss of it might be productive of the most ruinous Consequences. A Naval superiority at Sea and on Lake Champlain, connected by a Chain of Posts on the Hudson River, would effect an entire separation of the States on each side, and render it difficult, if not impracticable for them to cooperate.[58]

Major General Philip Schuyler, commander of the Northern Department, worried in October 1775 that a British expedition up the Hudson would "undoubtedly greatly distress if not totally ruin our cause."[59] The key American commanders were committed to defending the Hudson.

By the time the British ventured north against the fortifications of the Highlands in October 1777, the defensive works would show the signs of the stake that the Continental Congress, the New York Provincial Congress, and Washington had already put into the defense of the Hudson. Unfortunately, the Americans had not completed Forts Montgomery or Clinton on Popolopen Creek, the batteries over-watching the chevaux-de-frise from Pollepel Island to Plum Point near New Windsor, nor the complex called Fort Constitution on Martelaer's Rock. Despite the presence of a chain and an improvised boom, backed up by two frigates of the Continental Navy, a New York sloop, and two row galleys of the Continental Army blocking the channel near Anthony's

57. See John Adams to George Washington, 6 Jan. 1776, https://founders.archives.gov/documents/Adams/06-03-02-0200.

58. See "Sentiments on a Peace Establishment," 1 May 1783, in Washington, *Writings* (ed. Fitzpatrick), 26:382; also at https://founders.archives.gov/documents/Washington/99-01-02-11202. A British intelligence report of 6 April 1778 assessed "the fatal Consequences" to the American cause should the British "get possession of the River," Code Box (234:19), Sir Henry Clinton Papers, Clements Library.

59. Philip Schuyler to the President of Congress, 14 Oct. 1775, in Force, *American Archives*, 3:1065.

Nose, the lack of sufficient regulars and militiamen to man the works would doom the entire Highlands complex to capture and destruction.

Stung by the defeats in the Highlands and near Philadelphia in 1777, Washington would focus his strategic vision on the Hudson River and New York City that anchored it for the remainder of the war. His fixation on the Hudson would lead him to support the construction of the works that would fortify it throughout the conflict: at Martelaer's Rock (Constitution Island), at Continental Village, south of the Fishkill Supply Depot, along Popolopen Creek, near the King's Ferry, and finally, at West Point. In March 1777 Washington warned Governor Jonathan Trumbull of Connecticut that if the British mounted an expedition to seize control of the North River, "The Command of the passages over [it] and the free Navigation of it, would prove fatal to us."[60]

No sooner had General Henry Clinton's expedition done as Washington feared and then fallen back downstream than he was communicating with Governor George Clinton of New York about the need to rebuild key positions. Echoing the original report by his brother and Tappen in June 1775, Governor Clinton would agree with the commander in chief by proposing that the Hudson at the west point, in conjunction with Fort Constitution, be the site of the next generation of defensive fortifications because it was "the most defensible Ground and because the Navigation of the River there is more difficult & uncertain and the River something narrower than it is at the former place."[61]

In a letter to Major General Israel Putnam on 2 December 1777, Washington had laid out his rationale for supporting Governor Clinton's judgment about this "very and infinitely important object":

> The importance of the North River in the present contest and the necessity of defending it, are subjects which have been so frequently and so fully discussed and are so well understood, that it is unnecessary to enlarge upon them. These facts at once appear, when it is considered that it runs thro' a whole State—That it is the only passage by which the Enemy from New York or any part of our coast can ever hope to co operate with an Army that may come from Canada;

60. Washington to Governor Jonathan Trumbull, 29 Mar. 1777, in Force, *American Archives*, 7:334.

61. Washington to George Clinton, 3 Dec. 1777, in Washington, *Writings* (ed. Fitzpatrick), 14:135, https://founders.archives.gov/documents/Washington/03-12-02-0482; Clinton to Washington, 22 Dec. 1777, in George Clinton, *Public Papers*, 2:591.

> that the possession of it is indispensibly essential to preserve the communication between the Eastern—Middle and Southern States; and further, that upon it's [*sic*] security in a great measure depend our chief supplies of Flour for the subsistence of such Forces as we may have occasion for, in the course of the War, either in the Eastern or Northern Departments, or in the country lying high up on the West side of it.[62]

In 1786 then Secretary of War Henry Knox reinforced his commander in chief's views based on what he had learned firsthand as a major general commanding West Point at the end of the war: "That in case of an invasion of any of the middle or eastern states by a marine power the possession of Hudson's river would be an object of the highest importance, as well to the invader, as to the United States. . . . That West Point is of the most decisive importance of the said river."[63]

By the time Washington moved his army south from the Highlands to Philipsburg to threaten the British on Manhattan Island in 1781, he had left behind a series of fortifications at West Point that had deterred Clinton from moving further north than Stony Point since 1779. In fact, Sir Henry would do no more than plan, and even his planning for 1780 depended on the treasonous acts of Major General Arnold. A chain—for at least one season possibly protected by a boom—stretching from Constitution Island to Chain Battery Cove beneath the guns of Fort Arnold (Clinton), and four water batteries, was the linchpin of Fortress West Point. Sherburne's Redoubt above the chain, Forts Meigs, Wyllys, and Webb to the south, and Fort Putnam on Crown Hill to the west protected the back of Fort Arnold. Nine redoubts on both sides of the river, combined with Putnam's Battery on the site of the old Fort Montgomery and redoubts around Peekskill and Continental Village, established an outer ring for early warning and a defense-in-depth.[64]

Washington almost always garrisoned this fortress or provided a screen for it with a cadre of Continental regiments, normally equaling a reinforced

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62. Washington to Israel Putnam, 2 Dec. 1777, in Washington, *Writings* (ed. Fitzpatrick), 6:376–77; also at https://founders.archives.gov/documents/Washington/03-12-02-0473.

63. General Knox "on the importance of West Point and necessity for purchase thereof," Reports of H Secty. At War Knox, in Henry Knox Papers, Reel 13, USMA Library, Knox enumerated four reasons to support his statement: narrowness of the Hudson, "peculiar bend," high banks, and the use of a chain there.

64. This is an overview of the process of construction of the fortifications of West Point and the Hudson Highlands that will be developed in the remainder of the book.

division, with a system of signal guns and beacons to call in the militia from the surrounding counties of New York and Connecticut; two of the beacons were on the western Butter Hill (Storm King) and the eastern Fishkill (Beacon) Mountain.[65] So critical did he view this area that he created within his Middle Department a separate command, the Highlands Department, "a de facto territorial department," for it with a major general usually in charge. The department stretched along the Hudson from Newburgh and Fishkill on the north to Tappan, White Plains, and Dobbs Ferry on the south; by the time of the arrival of French General Jean Baptiste Donatien de Vimeur, Comte de Rochambeau's *expédition particulière* in Westchester County in July 1781, there would be a redoubt (blockhouse) at Dobbs Ferry, reinforced by a battery of four 12-pounders and two howitzers and a blockhouse near Sneeden's Landing across the Hudson on the western shore. While the command was centered on Fortress West Point, its commander's responsibility included manning the Fishkill Supply Depot, Continental Village and Fort Independence near Peekskill, guard boats and Fort Lafayette at King's Ferry, Forts Clinton and Montgomery on Popolopen Creek, and "the Lines" guarding the crossings over the Croton River, including Pine's Bridge. Washington usually kept the Continental Main Army under his direct command nearby.[66] Even when he quartered his army in New Jersey, at Morristown for the winters of 1776–77 and 1779–80, and at Middlebrook in 1778–79, the valleys, including the Clove, stretching from there to the Highlands screened his movements and gave him the ability to move with only a few days' marches to

65. E. M. Ruttenber, "The Beacons and Signals," *The North Jersey Highlander*, 12:3–15. See also order, "Copy to General How[e]," No. 23, 3 July 1780, in Merle Gardner Sheffield Research Files, USMA Library.

66. Robert K. Wright Jr., *The Continental Army*, 83, 95, 151; minutes, 8, 9 Nov. 1775, Ford, *Journals of the Continental Congress*, 337, 343; Robert A. Selig, *The Washington-Rochambeau Revolutionary Route*, 86. The redoubt would be garrisoned by Lt. Col. Alexander Scammell's Light Infantry and supported by Col. Elisha Sheldon's Second Continental Light Dragoons. Brig. Gen. Moses Hazen's Second Canadian Regiment (Congress's Own) and the combined New Jersey regiments would cross here on 19 Aug. 1781 enroute to Yorktown, VA; see Robert Selig, *The Franco-American Encampment*, 38; Clermont-Crèvecoeur, "Journal of the War in America" in Rice and Brown, *American Campaigns of Rochambeau's Army*, 1:34. For a description of the blockhouse near Sneeden's Landing, see "Observations" in "Original Documents, Sir Henry Clinton's Original Record of Private Daily Intelligence," *Magazine of American History* 11:436. Pine's Bridge crossed the Croton River in the Neutral Grounds; see Livingston to Washington, 25 Oct. 1776, https://founders.archives.gov/documents/Washington/03-07-02-0022. Also see Washington to Scott, 25 Sept. 1778, https://founders.archives.gov/documents/Washington/03-17-02-0122; in a footnote to this letter, McDougall refers to starting a "new Bridge over Croton, about a Mile from its Mouth" four miles south of the original bridge.

reinforce the garrison.[67] From the vantage point of his formidable fortress in the Highlands, Washington would continually fix his gaze upon the British-controlled city forty-six miles to the south—their key post of New York.[68]

Washington's obsession with New York City would dictate that he first try to defend it in the summer of 1776 and then retake it once the British had captured it. As he tried to anticipate the next move of the British after they had abandoned Boston, Washington and the Continental Congress recognized the critical nature of both the waterway and the city. In a letter to Governor Nicholas Cooke of Rhode Island on 21 March 1775, he and his generals singled out New York as their objective because it "secures the free communication between the Northern & Southern Colonies and will prevent them from possessing Hudsons river and from having an easy pass into Canada."[69]

Before abandoning Manhattan after the British had taken Long Island, Washington wrote on 8 September 1776 to John Hancock, President of the Continental Congress, that the Hudson was called the "Key to the Northern Country." Strong fortifications there would ensure "not only the Navigation of Hudsons River but an easier & better communication may be more effectually secured between the Northern & Southern States."[70] Washington thus saw that the Hudson River offered advantages to the side that possessed it. After the British controlled the city itself, he would return time and again to developing plans for regaining it, telling Admiral Charles Hector Theodat, the Comte d'Estaing, on 4 October 1779, for example, that "New York is the first and capital object, upon which every other is dependant. The loss of the Army and the Fleet there, would be one of the severest Blows the English Nation could experience."[71] As long as he was commander in chief Washington would never lose sight of the strategic consequences that the Hudson and New York had for the outcome of the Revolution.

With Washington's coaxing, French commanders would acknowledge that New York City was a worthy objective as they planned campaigns along

67. For Feb. 1779, for example, see Charles H. Lesser, ed., *The Sinews of Independence*, 104–105.

68. *Coast Pilot*, 261.

69. Washington to Cooke, 21 Mar. 1776, in Washington, *Writings* (ed. Fitzpatrick), 4:414; also at https://founders.archives.gov/documents/Washington/03-03-02-0374.

70. Washington to the President of Congress, 8 Sept. 1776, in Washington, *Writings* (ed. Fitzpatrick), 6:29; also at https://founders.archives.gov/documents/Washington/03-06-02-0203.

71. Washington to Comte d'Estaing, 4 Oct. 1779, in Washington, *Writings* (ed. Fitzpatrick), 16:411; also at https://archive.org/details/writingsofgeorge16wash/page/410/mode/2up.

the Atlantic seaboard. As soon as Count d'Estaing arrived with a French fleet in July 1778, he would threaten it and Admiral Howe's fleet bottled up there. In 1779, 1780, and 1781, Washington would try to persuade successive French generals and admirals that they should take America's "first" object. At the conference in Hartford in August 1780, Washington answered the query by the Comte de Rochambeau and Admiral Charles-Henri-Louis d'Arsac, Chevalier de Ternay with his understanding "That of all the enterprises which may be undertaken, the most important and decisive is the reduction of New York, which is the centre and focus of all the British forces." Washington emphasized that "New York should become the object of the combined operations" by land and sea.[72] This agreement would lead to nothing in 1780 but would be the basis for the merging of Rochambeau's *expédition particulière* of over 5,000 men and Washington's army of some 6,000 men in Westchester County in the summer of 1781. Adjutant General Scammell predicted in 1778 why even that attempt would fail: "What the British Army may want in Numbers, is made up in Situation, & by their naval Force & at present it would be rashness in us to attempt their strong Hold, unless we had command of the water."[73] The British would also understand the critical nature of the city and its surrounding "water."

The respective British commanders in chief would single out New York City on the Hudson as their primary operating base in the thirteen colonies. Since Lieutenant General Thomas Gage thought that the Hudson should be the "seat of the war," he selected New York as the port of entry to which the British should return after leaving Boston in March 1776 for Halifax, Nova Scotia. He summarized his reasons in a letter to the Earl of Dartmouth:

> Its situation between the eastern and western colonies is advantageous, besides being commodious in transporting the necessaries of an army. We are made to believe also that many friends in that province would appear in arms and the troops receive many supplies they are in want of. A communication with Canada might be better secured from thence than any other part and during winter,

72. "Summary of the Hartford Conference," 22 Sept. 1780, in Stanley J. Idzerda, ed., *Lafayette in the Age of the American Revolution*, 3:175–76; also at https://founders.archives.gov/documents/Washington/03-28-02-0173-0005.

73. Alexander Scammell to Dr. Samuel L. Scammell, 30 Dec. 1778, in Alexander Scammell Letters, USMA Library; Selig, *The Franco-American Encampment*, 69, 72.

> when the troops can't keep the field, attempts might be made upon the southern provinces by embarking in the transports.[74]

Major General William Howe would accept his rationale, making New York his "first aim" and would take Manhattan Island after he had replaced Gage.[75] Even when the Howe brothers moved against Philadelphia, the British commander in chief would provide for the defense of what he called "this important post" of New York City by naming General Henry Clinton as its commander, with sufficient troops to man its extensive fortifications, and even instructing him to act "offensively, in case an opportunity should offer."[76] The British built a series of redoubts and forts, stretching from Staten Island to Fort Knyphausen (Fort Washington) to King's Bridge, backed by a number of ships, to protect their primary base.[77] Howe was confident that Fortress New York could hold its own even with his large force absent.

Whether or not the Hudson had made an impression on Henry Clinton as a boy when he lived in New York when his father, George, was royal governor, he demonstrated throughout the war that he thought it to be "a very important object."[78] In fact, in a plan that he conceived while still in England in March 1775, he argued that it should be the centerpiece of the Crown military strategy: "New York if not hostile is a good barrier & from situation between t[w]o large (the one navigable) rivers may brake the chain of rebellion."[79] When asked his opinion by Gage as to whether or not the Hudson should be the "seat of the war," "viewing the whole state of America," he readily agreed, specifying that "an army of not less than 10,000 men should establish themselves on Hudsons River."[80] In his later account of the war he offered a lengthy explanation for this view. As had Washington and Gage, he noted that the Hudson would have been

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74. Gage to Earl of Dartmouth, 1 Oct. 1775, Davies, *Documents of the American Revolution*, 11:135–36.

75. Howe to Lord Germain, 25 Apr. 1776, in Davies, *Documents of the American Revolution*, 10:275.

76. Howe to Sir Henry Clinton, 9 July 1777, in Clinton, *The American Rebellion*, 22.

77. Roberts, *New York's Forts*, 261–336.

78. Sir Henry Clinton, *The American Rebellion*, 11.

79. "Plan made in England," end of March 1775, in Sir Henry Clinton Papers, Clements Library.

80. H. Clinton to Thomas Gage, 7 Oct. 1775, in Clinton Papers, Clements Library.

> a barrier between the southern and eastern colonies, which would have most effectually divided the strength of the inimical states by depriving those to the southwest of all assistance from the populous and hardy eastern provinces. . . . For, as long as a British army held the passes of that noble river and her cruisers swept their coasts, the colonists would have found it impossible to have joined and fed their respective quotas of troops.[81]

He argued that this control would have produced a scarcity of "bread corn" for the inhabitants to the east and "black cattle and horses in some of the others." He finished his analysis by noting the "ready intercourse" the Hudson provided with Canada "by the lakes." When writing of military strategy early in the war, Clinton generally thought that New York and the Hudson gained greater value because of the significance that he attached to Canada; in fact, he reasoned that "should it be lost to us, our whole plan of operations must alter; a conquest of that province must be our first and principal object."[82] Canada would remain securely a part of the empire and allow him to focus his attention on protecting New York City throughout his tenure as commander in chief. Unfortunately, because he felt that the British should have secured the Hudson "on the first breaking out of the disturbances," he would never realize the potential that the Hudson seemed to offer to him for ending the war.[83]

The question of whether or not the British could ever have controlled the Hudson River had they chosen to extend their area of influence from New York City is intriguing but cannot be conclusively answered.[84] The limitation upon complete control of the Hudson for the Americans boiled down to their inability to capture New York City without the presence of a French fleet and army prepared to conduct a joint operation and siege such as those attempted at Savannah and Newport. As for the British, Sir Henry Clinton speculated about the possibility of controlling the Hudson in a retrospective proposal. He offered that "had Mr. Gage been permitted to go at first with his whole force to New York . . . and Crown Point and Ticonderoga

81. H. Clinton to Harvey and Newcastle, 15 Nov. 1775, in Sir Henry Clinton Papers, Clements Library.

82. H. Clinton to Harvey and Newcastle, 15 Nov. 1775, in Sir Henry Clinton Papers, Clements Library.

83. H. Clinton, *American Rebellion*, 11–12.

84. Mackesy discussed the possibilities in *War for America*, 143–44.

been put into a proper state of defense and suitably garrisoned, that whole province and Canada would have been secured."[85]

Lieutenant General John Burgoyne tried a variation of Clinton's idea in the fall of 1777; he had developed his own plan in February 1777.[86] His failed invasion from Canada provided as close to the answer as historians will probably ever get. Militiamen by the thousands swarmed to halt the progress of his army near Saratoga, New York, and on the Walloomsac River near Bennington, Vermont, giving a clue as to the plight of any British force that attempted to venture too far into the American hinterlands. The British must have been shaken by the degree of Whig support in a state that they had originally rated as second in numbers of Loyalists.[87] Control of the waterway itself might have been possible had the British committed the naval and ground resources required. Now in the pay of the British, Brigadier General Arnold argued in 1781 that, if this control had been only of the Hudson Highlands, "Mr. Washington on Either Side of the River would be under the Necessity of Coming to a general Action or of disbanding his Army for want of Provisions."[88]

Clinton's and Commodore William Hotham's campaign of October 1777 and Clinton's and Sir George Collier's capture of Verplanck's Point and Stony Point in June 1779 showed a spark of the potential for the extended control of the Hudson.[89] Instead, each of these operations ended up being no more than raids making British control beyond New York City transient. Clinton, justifying his failure to exploit his success of 1779, wrote that without reinforcements, he was "much too weak in troops to retain that post [New York], break in upon or even threaten Mr. Washington's communications with his magazines, and secure those of my own."[90] Had the British, however, backed their words about the strategic significance of the Hudson River with the actions and resources commensurate with its designation as the "seat of the war," they might have crippled American operations by disrupting logistics, communications, commerce, and, ultimately, political support for

85. Clinton, *American Rebellion*, 20–21.

86. Lieut. Gen. John Burgoyne, "Thoughts for conducting the War from the Side of Canada," in *A State of the Expedition from Canada*, Appendix, iii–xii.

87. Roberts, *New York's Forts*, 261.

88. Brig. Gen. Arnold to Lord George Germain, 28 Oct. 1781, in extracts from Clinton Papers, Clements Library, from vols. 34, 90, 132, 136, on microfilm, USMA Library.

89. Clinton, *American Rebellion*, 124.

90. Clinton, *American Rebellion*, 126–27.

the war. This lack of aggressiveness within the war of posts or against the Continental Army allowed Washington's defensive war to succeed once the French became active allies. Confronted with a global conflict, British will succumbed to the Americans' determined quest for independence.

Protecting or denying the vital logistical and commercial artery of the Hudson to Briton and American alike justified the huge quantities of resources and manpower on the part of both military establishments. Military geography had given to generals on both sides strategic and operational opportunities based simply on the size and location of the Hudson. Because of its location, the Hudson became a political and economic barrier between the New England states and those to its south. Whoever controlled the Hudson controlled its usage as a watery highway and exploited its value for communications and commerce. As a nexus of population, industry, and agriculture, the river affected the logistics of both the British and the American armies. Recognizing the Hudson's value, by his actions and the troops and resources that he invested in fortifying or attacking, George Washington, more so than Sir Henry Clinton, converted rhetoric into reality: the Hudson River and its Highlands truly became for him the "key of America" and the "seat of the war." For the Americans, fortifying the Hudson Highlands would become the focus of their efforts from the summer of 1775 until they achieved independence.

CHAPTER 2

BERNARD ROMANS, MARTELAER'S ROCK, AND THE FLAWED PLAN

The importance of the Hudson River to the cause of independence was never lost on the Americans. Echoing earlier assessments, in the fall of 1776, the Committee of Safety of New York submitted the following report to the Continental Congress:

> If the enemy persevere in their plan of subjugating these States to the yoke of Great Britain, they must, in proportion to their knowledge of the country, be more and more convinced of the necessity of their becoming masters of Hudson's river, which will give them the entire command of the water communication with the Indian nations, effectually prevent all intercourse between the eastern and southern confederates, divide our strength, and enfeeble every effort for our common preservation and security.[1]

The Committee, therefore, reaffirmed what key American leaders had been advocating since the spring of 1775—that "the defence and security" of the Hudson needed to be "a principal object" of all defensive preparations.[2] As the Continental Congress, the New York Provincial Congress, and its Committee of Safety confronted the reality of conflict with the mother country, their members not only had to raise an army, mobilize the militia, and organize a government that could sustain them, they also had to decide where to defend, decide what types of fortifications to build there, and develop plans upon which construction could proceed. Their early vision of

1. New York, *Provincial Congress*, 1:723, https://archive.org/details/journalsofprovino1newy/page/722/mode/2up.

2. Minutes, Committee of Safety (NYCS), 28 Nov. 1776, New York, *Provincial Congress*, 1:723, https://archive.org/details/journalsofprovino1newy/page/722/mode/2up.

how to structure the war effort led them to what the British had also concluded to be the seat of the war: the Hudson River and its Highlands.

In response to the increasing concern that the conflict at Boston would spread, New York delegates to the Continental Congress requested advice on actions to be taken in relation to their own seaport, New York City, at the mouth of the Hudson. From the outset, Washington and the defense committee determined that the Hudson must be held. To accomplish that task, it would be necessary to fortify the Hudson Highlands. Based on the committee's report of 19 May 1775, the Continental Congress resolved on 25 May

> that a post be also taken in the highlands on each side of Hudson's River and batteries erected in such manner as will most effectually prevent any vessels passing that may be sent to harass the inhabitants on the border of said river; and that experienced persons be immediately sent to examine said river in order to discover where it will be most adviseable and proper to obstruct the navigation.[3]

From this point on, the American cause would be tied to the Hudson Highlands.

The task of implementing the congressional resolution to fortify the Highlands devolved on the Provincial Congress of New York, the only body with a vested interest that was immediately capable of taking action. The Provincial Congress moved swiftly. Only four days after adoption of the resolution in Philadelphia, it convened in New York City to consider the recommendation. The next day, 30 May, the Provincial Congress appointed from among its members Major Christopher Tappen and Colonel James Clinton—both residents of Ulster County—"to go to the Highlands and view the banks of Hudson's river there; and report to this Congress the most proper place for erecting one or more fortifications; and likewise an estimate of the expense that will attend erecting the same."[4] Clinton had served as a captain in the Ulster militia in the French and Indian War, working in the trenches at the siege of Fort Niagara and supervising the building of a series of small forts along the western frontier of Ulster and Orange

3. Minutes, 19, 25 May 1775, Ford, *Continental Congress*, 2:57, 60, https://www.loc.gov/resource/llscdam.lljc002/?sp=60&st=image&r=-0.272,0.003,1.587,0.773,0. Also see 29, 30 May 1775, Force, *American Archives*, 2:844, 1259, https://archive.org/details/journalsofprovino1newy/page/20/mode/2up; and 30 May 1775, New York *Provincial Congress*, 1:20.

4. New York, *Provincial Congress*, 1:20, https://archive.org/details/journalsofprovino1newy/page/20/mode/2up; also in minutes, 29, 30 May 1775, New York Provincial Congress (NYPC), Force, *American Archives*, 2:1258–59, 1265.

counties. On 6 May 1775, he had accepted a position on the Committee of Safety and Observation for New Windsor.[5]

Clinton and Tappen, brothers-in-law through the marriage of Cornelia Tappen and Clinton's younger brother George, carried out their mission with celerity and thoroughness. Setting sail on the second of June, both men already knew the terrain of the Highlands and the tortuous path the river cut through the mountains. Tappen, of Dutch ancestry from Kingston on the Hudson River, where he was the deputy county clerk and clerk of the town's corporation, and Clinton, from Little Britain to the west of Newburgh, did not miss the significance of the sharp S-turn in the river between Martelaer's Rock (present-day Constitution Island) and the high ground on the opposite shore (West Point).[6] Any vessel fighting wind, current, and tide as it negotiated the turn would be vulnerable to hostile cannon fire from both shores.

The men had several other sites from which to choose for fortification: King's Ferry with Stony Point and Verplanck's Point on the west and east shores, respectively, just above Haverstraw Bay where the Highlands begin; farther north, the site where Popolopen Creek flows eastward into the Hudson opposite Anthony's Nose on the eastern shore; and, finally, the wide but shallow portion of the river between Plum Point on the western bank and Pollepel Island adjacent to the eastern shore. The latter position, as it turned out, near New Windsor at the northern gateway to the Highlands, offered the possibility of sinking obstacles onto the river bottom that would protrude above the surface and block shipping. Such obstacles, called chevaux-de-frise, could not be used inside the Highlands due to the great depth of the river. Considering all the possibilities, Tappen and Clinton recommended as their proposed site the "west point" of the Hudson and Martelaer's Rock.[7]

By 10 June, the men were back in New York City and, with an accompanying map (see Image 2.1), presented their report to the Provincial Congress:

> Your Committee . . . report it as their opinion, that a post (capable of containing 300 men), erected on the east bank of Hudson's

5. Bush, "The Other Clinton," *Hudson Valley Regional Review* 13:21–22; and Headley, *History of Orange County*, 82. Tappen would become the major in Colonel Charles DeWitt's Regiment of Ulster County Minute Men on 21 Dec. 1775; *Yearbook Sons of the Revolution*, 472.

6. Clearwater, *History of Ulster County*, 211; Bush, "The Other Clinton," *Hudson Valley Regional Review* 13:20. The two men visited friends and Tappen's wife in New Windsor; George Clinton, *Public Papers*, 1:201.

7. Palmer, *River and the Rock*, 25—28.



Image 2.1: Annexed map of the Hudson Highlands accompanying the Clinton-Tappen Report. (Courtesy of the Library of Congress, Peter Force, *American Archives*.)

> River, marked A [Martelaer's Rock], and another on the west side of said River, to contain 200 men, marked B [West Point], in the annexed map, will answer the purpose proposed and directed by the Continental Congress. As it is not only the narrowest part of the said river, but best situated, on account of the high hills contiguous to it, as well on the west as east side of the river, which cover those parts, so that without a strong easterly wind, or the tide, no vessel can pass it; and the tide on said part of the river is generally so reverse that a vessel is usually thrown on one side of the river or the other, by means whereof such vessel lay fair and exposed to the places your Committee have fixed on.[8]

They also mentioned the possibility of using "four or five booms chained together on one side of the river ready to be drawn across" as a means of blocking navigation. Booms were usually constructed of old boats chained together, or logs formed into rafts, linked together, and stretched across the water.[9] Obstructing the river would become an obsession with Americans throughout the war. The Clinton-Tappen report had been a good start; preliminary planning had been completed efficiently and expeditiously. However, the Highlands would have to be temporarily lost to the British and two and a half years would have to pass before the Clinton-Tappen recommendation would be implemented in its entirety.

From the beginning, money would be a problem. Clinton and Tappen could only approximate that the cost of their proposal would be no less than £1,500. The New Yorkers, probably hoping that the Continental Congress would pay for the fortifications, forwarded the report to Philadelphia without taking any action of their own. The Continental Congress, also confronted

8. Minutes, 10, 13 June 1775, NYPC, Force, *American Archives*, 2:1291, 1295. The map opposite page 3:736 fits the discussion of the report and is believed to be a facsimile of the map that accompanied the Clinton-Tappen report, https://babel.hathitrust.org/cgi/pt?id=uiug.30112089752031&seq=443. On this map, Martelaer's Rock (Constitution Island) is marked with an "A," and West Point, notionally, with a "B." The location of the original map is unknown. A copy of what appears to be the original map appears in Diamant, *Bernard Romans*, 59. Diamant provides a side-by-side comparison of the original maps and the engraved facsimiles appearing in *American Archives* for each of the maps in this chapter. Also see New York, *Provincial Congress*, 1:40–41, https://archive.org/details/journalsofprovino1newy/page/40/mode/2up; and Papers of the Continental Congress, USMA Library, 286, 288—89.

9. New York, *Provincial Congress*, 1:40–41, https://archive.org/details/journalsofprovino1newy/page/40/mode/2up; and Papers of the Continental Congress, USMA Library, 286, 288—89.

with financial problems, was busy trying to raise the Continental Army. It was not until after the legislative body appointed George Washington commander in chief on 16 June that it told New York to seek assistance from Connecticut.[10]

Perhaps the Continental Congress viewed the construction of fortifications as the local responsibility of New York and its sister colony, but a much more plausible conclusion is that the already overburdened central government wished to avoid additional expense. At best, the Continental Congress in 1775 was still an expedient measure to coordinate what was supposed to be the united effort of the colonies against the wickedness of a corrupt British Parliament. Toasts in local taverns were still made to the King whose assistance in redressing grievances would quell the fighting and assure the continued loyalty of his American subjects. Americans declared independence only after it became apparent that King and Parliament were united against the colonies. Before that, the Continental Congress was only an extralegal body with no resources and little authority beyond that dictated by necessity.

Two months passed before anything more was done concerning the Highlands. Then the Provincial Congress received a message from General Washington informing that body of a suspected enemy raid on New York City. Although a false alarm, the event shook the intransigence of the New Yorkers. (Often during the war, heightened activity in the Highlands would result only from an immediate threat.) Thus, on 18 August 1775, the Provincial Congress resolved that "the fortifications formaly [formerly] ordered by the Continental Congress, and reported by a committee of this Congress, as proper to be built on the banks of Hudson's River, in the Highlands, be immediately erected."[11]

The New York Congress next appointed five commissioners as its agents "to manage the erecting and finishing the said fortifications": Isaac Sears, a delegate from New York City, a Son of Liberty and member of the revolutionary Committee of Fifty-one, and a delegate to the First and Second Continental Congresses; John Berrien, a Son of Liberty and a member of the General Committee of the City of New York; Colonel Edward Flemming;

10. Minutes, 16 June 1775, Ford, *Journals of the Continental Congress*, 2:95, https://www.loc.gov/resource/llscdam.lljc002/?sp=95&st=image&r=-0.7,0.103,2.4,1.169,0.

11. Minutes, 18 Aug. 1775, *Provincial Congress*, 110, https://archive.org/details/journalsofprovino1newy/page/110/mode/2up; and Force, *American Archives*, 3:535.

and Captain Anthony Rutgers and Captain Lieutenant Christopher Miller of the Artillery Company of the Marine Society.[12]

Two of the commissioners, Colonel Flemming and Anthony Rutgers, resigned their posts almost immediately, Flemming to be the deputy adjutant general, New York Department, and Rutgers to continue as an artilleryman and a privateer; they were replaced by militia Captains Samuel Bayard, a New York merchant and co-owner of a glassworks, Samuel Bayard & Company, in New Windsor; and William Bedlow. Later, the Provincial Congress added John Hanson and Thomas Grenell, to bring the total number to seven. (John Hanson resigned in protest two months later to be replaced by Jonathan Lawrence, a resident of Newtown, Dutchess County, a delegate from Queens County and brigade major of the Queens County Militia, on 20 October 1775.) John Berrien was to act as the commissary.[13]

Along with the general guidance as to the mission of the commissioners had come, however, no budget, no thoughts about selecting an engineer, nor a detailed plan for the fortification, which the five members requested on 7 September. Since the Committee of Safety deferred giving instructions until it was able to meet with all the parties together, a meeting that never happened as conceived, the colony's agents were left to work out all of these issues as they went along.[14]

While only three commissioners had to approve decisions, planning and construction was to be by committee, with all the attendant problems and difficulties associated with that type of group effort.[15] The most serious shortcoming was the failure to appoint a single individual to be in charge. Furthermore, the governing body of New York had appointed commissioners but no engineer. In fact, the Provincial Congress had apparently selected the commissioners for their political connections rather than for their

12. New York, *Provincial Congress*, 110.

13. Minutes, 18, 29–30 Aug., 1, 6 Sept., 16, 18, 20 Oct. 1775, NYPC and NYCS, *American Archives*, 3:541, 565, 567, 571, 880, 1290, 1295—96, 1301, https://archive.org/details/journalsofprovino1newy/page/66/mode/2up?q=Christopher+Miller; Ruttenber, *History of the Town of New Windsor*, 26—27. Bayard first appeared as a merchant in New York City in 1736 in *Collections of the New-York Historical Society for the Year 1885*, 18:130. Bayard's and Bedlow's ranks may have been honorific since neither appears on a militia roll. For Jonathan Lawrence, see *Yearbook Sons of the Revolution*, 365; and Mather, *Refugees of 1776*, 442.

14. The Committee of Safety directed that a conference take place; there is, however, no record of such a meeting in the minutes; Bayard, Grenell, Bedlow, Hanson, and Berrien to NYPC and minutes, 7 Sept. 1775, NYCS, Force, *American Archives*, 3:659–60, 882.

15. Minutes, 18 Aug. 1775, NYPC, Force, *American Archives*, 3:535.

credentials as soldiers or builders. Several of the agents were at least nominally in the militia, and at least one—Bayard—was a merchant who could be expected to monitor spending and costs. Inadequate delineation of authority and responsibility and the lack of engineering expertise would plague the Highlands Department until 1778, when Washington finally achieved unity of command and found an engineer who could work with the Americans: Thaddeus Kościuszko.

Although Samuel Bayard, as a member of the Clinton-Tappen team, understood the fortification sites recommended in their report, an engineer was still needed to lay out the military works.[16] There were few trained engineers in America, and the Continental Army recruited those available. Nevertheless, the Committee of Safety and the commissioners were able to acquire the services of Bernard Romans, a Dutchman turned Englishman, now a resident of Wethersfield, Connecticut. Since, according to his biographer, Romans had sought an audience with the commissioners, they would have been well advised to have sought out the admonition that John Muller offered in his *Treatise* on fortifications: he thought that leaders should not trust the judgment of a single engineer, even one who was "so well qualified," but rather should seek other opinions.[17] New York and the Continental Congress, in the early stages of their own organization, policymaking, and direction, were desperate at this time and seemed, they thought, to have little recourse but to rely upon the apparent expertise of Bernard Romans.

Born in Holland in 1720, Romans had some credentials as an engineer. His biographers shed little light on his subsequent education in England and offer no evidence to sustain their conclusions that he was a civil engineer. Lincoln Diamant, who wrote the only full-length biography, asserted that Romans had studied botany and mathematics and then "graduated to the practice of engineering." Romans himself is silent on his training prior to his work as an official surveyor for the British in Georgia and Florida from 1757 to 1773. From 1768 to 1770, he had served as "Principal Deputy Surveyor for the Southern district" of British North America. Romans was clearly a skilled surveyor and cartographer and added to his reputation by his discoveries as a botanist. The detailed lists of construction materials and estimates of their

16. Of the commissioners, only Samuel Bayard had accompanied Clinton and Tappen on the original survey; Force, *American Archives*, 2:1295.

17. Diamant, *Bernard Romans*, 70; Muller, *Practical Part of Fortification*, 129, https://archive.org/details/bim_eighteenth-century_a-treatise-containing-th_muller-john_1774_0/mode/2up.

costs, the critiques of the work by masons, carpenters, and laborers, and the solid craftsmanship evident still in the stonework that has survived to this day indicate familiarity with civil engineering. After moving to New York in 1773, Romans had written a book about Florida, *A Concise Natural History of East and West Florida*. Even as he was in the pay of the New York Provincial Congress, the King continued to provide him with a £50 annual stipend as the botanist for the Floridas. A captain in the militia of Connecticut, he had been with Ethan Allen and Benedict Arnold at Fort Ticonderoga in 1775 and had personally led the force that captured Fort George.[18]

Despite Romans's part in the military expedition to upstate New York, he apparently had little or no practical experience as a *military* engineer. Although he may have learned from John William Gerard de Brahm, a military engineer and his original superior as surveyor general of the Southern District, there is no evidence that he consulted or owned other treatises about military engineering; de Brahm himself did not mention engineering when he listed Romans's qualifications as "Draughts[m]. Mathem[n]. Navigat[r]. in Employ."[19] Romans did have a working knowledge of military terms and structures that he revealed in his observations of the "military architecture" of St. Augustine from his surveying duties in Florida. He had also assessed the cost of repairing Fort Ticonderoga for Arnold in May 1775 after the capture of that once formidable work. To his credit, he purchased a copy of Roger Stevenson's *Military Instructions for Officers Detached in the Field* in Philadelphia before traveling to New York.[20] With whatever training he had received in England as a civil engineer and his years of experience as a surveyor in Florida and Georgia, Romans at the age of fifty-five would now try his hand at military construction.

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18. Little is known of Romans's engineering training while in England; Diamant is vague in *Bernard Romans*, 15–17, 51–53, 71, 132; in his *Chaining the Hudson*, Diamant wrote that Romans was a "self-taught military engineer" (page 5). Based on the entry "Romans, Bernard," in *The Dictionary of National Biography*, 1921–22 ed., Louise Richardson, in her "Introduction to the New Edition" in Penguin's 1961 reprint of Romans's *A Concise Natural History of East and West Florida*, contended that the British government sent him to North America as a "civil engineer." This distinction may have been a generalization of his surveying skills. Also see *National Cyclopaedia of American Biography*, 1897 ed., under "Romans, Bernard," and *Dictionary of American Biography*, 1963 ed., under "Romans, Bernard." Romans detailed his work in North America in his letter to Mr. Gauld, 10 Feb. 1774; and his wife, Elizabeth Romans, characterized him as "a salaried surveyor" in her pension claim of 15 Oct. 1846; see P. Lee Phillips, *Notes*, 29–30, 69.

19. De Vorsey, *De Brahm's Report*, 185; also see Phillips, *Notes*, 45, 47, 54.

20. Romans, *Natural History*, 174–75; Diamant, *Bernard Romans*, 70.

Sometime between 8 and 14 September 1775 Romans arrived in New York and made his initial survey of the Hudson Highlands and Martelaer's Rock. The five commissioners conducted business in New York City until at least the eighth, awaiting the engineer's arrival from Philadelphia and a meeting with the Committee of Safety, which apparently never took place. After a cursory conference with the commissioners, Romans proceeded to the Highlands and set to work. He drew a sketch map of the island, picked precise locations for the various forts and batteries, drew an elaborate plan of a "Grand Bastion" or principal fort to be built on the island, developed an estimate of building materials and associated costs—£4,645 4s. 4d.—and prepared a written report to the Provincial Congress that he dated 14 September 1775 at "North River, Martelaer's Rock, or Martyr's Reach." The estimate contained a list of stone, lime, timber, planks, shingles, bricks, spikes, nails, tools, and iron stoves for the batteries, blockhouses, barracks, storehouses, and guard house and even copper fixtures for the magazine. (See Appendix A for the "Estimates and Expenses.") On 18 September Romans personally presented his plans and estimates to the New York Committee of Safety, temporarily convened in place of the adjourned Provincial Congress.[21]

As can be seen in Romans's "Plans Nos. 1–3," the engineer proposed to rely on the firepower on Martelaer's Rock from three blockhouses with supporting batteries ("A," "B," and "E") and five batteries and a blockhouse

21. While no record of Romans's meeting with the commissioners remains, Diamant claimed that Romans sought them out; Diamant, *Bernard Romans*, 70. Which body did the actual hiring of Romans is difficult to discern from the record. The Committee of Safety had no doubt that the commissioners had recommended Romans to it; the first meeting between him and the NYCS apparently did not take place until 18 Sept. Edward Boynton confused generations of readers by asserting that Romans and the commissioners arrived on Martelaer's Rock together on 29 Aug. 1775 (when Romans was still in Philadelphia); *History of West Point*, 21–22. Addressed as colonel in his correspondence with the commissioners, Romans claimed to have been employed since 28 Aug. 1775 as the "Engineer for the Province of New York with the rank and pay of Colonel"; "The Petition and Memorial of Bernard Romans" to the NYPC, 15 Nov. 1775, Force, *American Archives*, 3:882, 919, 1355–67; John Berrien to the Commissioners (?), 21 Sept. 1775, New-York Historical Society, *Collections*; and Phillips, *Notes*, 112. Romans corrected some mistakes in his second estimate, added 2,000 bushels more of "unslacked lime" at £50 extra, and professed ignorance of the cost of 150,000 bricks; Romans's "Estimates and Expenses of erecting the Fortifications of Hudson's River," 18 Sept. 1775, and "Estimate of the Expense that will accrue in the finishing the Fortifications in the Highland, laid before the Committee of Safety, in New-York, on the 2d October, 1775," Force, *American Archives*, 3:733–34 and 1358–59, https://babel.hathitrust.org/cgi/pt?id=mdp.39015011821371&seq=441, https://babel.hathitrust.org/cgi/pt?id=mdp.39015011821371&seq=761; minutes, 25 Sept. 1775, New York, *Provincial Congress*, 158–59; NYCS to the Continental Congress (CC), 19 Sept. 1775, Papers of the Continental Congress, microfilm, USMA Library, 41, 55–56.

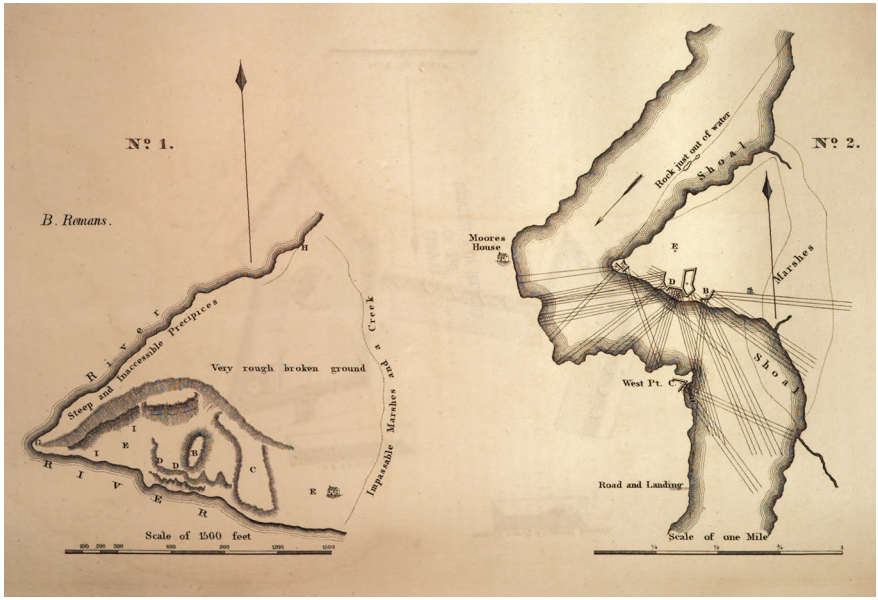

Image 2.2: Romans's "Plan Nº. 1," "a description of the ground," and "Plan Nº. 2," "shows the lines of the extreme command of each gun," from his Report of 14 September 1775. (Courtesy of the Library of Congress, Peter Force, *American Archives*.)

in the Grand Bastion (identified with the letter "D" in "Plan 1" and sketched in detail in "Plan No. 3"). At the west point, he planned a blockhouse with a supporting battery at "C." In "Plan No. 2," Romans indicated the coverage that he expected to gain from the total of sixty-one 9-, 6-, and 4-pounder cannons and twenty smaller swivel guns (anti-personnel) that he would emplace in the various fortifications, judging that the resultant firepower would ensure that "no spot in the whole reach remains out of the com[ma] nd of the greatest part of the Guns at once & a ship would find hot work for a great way."[22] Romans thus would concentrate his system of defense on

22. B. Romans to NYCS, 14 Sept. 1775, Force, *American Archives*, 3:735–36, and maps marked "No. 1," "No. 2," and "No. 3" between pages 736 and 737, https://babel.hathitrust.org/cgi/pt?id=uiug.30112089752031&seq=443; checked against Papers of the Continental Congress, USMA Library, 278–79; some spellings are changed to conform to this original version. Also see Sheffield, *The Fort That Never Was*, 2–5; and Galgano, "Revolutionary War in the Hudson Highlands," *Middle States Geographer*, 43:60–71. The term "Grand Bastion" first appeared in the report of Nicoll, Drake, and Palmer, 14 Dec. 1775; the language in the report makes it clear that this was Romans's term: "Grand Bastion (so called)," New York, *Provincial Congress*, 224, https://archive.org/details/journalsofprovino1newy/page/224.

Martelaer's Rock, except for the one blockhouse and one battery that he planned to erect at West Point.

Romans thought that the most critical of all the fortifications would be the Grand Bastion, soon to be known first as "Constitution Fort" and then as "Fort-Constitution," with its twenty-eight cannons, and it was there that work first started and all efforts were concentrated during the waning months of 1775. Ironically, considering Romans's fate, remnants of these original works can still be seen today, and they are known as Romans's and Marine Batteries. With these works, Romans clearly believed that he had developed a plan to block the Hudson River that was both efficient and effective as he closed his report by claiming that "This is the most frugal plan that can be of any service here; a less or more imperfect plan would only be beginning a strong hold for an enemy."[23]

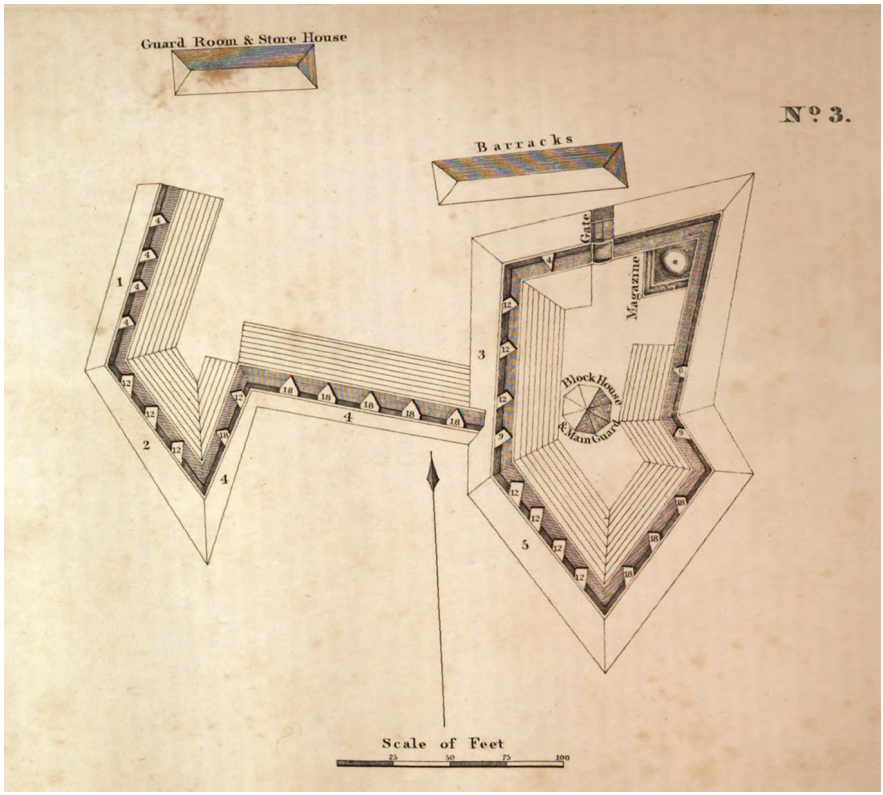

Image 2.3: Romans's "Plan Nº. 3," the "Grand Bastion," from his Report of 14 September 1775. (Courtesy of the Library of Congress, Peter Force, *American Archives*.)

23. Romans to NYCS, 14 Sept. 1775, Force, *American Archives*, 3:735–36, https://babel.hathitrust.org/cgi/pt?id=uiug.30112089752031&seq=442.

Unfortunately for Romans and the American cause, from the perspective of observers and investigators, his plans were most imperfect. In a move that would have profound long-term effects, he had both failed to share his ideas with the commissioners since their initial meeting in New York and chosen not to show his finalized plans to them before handing them to the Committee of Safety. Commissioners Bayard, Bedlow, and Hanson had arrived in the Highlands by 10 September, perhaps occupying an abandoned farmhouse belonging to a Mr. Reuben Bunn on the southeastern side of the island. Although they had alerted the Committee of Safety of Romans's initial arrival in New York, they had apparently never had the opportunity to meet with him and the Committee of Safety as that body had directed. They were shocked to receive John Berrien's letter reporting his conference with Romans and the Committee on 18 September. They made their dissatisfaction with not being consulted clear in their letter of 25 September to the Committee.[24]

Having failed to clear his plan with his superiors, Romans then disregarded the basic rules of military engineering as they were understood at the time. He would have served himself and his adopted country far better had he followed the maxims of acknowledged, published engineers, particularly the instructions of Roger Stevenson for fieldworks. He might then have first built more temporary field fortifications of earth and wood that commanded the river rather than starting a complex and costly bastioned fort of dry laid masonry. A committee of the Continental Congress—Robert R. Livingston (New York), Robert Treat Paine (Massachusetts), and John Langdon (New Hampshire)—observed on 23 November 1775 that as the southwest curtain—Grand Bastion—was the "least useful, we think it should have been last finished."[25]

Romans was clearly very skillful with a pen, as his drawings and plan of work for Fort Constitution reveal; his approach to his craft as a cartographer and even perhaps as a civil engineer were evident in the introduction to his book on Florida: "A Describer of countries, ought in a great measure,

24. Berrien to the Commissioners (?), 21 Sept. 1775, John Berrien, manuscript file, New York Historical; Commissioners to NYCS, 25 Sept. 1775, Force, *American Archives*, 3:795–96; Tax List of Philip Philipse Patent, 1777, in Pelletreau, *History of Putnam County*, 127. I critiqued Romans's work in "Staff Rides and the Flawed Works of Fort Constitution," *Engineer* 20:9–16.

25. Stevenson, *Military Instructions*, https://archive.org/details/militaryinstructoostev/mode/2up?ref=ol&view=theater; Livingston, Paine, and Langdon to Hancock, 23 Nov. 1775, Force, *American Archives*, 3:1657–58.

to imitate a building Engineer, in first laying before those, whom he will employ, accurate and distinct plans of his intended work, thereby enabling them to judge more distinctly of the execution thereof."[26] To that point, on paper at least, Romans had followed John Muller's prescription to "survey the spot of ground upon which it is to be, very exactly, and to draw the plan of it very distinctly."[27] The next step was to match the blueprint "very exactly" to the terrain itself.

Unfortunately for Romans, there was—and is—more to military engineering than a well-drawn plan, a point that John Muller made directly at the time to all who read his treatise on fortifications:

> [I]t is not sufficient to know how to draw plans, profiles, and landskips; to understand a few propositions in geometry, or to know how to build a wall or a house; on the contrary, he ought to be well grounded in all the most useful branches of the mathematics, and know how to apply them in practice; he should understand natural philosophy and architecture, have a good notion of all kinds of handicraft works; and above all things, be well versed in mechanics.[28]

Romans's flawed plan would not stand up to this test and would be the first step in his undoing, and in the near term, that of the Highlands as well.

Despite Romans's finely crafted drawings and detailed plans, his apparent inexperience as a military engineer led him to choose poor locations for his major works. Had he consulted or remembered the contents of prominent published treatises on fortifications, such as those of Muller, Sebastien LePrestre de Vauban, or J. C. Pleydell, he would have noted their caution to practitioners to be careful about their "the choice of a proper situation" (Muller) and "to make use of every advantage of ground" (Pleydell).[29]

In "his choice of situation," Romans accepted too literally the location on Martelaer's Rock proposed by Tappen and Clinton rather than surveying and tracing out the best site himself, using the supposed expertise for which he was being paid. Close inspection of the Clinton-Tappen map indicates that

26. Romans, *Natural History*, 1.

27. Muller, *Practical Part of Fortification*, 128–29.

28. Muller, *Practical Part of Fortification*, 123–24.

29. Pleydell, *Field Fortifications*, vi, https://archive.org/details/bim_eighteenth-century_an-essay-on-field-fortif_1794/page/n5/mode/2up; Muller, *Elementary Part of Fortification*, 197, https://archive.org/details/atreatisecontaiooconggoog/page/n278/mode/2up?q=choice; Vauban, *Manual of Siegecraft*, 157; and *New Method of Fortification, as Practised by Monsieur de Vauban*, 25; Stevenson, *Military Instructions*, 9; Muller, *Practical Part of Fortification*, 124.

Romans was conforming literally to the wishes of the Provincial Congress in its directive to "erect immediately" the fortifications recommended by the Clinton-Tappen committee. He therefore planned the main work for the location marked "A" on the Clinton-Tappen map and also planned a fortification for the west point at "B." The extra 100 troops recommended in the Clinton-Tappen report for "A" implied that its authors attached a greater degree of importance to the "post" on Martelaer's Rock; Romans planned accordingly.

The Provincial Congress had, however, hired Romans for his purported expertise as a military engineer, and he should have taken as his first task an assessment of the original plan based on his own observations of the actual terrain. The commissioners made this very point in their first written critique of Romans's work on 10 November 1775: "The superficial view you say you took of the ground, when you first came up here, was a great errour. It should have been minutely examined, to have made a proper estimate of works to be erected here."[30] He had demonstrated in his initial proposal that he did not feel totally bound by the opinion of "some gentlemen, not well enough versed in the science" because he had himself found a spot a short distance to the east of the one selected by the committee.[31] This meant that he must have sensed the inadequacy in fortifying position "D"—the Grand Bastion—by itself because he added some works of his own at "B" on Plan No. 2 about one-eighth of a mile to the east of "D." Had this position been completed as planned, it would have at least placed artillery fire on the river bend.

Most remarkably, because Romans decided to fortify Martelaer's Rock first, he essentially ignored the second site Clinton and Tappen had chosen on the dominating heights at West Point less than one-half mile away. In his book, Stevenson had pointedly warned against precisely such a blunder of allowing commanding ground to dominate a position. This was the very book that Romans owned and presumably had read.[32] Even the small single blockhouse and battery that he had planned for the site would have been insufficient to prevent the enemy from placing artillery there to fire down at the fortifications on Martelaer's Rock, making the latter untenable. As the finale, both problems were exacerbated by Romans's failure to design and

30. Bedlow, Lawrence, and Grenell to Romans, 10 Nov. 1775, Force, *American Archives*, 4:1361.

31. Romans to the NYCS, 14 Sept. 1775, Force, *American Archives*, 3:735; Papers of the Continental Congress, USMA Library, 278.

32. "He must take care not to be commanded by any neighboring heights," Stevenson, *Military Instructions*, 10.

to build outlying redoubts or any defensive positions whatsoever to provide security against an overland attack from the rear and higher ground on either side of the river.

Resulting from the facts of geography, a third defect—the most immediate as far as the purpose of the fortifications was concerned—was that out of all the artillery firepower included in his plan (sixty-one guns), only twenty-four, or roughly forty percent, would be capable of covering the bend in the river. And among that lesser number, none was of sufficient caliber to damage a large vessel effectively, even though Romans himself recognized that heavy cannon—18-, 24-, and 32-pounders—were most appropriate for holing attacking ships. The New York Provincial Congress had authorized the use of the cannons from the Grand Battery of New York City in the fortifications of the Highlands on 22 August 1775.[33] Thus in Romans's plans, ships sailing to the Grand Bastion would not be exposed to most of the available firepower until they had passed the crucial bend of the river and were again underway, regaining headway and speed.

The value of the S-turn at West Point was that ships would necessarily lose all their headway, becoming almost motionless as they negotiated the first bend of that turn. At that point, the correctly massed fire of American artillery, even considering the inaccuracy of the cannons of the eighteenth century, would have mauled an enemy vessel. With a log boom or chain stretched across the river from the northeastern tip of West Point to Constitution Island to inhibit renewed forward progress, ships would be virtually trapped and in mortal jeopardy. Romans's plan, however, would have positioned most of the guns so that their fire would be masked or blocked by the west point as a ship approached the turn.

The result of Romans's design would have been that most of the matrosses (cannoneers) in the first battery constructed (Romans's Battery) would have

33. New York, *Provincial Congress*, 1:113, https://archive.org/details/journalsofprovino1newy/page/112/; Romans, "Remarks," minutes, 16, 17 Oct., 1775, NYPC, Force, *American Archives*, 3:1294. John Muller advocated 24-, 32-, and 42-pounders "to prevent enemy's ships from passing by"; he did point out, however, that at "a proper distance"—close—"there is no reason to fear but that these small calibers are as useful as any others," *Treatise of Artillery*, 59, 63, https://babel.hathitrust.org/cgi/pt?id=nyp.33433009107370&seq=9; Bruce Bliven Jr., in *Under the Guns: New York: 1775–1776*, 35, wrote that there were twenty-one naval 12- and 18-pounders in the Grand Battery in front of Fort George; Henry Knox inventoried the cannons and mortars in the City of New York and reached a total of 121 cannons and 19 mortars, "A Return of the disposition of the Cannon, and of ten Companies of the Continental Regiment of Artillery, and one Colony Company of Artillery, commanded by Captain Hamilton, in and about the City of New-York," Knox to Washington, 10 June 1776, Force, *American Archives*, 6:920–21.

a vessel in their sights for only a few moments as it regained speed coming out of the first turn, probably not long enough to pierce the wooden ship sufficiently to sink it. Romans's plan also failed to include the critical water obstructions (booms) recommended by the Clinton-Tappen report.

Finally, fieldworks located at the future sites of Gravel Hill Battery on Constitution Island and at Fort Arnold on West Point, near where Romans himself had drawn a blockhouse and batteries, would have confronted substantive problems of terrain and firepower (Image 2.4). Romans would have done well to have remembered or read Pleydell's admonition in 1768 that "an hundred men properly posted, and entrenched according to rule, can effect more than a thousand, who have taken up a wrong position."[34] Investigating committees would not, however, miss this point and would zero in on the limitations of the sites chosen by Romans.

Romans would react to the pressure of mounting criticism and by November 1775 would begin to deviate materially from his plan devised in August and September. He altered the "southwest" curtain nearing completion to the west of the blockhouse from the bastioned trace originally planned to a single curtain and made it somewhat longer than the September version. He also added a magazine to the northwest corner of this work.[35] Romans further modified his plan sometime in late autumn and drafted a document that was a combination map, report of construction completed, and plan of future work (see Appendix B).[36] In his new design, he abandoned the idea of an enclosed Grand Bastion. That was the end of Fort Constitution as Romans had originally conceived it, for it would never be completed as it was originally drawn. In its place, he indicated a main curtain with fourteen cannons ("a wall") of 200 feet (the nearly completed southwest curtain, "DE" on the map), and two "flankers," the southernmost with six cannons ("EF" on the map), and perpendicular to it on the eastern side was a curtain ("FG" on the map) that was to be 200 feet in length with fourteen heavy cannon;

34. Pleydell, *Field Fortifications*, ix.

35. Romans's "Plan No. 3" is contained in Force, *American Archives*, 3:736—37, 4:1051; Bayard, Bedlow, Grenell, and Lawrence to the NYPC, 11 Nov. 1775, in New York, *Provincial Congress*, 2:94.

36. Romans, "Plan of a part of Hudson's River." While the Livingston-Langdon-Paine Committee report did not mention the document, its mention of the "South Bastion" indicates that Romans discussed some of his concept in November; the committee of Nicoll, Palmer, and Drake definitely referred to the "Plan" the following month. Romans therefore probably drafted the plan after the first committee made their criticisms known to him and the commissioners.



Image 2.4: "Plan of a part of Hudson's River Near & about the Fortifications now erecting in the highlands." See Appendix B. (Courtesy of the Archives and Special Collections, United States Military Academy Library.)

this battery would command "the Bay, furnishing a most terrible Crossfire with the Battery's H [to be called Gravel Hill] & I [on the eastern shore with four heavy cannons] so as to make it totally impossible For a vessel to Stand it." In addition, he proposed a small battery and blockhouse on an eminence later known as Hill Cliff (shown as "L" on the map), and a larger battery of ten heavy cannons at Gravel Hill. The latter was obviously in response to criticism that enemy ships could not be taken under fire from the existing batteries until they rounded the west point (known today as Gee's Point). Romans planned other batteries across from and below West Point; however, the works previously planned for the Plain on West Point itself appear to have been abandoned.



Image 2.5: An enlargement of Romans's fortifications from "Plan of a part of Hudson's River Near & about the Fortifications now erecting in the highlands." (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

Having picked the wrong place, with all the associated problems, to begin his work, Romans next ignored or misunderstood the command relationship established by the New York Provincial Congress when it appointed commissioners "to act, manage, and direct the building and the finishing" of the fortifications. The arrangement should have been clear since the commissioners and not the Congress had first hired Romans, and the Congress had initially made no provision for an engineer.[37] On 8 November, Romans acknowledged that "the power lies with you, gentlemen. . . . I understood their [the New York Provincial Congress and Committee of Safety] intentions were, that I should give you my advice, and therefore consider myself in duty bound to be content under your direction of affairs in every particular."[38] Vauban had warned in his writings that members of his profession were often "forced to follow someone else's opinions and work at strange notions."[39]

Despite Romans's obvious place in the pecking order as subservient to the commissioners, serving, in his own words, without "written appointment nor instructions," he consistently proved himself incapable of working harmoniously with the men the New York Provincial and Continental Congresses ultimately held accountable for progress in the Highlands. A week after acknowledging his subordinate relationship to the commissioners, Romans asserted, blatantly and unequivocally, the precise opposite to the New York Committee of Safety. In seeking the position of Engineer for New York and a commission as a colonel, Romans demanded that the commissioners consult him in "every thing," and upon the approval of the plan, as engineer, "his word is law."[40] When the commissioners had asked the Committee of Safety if they were "under Mr. Romans's direction," that body reminded them that the agents had sought his assistance and that his role was to "give you his best advice and assistance, as an engineer."[41] Hoping that the group could work together, the New York governing body would not move to solve the dispute over command directly until December.

37. Minutes, 18 Aug. 1775, NYPC, Force, *American Archives*, 3:535.

38. Romans to Commissioners, 8 Nov. 1775, Force, *American Archives*, 3:1358.

39. Vauban, *Manual of Siegecraft*, 168.

40. "The Petition and Memorial of Bernard Romans" to the NYPC, 15 Nov. 1775, Force, *American Archives*, 3:1363, 1367.

41. NYCS to Commissioners, 30 Sept., 12 Oct. 1775, Force, *American Archives*, 3:919, 1283.

To his ultimate regret, Romans stubbornly or pridefully clung to the view that he was the "director" or "projector" of construction.[42] Perhaps fearing opposition from Samuel Bayard, who had been with Clinton and Tappen, he did not show his original plan to, nor coordinate it with, the commissioners. He delivered it directly to the New York Committee of Safety, which undermined the authority of their own agents by forwarding the very impressive drawings and estimates to the Continental Congress rather than demanding the commissioners' prior approval.[43] This combination of Romans's arrogance and the committee's blunder led to increasing animosity, disagreements over the distribution of labor (116 workmen) and construction methods, and finally "a paper war" (Romans's term) between the fully estranged principals of the project—Romans petulantly writing from his blockhouse and the commissioners isolated in their office ("room") in the nearby storehouse to the rear. In one of the opening volleys, Romans called their initial plan "a very lame one" and wrote that, although he and Commissioners Bedlow and Grenell had agreed to "some variations in our distribution of labourers and masons," the arrangement was "still very absurd." Reiterating his refusal "to be an overseer under you," he finished by defining the roles that he thought the respective parties should fulfill: "you must seek such submissive engineers elsewhere. If I execute my plan, which is approved of, I have no business to consult you any further than that you must find me people and pay them. If, in that case, I do not comply with my enterprise, then is your time to disapprove and complain, but not before."[44] This was not the first time, nor would it be the last that Romans would show

42. "The Petition and Memorial of Bernard Romans" to the NYPC, 15 Nov. 1775, and Romans to Commissioners, 16 Nov., Force, *American Archives*, 3:1363, 1367.

43. Minutes, 25 Sept. 1775, New York, *Provincial Congress*, 1:158—59; NYCS to the CC, 19 Sept. 1775, Papers of the Continental Congress, USMA Library, 41; Berrien to the Commissioners (?), 21 Sept. 1775, Phillips, *Notes*, 112.

44. The exchange of correspondence between the Commissioners and Romans may be found in Force, *American Archives*, 3:1355–67, and Sheffield, *The Fort That Never Was*, 13, C-1–C-12. They exchanged views on the distribution of masons, laborers, and miners, the construction of the blockhouse, the responsibilities of the steward, and the need for oxen and gunpowder, point by point. Palmer wrote that the commissioners were still working out of the Bunn farmhouse, *River and the Rock*, 41; John Grenell's map from Nov. 1775 shows at "E" "A Storehouse & Commissioners Room," "Hudson River highlands from Polyphemes Island south to lower end of Tappan Bay below Dobbs Ferry and Corbets Point," Jared Sparks Collection, 1:525, 526, Olin Library, Cornell University. Romans drew the storehouse in "Plan of a part of Hudson's River Near & about the Fortifications now erecting in the highlands," USMA Library. An enlargement of Grenell's map and Romans's "Plan" are also published in Sheffield, *The Fort That Never Was*, 6–7, 13, and Figures 4, 5, 8.

his difficult personality.[45] In the meantime, there was no unity of command, and working conditions proved difficult.

A final criticism of Romans's plan for Fort Constitution was that it was too grandiose. He envisioned that the Grand Bastion would have walls 30 feet thick, 18 feet high, and 500 feet long. Underestimating both the construction time and the costs, it became increasingly evident that the entire project was too massive for the time and funds available.[46] Muller had pointed out that a major consideration in the planning of a fortress must be "The expence necessary in the building of it" to avoid the possibility that "instead of being an advantage, it becomes a burthen to the nation."[47] Tappen and Clinton had originally estimated that the cost of their two proposed posts would be about £1,500; Romans's initial estimate was more than three times that amount.[48] Cost would be a major bone of contention between the engineer and the commissioners; Romans accused the commissioners of letting their concern for "the pecuniary affairs of their Country" lead them "into such methods of saving as a little experience will soon convince them and all the concerned are very expensive."[49]

The location of Martelaer's Rock contributed to the problem of maintaining a reasonable budget. The £4,250 advanced by the Provincial Convention disappeared within some three months. The commissioners had to pay artisans and laborers from the "country" as well as New York City, procure materials from the surrounding area, and then ship them to the building site. John Berrien would have to pay exorbitant prices for logs because the local

45. Romans to Commissioners, 8 Nov. 1775, Force, *American Archives*, 3:1358. Captain Mott of the Connecticut militia had commented on this in his journal while en route to Fort Ticonderoga in May 1775: "Mr. Romans left us and joined no more; we were all glad, as he had been a trouble to us, all the time he was with us." Philip Schuyler would later prefer court-martial charges against Romans, now the commander of a Pennsylvanian company of matrosses, in Apr. 1776 during his march to the Canadian Department; Diamant, *Bernard Romans*, 52, 123–26; Phillips, *Notes*, 52.

46. Romans's "Estimates and Expenses," 18 Sept. 1775; and "Estimate of the Expense that will accrue in the finishing the Fortifications in the Highland, laid before the Committee of Safety, in New-York, on the 2d Oct., 1775," Force, *American Archives*, 3:733–34, 1358–59, respectively, https://babel.hathitrust.org/cgi/pt?id=mdp.39015011821371&seq=441 and Nicoll-Drake-Palmer Report, 14 Dec. 1775, Force, *American Archives*, 3:733–736, 4:422. See Appendix A.

47. Muller, *Practical Part of Fortification*, 130.

48. Romans's "Estimate of the Expense," 2 Oct. 1775, Force, *American Archives*, 3:1358–59.

49. "The Petition and Memorial of Bernard Romans" to the NYPC, 15 Nov. 1775, Force, *American Archives*, 3:1364.

area, according to Romans, was "miserable timber country; even fascines are with more difficulty got than stones."[50] The Provincial Congress added to these burdens by increasing the requirements for timber even further. Overly optimistic about construction, it assigned more troops for winter quartering in the Highlands and directed the construction of more barracks to accommodate them.[51] Had the results of Romans's labor been more evident to the many observers sent to evaluate progress, the expense might not have been a major factor in his undoing, as the later expenditures for the fortifications at West Point suggest. Brigadier General William Alexander, known as Lord Stirling, would summarize the issue very succinctly in his report of 1 June 1776: "Mr. *Romans* has displayed his genius at a very great expense and to very little publick advantage."[52]

Combining these monetary factors with the military defects in the plan resulting from the locations that Romans had chosen for the works and the views that he had expressed of the relationship that should exist between himself and the commissioners, Romans presented his superiors with ample ammunition to fire at the very man whom they had hired. Believing that they had been unforgivably snubbed, the Commissioners wrote to the New York Committee of Safety deriding Romans's plan as "not sufficient." While they offered no suggestions for improvements of their own at the time, they did feel that had they been consulted, they could have given the Committee of Safety "full satisfaction relative to the situation of the ground." Left standing, Romans's flawed plan, which the commissioners thought was "only a temporary expedient," would convince critics of the impracticality of the entire scheme for Fort Constitution and would carry over into its flawed execution.[53] Yet Romans's plan was the blueprint to which he and the commissioners were committed, and their challenge was to make it reality. Silas Deane of Connecticut summed up the position of the Continental Congress

50. Romans, "Remarks," 16 Oct., minutes, 17 Oct. 1775, NYPC, Force, *American Archives*, 3:1293—1294.

51. Berrien to NYPC, minutes, 13 Oct., (£100) 30 Aug., (£250) 6 Sept., (£500) 13 Oct., (£200) 20 Oct., (£1,200) 2 Nov., (£1,000) 6 Dec., (£1,000) 7 Dec. 1775, NYPC, Force, *American Archives*, 3:567, 880, 1284, 1294, 1299, 1311, 4:388, 390—91.

52. Lord Stirling to Washington, 1 June 1776, Force, *American Archives*, 6:672—78.

53. Commissioners to NYCS, 25 Sept. 1775, Force, *American Archives*, 3:795—96. Whether or not the commissioners saw the real weakness in Romans's plan or whether this disapproval came as a result of being left out of the planning is not clear; the commissioners failed to express why they thought Romans's plan was weak, and they failed to offer a better solution.

and almost everyone else involved at the moment: "they have employed an engineer [Romans]. The people and he agree in the spot and the plan. Unless we rescind the whole we should go on; it ought to be done."[54]

54. Minutes, 6, 7 Oct., CC to NYPC, 7 Oct. 1775, Ford, *Continental Congress*, 3:280–82, 485–87, https://www.loc.gov/resource/llscdam.lljc003/?st=pdf&pdfPage=229; Force, *American Archives*, 3:1891–92; New York, *Provincial Congress*, 1:172.

CHAPTER 3

FORT CONSTITUTION

By the late fall of 1775, the Continental Congress and the New York Provincial Congress had approved a plan to obstruct the Hudson River that Bernard Romans, as the engineer, had devised and the commissioners for New York had reluctantly been forced to accept. Despite the many problems with the plan and the dysfunctional relationship among the principals, construction at Martelaer's Rock could now proceed. Two key questions confronted the agents of the congresses and the engineer: Could they actually construct the fortifications conceived and sketched by Romans, and would these works fulfill the requirement to deny the Hudson River to the British? By January 1776, the Continental Congress and the New York Provincial Congress would answer no to both questions and declare Romans's Fort Constitution a failure.[1]

At a time when most Americans were still offering toasts to the Crown, naming a fort for the British Constitution showed the hope that many Americans held out for being granted the rights of Englishmen that they increasingly claimed had been abridged by Parliament. In keeping with the conservative spirit of the rebellion, the Committee of Safety did not want to violate the traditional rights of Englishmen, particularly not the right to private property. The Committee assumed that Martelaer's Rock was the property of Beverley Robinson, who owned considerable land in the Highlands from his marriage to Susannah Philipse, daughter of the wealthy Philip Philipse, a New York merchant, justice of the Supreme Court, representative from Westchester County to the General Assembly, and holder of the Highland or Philipse Patent. The committee, therefore, wrote Robinson on the same day that it forwarded Romans's plan to Philadelphia (19 September 1775) and asked to purchase the island "to erect a fortification on your land, opposite to the *West Point*, in the Highlands . . . [and] request you put a reasonable price upon the whole point of dry land or Island, called *Martelaer's*

1. In the Commissioners' letter of 25 Sept. 1775, they had mentioned "Constitution Fort," the first time that name appeared anywhere in relation to the Grand Bastion; Romans revised this name to its final form, "Fort Constitution," in his letter to the Commissioners of 8 Nov.; Force, *American Archives*, 3:795, 1355. The Commissioners' name for the principal fort would later become the name for the entire island (the present Constitution Island).

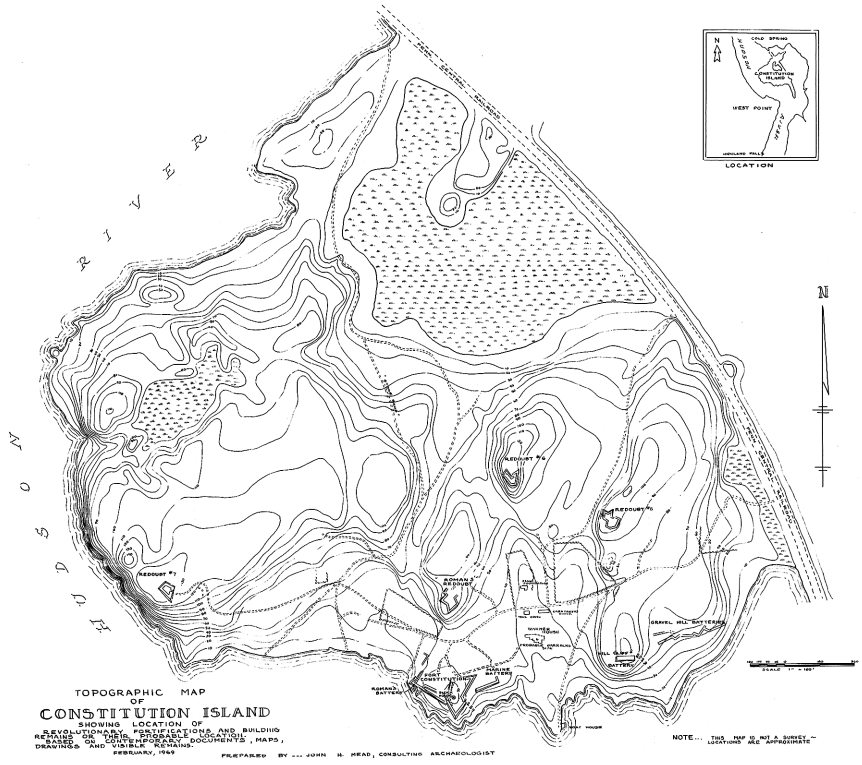

Image 3.1: *Topographic Map of Constitution Island Showing Location of Revolutionary Fortifications and Building Remains or Their Probable Location*, by John H. Mead, "Archaeological Survey of Constitution Island." (Courtesy of the Archives and Special Collections, United States Military Academy Library.)

Rock Island; which price, if they approve of it, they are ready to pay you for it."[2] Robinson informed the Committee on the second of October that the land in question, a part of the Highlands Patent, belonged to a Mrs. Margaret Ogilvie, the widow successively of Philip Philipse and the Reverend John Ogilvie, and to her children. He wrote that, had the land been his, "the public should be extremely welcome to it. The building a fort there can be no disadvantage to the small quantity of arable land on the island."[3]

The Committee apparently chose to handle the matter off the record, for there is no indication that Mrs. Ogilvie received the same consideration given Robinson, nor did anyone seem concerned about the use of Mr. Bunn's

2. NYCS to Robinson, 19 Sept. 1775, Force, *American Archives*, 3:902; Pelletreau, *History of Putnam County*, 19, 23, 29, 31, 40–41.

3. Pelletreau, *History of Putnam County*, 35, 576; Robinson to Haring, 2 Oct. 1775, Force, *American Archives*, 3:1274.

house on the island. Beverley Robinson would eventually cast his lot with King and Mother Country like so many others, who would, at first, support a rebellion against an unjust Parliament, but not the traitorous disloyalty to Crown that was fundamental to independence after 4 July 1776. Robinson's name would be prominent at the British victory over Forts Montgomery and Clinton in October 1777.

By early October sufficient construction material and cannons had arrived at the island to give the commissioners enough confidence to begin controlling the passage of ships. Only vessels refusing to "lower the peak of their mainsail" as they rounded the turn were assumed to be unfriendly and were then hailed or boarded. In mid-October Captain Robert North decided to challenge the commissioners' authority to impose such a rule. Refusing to dip his mainsail and keeping boarders off his craft at gunpoint, he continued south to New York City where he expressed his annoyance to the Provincial Congress. That body censured the commissioners for their procedures, with the result that John Hanson resigned, vowing never to return. Samuel Bayard and William Bedlow remained, but their frustration and sense of helplessness must have increased.[4]

While the commissioners had six 9-pounder cannons on hand, the lack of a garrison undermined their credibility as a military force. Although the New York Provincial Congress had directed Colonel John Lasher to have on call for the commissioners "a Guard" of twenty-four men from his battalion of militia from the County of New York, the commissioners apparently never exercised their authority to have the troops move to the Highlands. Since June, the Congress had been trying to get Major General David Wooster to send some of his troops from Connecticut and, later as a brigadier general in the Continental Army, at least a company to Martelaer's Rock. As late as 25 September, after royal Governor William Tryon, William Bayard, and Major John Bayard had extensively questioned Captain Thomas Palmer at Haverstraw about the fortifications, they had asked the Committee of Safety, "[S]hould we have a guard?" Until that point, they were dependent upon a system of passes declaring the bearers to be "friends to the liberty of *America*" and upon the Minutemen of New Windsor as a reaction force.[5]

4. NYPC to Commissioners, 17 Oct. 1775, Bayard and Bedlow to NYPC, 15 Oct., Hanson to NYPC, 18 Oct., NYPC to Commissioners, 19 Oct., Force, *American Archives*, 3:1290–91, 1293, 1295–97.

5. Bedlow, Bayard, and Hanson to NYCS, 29 August, and minutes, 29 Sept. 1775, NYCS, Force, *American Archives*, 3:65 and 915.

By mid-November, Captain John Hulbert's 3rd (Suffolk County) Company and Captain John Grenell's 5th (Suffolk County) Company of Colonel James Clinton's 3rd New York (Continental) Regiment would respond to the order of the New York Provincial Congress of 3 November and join Captain Benjamin Ledyard's 9th Company, of Colonel Alexander McDougall's 1st New York (Continental) Regiment, at Fort Constitution. These three under-strength companies totaling only 100 men were the Continental establishment's first investment in the Highlands. On 28 October, the Continental Congress directed that New York raise a company of matrosses with sixty-eight privates to man the artillery at the fort.[6]

Commanded respectively by Captain John Hanson, Grenell, and then starting on 16 January 1776 by Colonel Isaac Nicoll of the Minutemen of Orange County, the initial increment of Continentals and then Nicoll's contingent, proved to be enough for the time being because Great Britain's attention was yet focused on Boston; even the Royal Navy could not seize "the passes of the Hudson's River" as the Earl of Dartmouth had suggested to Governor William Tryon on 1 July. This did not stop Major General Henry Clinton from proposing on 1 February 1776 that the British before summer mount a "stroke" from Canada "to seize their works at the instant they are completed."[7] With such attacks possible, it is well that Continental troops reinforced by local militiamen would man the emerging works. By December, in fact, Lord Stirling was preparing to send six companies of some 900 men to bolster the small garrison, causing the commissioners to figure out how to build barracks and amass supplies for 1,000 men.[8]

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6. The Continental Congress (CC) asked the NYPC "to apply" to Governor Trumbull for additional troops from Connecticut; minutes, NYPC, 22, 29 Aug., 13, 16 Sept., 3 Nov. 1775; Schuyler to CC, 3 July, Wooster to NYCS, 15 Sept., Commissioners to NYCS, 25 Sept., Committee of the County of Westchester, 28 Sept., Nicoll-Drake-Palmer report, 14 Dec., Force, *American Archives*, 2:1536, 3:542, 565, 734–35, 794–95, 896, 898, 1323, 1657. The company had an establishment of one captain, one captain-lieutenant, one first lieutenant, one second lieutenant, a lieutenant "fire worker," four sergeants, four corporals, eight "bombardiers," sixty-eight matrosses, one drummer, and one fifer, as per Force, 3:894; see also minutes, 16 June, 10, 28 Oct., 23 Nov. 1775, Ford, *Continental Congress*, 2:95, 3:282, 309, 364; O'Callaghan and Fernow, *Documentary History of the State of New-York*, 15:526–28.

7. Henry Clinton, 1 Feb. 1776, "Plan for attacking the Hudson Highlands," Sir Henry Clinton Papers, Clements Library.

8. Minutes, 11, 23 Nov. 1775, Ford, *Continental Congress*, 3:343, 364; minutes, 2 Nov. 1775, New York, *Provincial Congress*, 1:191; Hancock to NYPC, 28 Oct., Stirling to Hancock, 5 Dec., Commissioners to NYPC, 7 Dec., NYPC to Hancock, 8 Dec., Nicoll-Drake-Palmer report, 14 Dec., "Instructions to the Commissioners," 16 Jan. 1776, Force, *American*

Even as the Continental Congress considered the troops required for the garrison at Fort Constitution, it began to show increased concern for other developments in the Highlands. Questions concerning wasted time, the possibility of constructing simpler forts more quickly, or even changing the location of the main fortification were all raised. The Continental Congress sent a message to the New York Provincial Congress addressing these issues and stressing its desire to obstruct the river if "practicable."

Receiving the message passed on by the Provincial Congress, Romans and the commissioners displayed a rare degree of cooperation in their response to the Continental Congress on 16 October. Perhaps Romans wanted to avoid any agitation that might adversely affect his current request for appointment to the rank of colonel and an engineer's title and pay. Whatever the reason, he and the commissioners responded jointly that within three weeks, the works would "be of sufficient strength to stand the brunt of as large a ship of rank as can come here, and two or three small fry." As a part of this defense, Romans promised by "*Saturday* next to be able to mount from twelve to eighteen cannon, eight of which, at least, might be heavy ones." Based on the cannons available at the time, Romans would have to settle for 9-pounders.[9]

Congress even broached the possibility of constructing more batteries on the West Point side of the river directly across from the western tip of Constitution Island at a place called Moore House.[10] Locally known as "Moore's Folly," the fancy red country home that originally belonged to New York merchant John Moore and his family was situated on level ground almost at water level not far from the foot of Crow's Nest Mountain. While son Stephen Moore would serve as an active Whig, later in the war his comrades would evict other family members living there for their Loyalist sentiments, and the house would serve either as quarters for the engineer at West Point or as headquarters for General Washington. Romans and the

Archives, 3:1315–16, 1901, 4:184–85, 254–55, 391, 421, 1051; map, 14 Dec. 1775, Papers of the Continental Congress, USMA Library, 280–83. Dartmouth to Tryon, 1 July 1775, Davies, *Documents of the American Revolution*, 11:30.

9. The original cannons at Fort Constitution came from twenty-one taken by Captain John Lamb from the Battery of New York City, minutes, 22, 28 Aug., 17 Oct. 1775; NYPC to Commissioners, 12 Oct., Romans, "Remarks," 16 Oct., NYPC, Lord Stirling reported thirteen 9-pounders at Fort Constitution on 29 May, enclosure No. 6. Stirling to Washington, 1 June 1776, Force, *American Archives*, 3:260, 542, 1283, 1293–94, 6:678; minutes, 17 Oct. 1775, New York, *Provincial Congress*, 1:177.

10. CC to NYPC, 7 Oct. 1775, Force, *American Archives*, 3:1891–92; New York, *Provincial Congress*, 1:172.

commissioners agreed that a battery at the house was unnecessary, nor could it have been completed before winter. As of 16 October, despite the fact "that in four days one hundred and fifty perches [each perch was 16½ feet long by 18 inches high by 12 inches wide] of wall has been properly laid by twelve masons," it was becoming apparent that none of Romans's fortifications would be completed before winter, so no new projects were needed.[11]

As construction inched forward at Fort Constitution, Romans responded to the query of the Continental and New York Congresses and initiated consideration of another site, one that would soon replace Fort Constitution as the main defensive position in the Highlands. While Romans could not have known that his suggestion of "Pooploop's Kill" (Popolopen Creek) would eventually lead to the eclipse of his own works, he made the first convincing case for a post there:

> But at Pooploop's Kill, opposite to Anthony's Nose, it is a very important pass: the river narrow, commanded a great way up and down, full of counter currents, and subject to almost constant fall winds; nor is there any anchorage at all, except close under the works to be erected.[12]

Dissatisfaction with the work at Fort Constitution would soon cause all concerned to focus their attention on this and other new sites.

After the Continental Congress approved Romans's plan in early October, relations between engineer and commissioners grew steadily worse. Nonetheless, work progressed, if slowly, and soon some tangible results were seen. In the commissioners' letter to the Provincial Congress on 11 November 1775, they reported the work finished so far as a blockhouse with eight 4-pounder cannons "in the upper story" and a barracks (eighty by twenty feet). Other work was nearing completion: "The curtain of the intended fort, of two hundred feet in length, will be finished up to the parapet in a few days, weather permitting," including its wooden platform upon which the cannons would rest, and a second barracks "of one hundred feet by twenty, under cover, floored, and completed, all to the stacks of chimneys and glazing."[13]

Aside from the curtain, the Grand Bastion around the blockhouse was "but little advanced," and completion of a powder magazine "in the northwest corner of the curtain" depended on the procurement of adequate bricks.

11. Romans, "Remarks," Force, *American Archives*, 3:1294.

12. Romans, "Remarks," Force, *American Archives*, 3:1294.

13. Commissioners to Woodhull, 11 Nov. 1775, Force, *American Archives*, 3:1362.

Rain had delayed the work thus far, and winter weather would make the conditions even worse. To his credit, Romans, realizing that he needed to be able to command "the river down below the *West-Point*," had now decided to build a second blockhouse 200 yards to the southeast of the first one.[14] Romans's concept was becoming reality in stone and timber, but only slowly.

In approving Romans's plan, the Continental Congress had noted that it was an ambitious project to complete in the remaining good weather, and it was desired that the Hudson River be denied the British before the new year. By early November it was becoming alarmingly clear to those closely associated with the project that Romans's plan could not be completed before winter halted construction. Romans feared that "If we keep not the work going, we will, in spring, again be new beginners."[15] This realization only exacerbated the ill feeling between Romans and the commissioners and resulted in the "paper war" becoming a thinly veiled attempt by Romans and the commissioners to absolve themselves of any responsibility for the failure to complete the works that season.[16]

Whether or not the Continental Congress knew of the dissension in the Highlands, fortuitously, if not coincidentally, it appointed a committee consisting of John Langdon, Robert Treat Paine, and Robert R. Livingston on 8 November to work with Major General Philip Schuyler to prepare forces for an expedition into Canada and to ensure that the forts at Ticonderoga and Crown Point were in "such a posture of defence as the state of our affairs may require." As an additional task, these gentlemen were to "take an accurate view of the state of our fortifications upon Hudson's river, and make a report of it as soon as it can conveniently be done."[17] An outside body would now judge the workmanship of the commissioners and their engineer.

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14. Commissioners to Woodhull, 11 Nov. 1775, Force, *American Archives*, 3:1362; New York, *Provincial Congress*, 2:94. The changes in this report show up in a map drawn by Romans, probably after the visit of the Livingston, Langdon, and Paine Committee. Romans, "Plan of a part of Hudson's River." Romans's "Plan" is also published in Sheffield, *The Fort That Never Was*, 6–7 and Figure 5, USMA Library.

15. Romans to Commissioners, 16 Nov. 1775, Force, *American Archives*, 3:1367.

16. Force, *American Archives*, 3:1355–67.

17. CC to Livingston, Paine, and Langdon, 8 Nov. 1775, Ford, *Continental Congress*, 3:341; Force, *American Archives*, 3:1914. One can almost be certain that this was a routine inspection of the work in the Highlands. The Continental Congress had approved the plan only the previous month, on 7 Oct., and in that approval had emphasized the need for haste and made several suggestions concerning the type of construction, obstructing the river, and additional batteries; Force, *American Archives*, 3:1891–92. Romans commented on these additional works in a letter dated 16 Oct., defended his use of stone

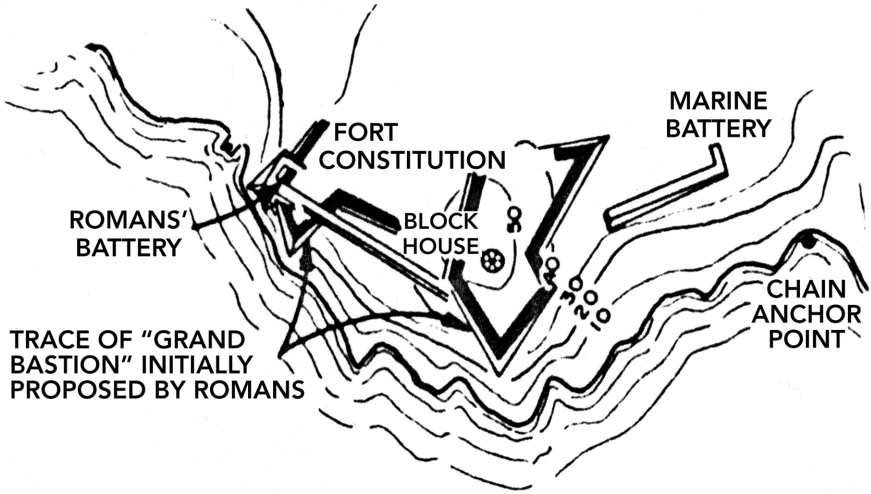

Image 3.2: Enlargement of Romans's Battery and vicinity from *Topographic Map of Constitution Island*, by John H. Mead, "Archaeological Survey of Constitution Island." (Courtesy of the West Point Museum Collection, U.S. Military Academy.)

Arriving at Fort Constitution on 17 November, the committee made as thorough an inspection as it could in a single day. Its members did not like what they saw and stated their dismay in their report of November 23. First, the Committee counted the garrison and the workers, finding only 100 soldiers in two companies and 106 workers. Second, they found "the fort in a less defensible Scituation than we had reason to expect, owing chiefly to an injudicious disposition of the labour, which has hitherto been bestowed on the Barracks, the Blockhouse, & the SouthWest Curtain." The Committee was unimpressed by Romans's assurance that the latter, with its fourteen cannons, would be finished in a week, because its members considered it "very insufficient in itself to answer the purpose of defence; though it is doubtless necessary to render the whole fortification perfect." They argued that it should revert to last priority because it was "the least useful." Even from their cursory inspection, they found that the battery "does not command the reach to the southward, nor can it injure a vessel turning the *West*

instead of timber and fascines, cited the need for heavy cannons, and, ironically, suggested Popolopen Creek as a possible site to place additional batteries. (This site would in a few months receive priority over the works on the island.) Romans's letter was forwarded to the CC on or about 20 Oct.; Romans, "Remarks," Force, *American Archives*, 3:1294. The NYPC had apprised the Philadelphia body of other problems, such as the need for a single commander in the Highlands, the lack of powder, the lack of troops to garrison the works, etc., but did not mention concerns about engineering (Force, *American Archives*, 3:1751–54). Therefore, one can conclude that the committee was not aware of the relatively poor condition of the works on the island until they arrived there.

Point, & after she has got round, a small breeze or even the tide, will enable a ship to pass the curtain in a few minutes."[18]

Livingston, Paine, and Langdon thought that Romans's proposed battery—what they called the "south bastion"—with its planned eleven heavy cannons, had the most promise as "a vessel turning the Point is immediately exposed to its fire." They did note some progress:

> The blockhouse is finished, & has 6 4 pounders mounted in it, & is at present the only strength of the fortress. The Barracks consist of 14 rooms, each of which may contain 30 men, but they are not yet compleated for want of Brick, with which to run up the chimneys.

Finally, they zeroed in on the greatest flaw of all, the location of Fort Constitution itself:

> The Fortress is unfortunately commanded by all the grounds about it, & is much exposed to an attack by Land, but the most obvious defect is, that the grounds on the West point are higher than the Fortress, behind which point an Enemy may land without the least danger; in order to render this Post impassable it seems necessary that this Place should be occupied, & batteries, thrown up on the opposite shore, where they may be erected with little expence, as the Earth is Said to be pretty free from stone, this will indeed render our Works very extensive, but we fear nothing short of it will be sufficient to avail us of the winding of the River.[19]

Romans threw in himself as the wild card when he mentioned that the site at Popolopen Creek was "free from the incoveniency we have mentioned, and where the elevation is much greater." The incomplete state of Fort Constitution, "the importance of the object," and the possibilities of a better location led the committee to recommend that Congress "send some persons, better versed in those matters than we are, to take an accurate survey of the Highlands, and to pitch on those spots on which batteries may be most cheaply, expeditiously, and advantageously raised."[20] Criticized as having designed fortifications that

18. Livingston, Paine, and Langdon to Hancock, 23 Nov. 1775, in Force, *American Archives*, 3:1657–58.

19. Livingston, Paine, and Langdon to Hancock, 23 Nov. 1775, in Force, *American Archives*, 3:1657–58.

20. "Remarks," Force, *American Archives*, 3:1294. Livingston, Paine, and Langdon to Hancock, 23 Nov. 1775, in Force, *American Archives*, 3:1657–58. There were twenty-seven carpenters, sixteen masons, two smiths, and fifty-nine laborers, a clerk, and a steward;

were vulnerable to an attack by land and dominated by higher ground on all sides, especially West Point, Romans and the commissioners now had to decide how to proceed considering the lateness of the season.

If news of dissension in the Highlands had not reached Philadelphia, it had reached New York City. Having read "all the Papers and Letters" between Romans and the commissioners, on 6 December 1775, the New York Provincial Congress appointed from its members a committee of Lieutenant Colonel Francis Nicoll (Albany, 3rd Regiment), Colonel Joseph Drake (Westchester, 1st Regiment), and Colonel Thomas Palmer (Southern Regiment of Minutemen, Ulster), assisted by John Berrien, to "endeavor to accommodate the difference subsisting between the Commissioners for erecting the said Fortifications and the Engineer" and to expedite the work.[21] Investigate they did, rendering their report on 14 December.

In the committee's report, from "Fort Constitution," Nicoll, Drake, and Palmer concluded that Romans had failed to consult adequately with the commissioners and had executed a plan to which they had not agreed. They sought to overcome the limitations of what they had observed by proposing alternative works to Romans's. The three men were convinced that Romans still planned to build an enclosed Grand Bastion, and that in terms of time, money, and effectiveness such a structure would not be practical at that location: "All which we conceive will be impracticable to compleat in Season. Even should the expence be approved of, which in our Opinion would not amount to less than Eight or Ten thousand pounds And when compleated, would not effect any Vessel untill she came abreast with the West Point." Echoing the Livingston, Paine, Langdon report, the committee criticized the location of Romans's works because "none of the Cannon can be pointed so as to obstruct any Vessel in her Passage up, untill She passes the West Point."[22]

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the committee also inventoried the cannons, shot, and powder: "We found at the fortress, eight nine-pounders and six carriages; forty-two six-pounders, and eighteen carriages; sixteen four-pounders and four carriages; five three-pounders, one hundred and one nine-pound shot, one hundred and eighty six-pound shot, one hundred and forty four-pound shot, forty-three double headed six-pound shot, nineteen double headed four-pound shot; cannon cartridges: four hundred of nine-pound, four hundred of six-pound, eighty-eight of four-pound; one hundred and eighty-five pounds of match; one hundred pounds of musket balls; one hundred pounds of grape shot; one hundred and seventy pounds of powder"; also see Sheffield, *The Fort That Never Was*, Appendix D.

21. Minutes, 6, 8 Dec. 1775, NYPC, Force, *American Archives*, 4:388, 394.

22. The Nicoll-Drake-Palmer report, 14 Dec. 1775, may be found in Force, *American Archives*, 4:420–22, with the accompanying map in *American Archives*, vol. 3, between

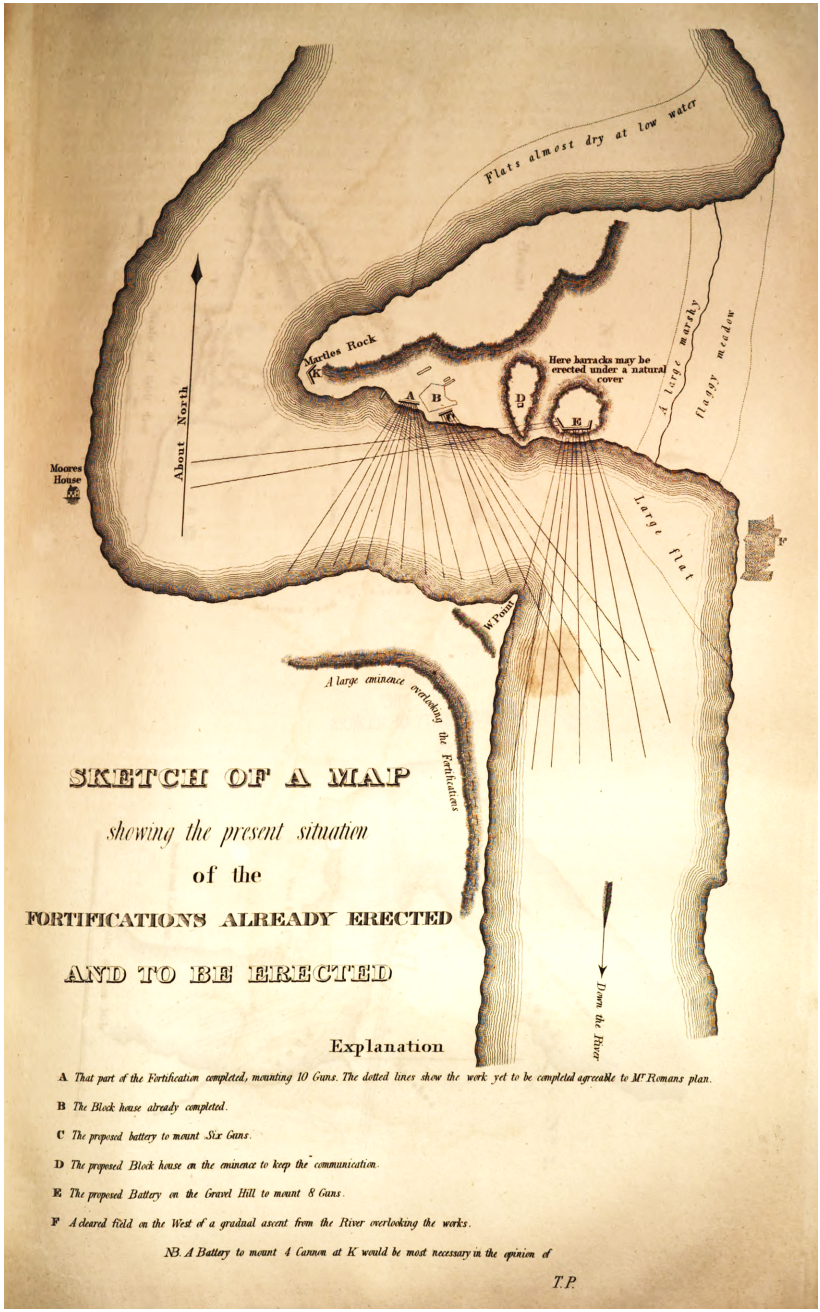

Image 3.3: Facsimile of map accompanying the report of Nicoll, Drake, and Palmer, *Sketch of a Map shewing the present situation of the Fortifications Already Erected and to Be Erected.* (Courtesy of the Library of Congress, Peter Force, *American Archives.*)

Enough yet remains today of the southwest curtain, now called Romans's Battery, to give life to the committee's description. Starting five feet above the river at high tide, the foundation itself rises some twenty feet at the western end and decreases in height as it merges with the cliff face to the east. The 200-foot curtain was a rampart or main wall about eleven feet thick with the scarp face of the exterior revetment of dry-laid stone masonry (stone fitted together without mortar). Masons used mortar to keep the stones in place in the interior revetment. Between the two stone revetments the core of the rampart was stone rubble, the whole acting as a foundation for a wooden floor serving as a platform for the cannons. The front of the timbers of this gun platform rested on the rampart itself, while in the rear they were on mortared stone masonry along the western part of the battery and directly on bedrock along the eastern section. The parapet, comprising earth between timber revetments, with fifteen embrasures or openings for the cannons, was probably close to the same thickness as the top of the rampart, ten feet; based on Stirling's confusing dimensions, it may have risen at least six feet above the stone foundation. The engineer Pleydell in his writings had dictated that a redoubt wall should be at least twelve feet thick so that it could absorb the shock of heavier cannon balls; he noted that a 12-pound ball could penetrate up to eight feet of earth.[23]

As Romans's southwestern curtain evolved into a self-sufficient battery, the engineer built a brick powder magazine with a vaulted ceiling. With

736–37 (second map). I used the original text, as the congressional record changed the spelling of a number of words; also see Sheffield, *The Fort That Never Was*, 12 and Appendix E. The initials T.P. on this map are likely Thomas Palmer's; "LTC Francis Nicoll (1738–1817)—Find a Grave Memorial," https://www.findagrave.com/memorial/92192305/francis-nicoll. Col. Drake, https://archive.org/details/newyorkrevolution01statrich/page/204/mode/2up?q=Drake.

23. Pleydell, in his contemporary manual on field fortifications, stated that the size of shot "determines the thickness of the breastwork; and, indeed, to resist cannon shot, it ought never to be made less than twelve feet. It is sometimes made even fourteen feet thick, when the post is of great consequence" (Pleydell, *Field Fortifications*, 15–16). For details of the state of the construction that they observed and their own recommendations, see Nicoll, Drake, and Palmer to NYPC, 14 Dec. 1775, Force, *American Archives*, 4:420–22. It is plausible that the level gun platform must have been as high as where the eastern end meets the knoll, or roughly five feet higher than the current appearance of the western end; the estimate of the height is based on the plan for Marine Battery, Livingston, Paine, and Langdon to Hancock, 23 Nov., Papers of the Continental Congress, USMA Library, 33–37; and Force, *American Archives*, 3:1657–58. The archaeologist Edward Jelks found in 1971 that only the stone foundation of the battery had survived; based on the evidence, he surmised that a parapet constructed of earth held in place by timber rose above it; Jelks, "Archaeological Excavations," USMA Library, 32–40.

interior dimensions of twelve feet by eighteen feet, the structure, except for the west wall, was lined with bricks twelve and one-half inches thick laid up in English bond. A stairway from the gun platform led down to the magazine with a brick screen protecting its door from flying sparks.[24]

Romans obviously sold the committee on the value of the site at Popolopen Creek that he had mentioned to its members, for they visited there before leaving the Highlands. After walking the ground, the gentlemen were

> clearly of opinion, that this is by far the most advantageous Situation in the highlands for a Fortification; as one Erected on this Point would command the Reach of the River downwards to the Point of the Dunderbergh being the distance of nearly 3 Miles & from the same Point the Reach upwards may be commanded as far, and is environed in its adjacent & contiguous Situations with Marshes & inaccessable Mountains which renders it impracticable for the Enemy to land. We are therefore of Opinion that a battery of 16 or 18 Guns ought to be erected on this Point & that Barracks be erected there to make it a Post of about 150 or 200 Men.[25]

The committee's intent appears to have been to establish a forward post—a battery—rather than an alternative to the works in progress on Martelaer's Rock. Whatever the intent, it had contributed to a growing momentum for change.

The Nicoll, Drake, and Palmer report proved to be very influential, and the commissioners would adopt many of its recommendations. Essentially, the committee recommended that all further work on the Grand Bastion be discontinued, and that only a detached battery be built to the southeast of the blockhouse in lieu of Romans's proposed southeast curtain, labeled "FG" on his new plan. They agreed to fortify the hill approximately 300 yards east of the completed blockhouse (Hill Cliff, labeled "D" on the Nicoll, Drake, and

24. Until archaeologists excavated the magazine in 1972, it had been filled with rubble, its existence virtually unknown since its roof had collapsed. For the powder magazine at Romans's Battery, see Harrington and Harrington, "Excavation of the Powder Magazine and Romans' Battery," USMA Library, 14.

25. Nicoll, Drake, and Palmer to NYPC, 14 Dec. 1775, Force, *American Archives*, 4: 420–22. The "good platform" mentioned in this report referred to an area immediately behind the parapet floored with heavy timber forming a platform for the gun carriages. In more precise engineering terms, it might be called a banquette. A barbet (barbette) battery was a field fortification wherein the cannons fired over the parapet rather than through an embrasure or opening in the parapet. The barracks is cited on his "Plan No. 3" drawn in September and appearing as "A" and "B" on his new plan.

Palmer map in Image 3.3) but thought that a blockhouse without a battery would suffice. They also agreed to the concept of fortifying Gravel Hill but emphasized simplicity of construction.

The committee had also commented on the barracks then under construction behind Romans's Blockhouse. From its report, Romans's new plan, and a map drawn by John Grenell sometime in the late autumn of 1775, it is clear that Romans had built the first barracks, 100 feet long by 20 feet wide, of one and one-half stories, and the storehouse, 80 feet by 20 feet, with a guard room, sometimes used and described as a barracks.[26] The committee judged these buildings (to house some 300 men) to be poorly located because they would immediately be under hostile fire as soon as British ships rounded the west point. If one stands on this location today, their criticism is clearly understood.

The larger building, called Romans's Barracks by the archaeologists who excavated its foundation in the summer of 1971, was found by them to be a substantial structure. It may in fact have been longer than the 100 feet claimed by Nicoll, Drake, and Palmer since the archaeologists could not find either end wall. In his "Plan," Romans showed that it was to be 180 feet in length, and the sketch accompanying Lord Stirling's report in June 1776 substantiates this by showing it as even longer than Marine Battery, which was 140 feet in length. The two extant foundations for the north and south walls comprised undressed stones of differing sizes and weights laid up dry, each some two to three feet thick. In his report, archaeologist Edward Jelks documented two fireplaces and one cross wall foundation.[27] All that remains today is an area covered by brush and trees sprinkled with fragments of bricks.

Workers had just laid the foundation of another barracks, eighty feet long and twenty feet wide (for 160 men) and to be two stories high, slightly

26. John Grenell map, Olin Library, Cornell University. For years, these two sheets were thought to be separate maps, but close inspection by Charles E. Miller Jr. revealed that map 546 had been torn from map 525 at a fold, and they were, in reality, a single map. Map 526 bears Grenell's signature. Photocopies of map 525 showing West Point and vicinity are in the USMA Library. A simplified facsimile may be found in Sheffield, *The Fort That Never Was*, 13. Romans, "Plan."

27. Romans, "Plan"; Jelks, "Archaeological Excavations," USMA Library, 50–55. Jelks was not able to do enough digging to find the evidence that would have confirmed the fourteen rooms reported by Livingston, Paine, and Langdon on 23 Nov. 1775. Stirling's "Plan No. 3," Olin Library, Cornell University; Livingston, Paine, and Langdon to Hancock, 23 Nov. 1775, Nicoll-Drake-Palmer report, 14 Dec. 1775, Stirling to Washington, 1 June 1776, Force, *American Archives*, 3:1657–58, 4:184–85, 421, 6:672–77; map, 14 Dec. 1775, Papers of the Continental Congress, USMA Library, 280–83.

to the west and rear of the western end of Romans's Battery. Thus, it was located behind the hill where the blockhouse stood, and even though it was planned as a two-story structure, would be reasonably well protected from hostile fire until the attacking ships had passed the western end of Romans's Battery. This barracks did not appear on Romans's new plan, but its omission is probably explained by the fact that the requirement for additional barracks was not recognized until early December when the Continental Congress ordered additional forces—up to 1,000 men—under Lord Stirling, to join the garrison. The sketch accompanying the Nicoll-Drake-Palmer report does show the barracks, the foundation of which they had observed before proposing a site for another one behind the battery at Gravel Hill.[28]

The most far-reaching consequence of the Nicoll-Drake-Palmer report was the identification of the high ground north of the confluence of Popolopen Creek and the Hudson for a battery and barracks. Approval of the committee's report by the New York Provincial Congress would have constituted a major change in the fortification of the Highlands, and large sums of money and certain military risks would be involved. The decision was too much for the Provincial Congress. That assembly referred its committee's report to the Continental Congress for consideration and decision. A delegation from New York, including Thomas Palmer and John Grenell, carried the report to Philadelphia during the latter part of December 1775.[29]

Bernard Romans probably knew what the provincial committee would report. Perhaps he had read a draft of its findings. In any event, he was determined to be heard, and on 3 January 1776, appeared before the New York Committee of Safety to present his new plan for the defense of the Highlands. Referred to by the Committee as Romans's "drafts," this plan probably was the combination map and report that he had developed in late November. Romans quickly learned that the question of how to defend the Highlands had been referred to the Continental Congress in the form of the report of Nicoll, Drake, and Palmer. Romans left at once, taking his plan and a letter of explanation from the Provincial Congress. The Continental Congress received him in Philadelphia on 13 January 1776. Unfortunately for Romans, that body had already acted, resolving on 5 January "that no further

28. Nicoll-Drake-Palmer report, 14 Dec. 1775, Stirling to Washington, 1 June 1776, Force, *Archives*, 3:1657–58, 4:184–85, 421, 6:672–77; map, 14 Dec. 1775, Papers of the Continental Congress, USMA Library, 280–83; and Stirling to Hancock, NYPC to Commissioners, 5 Dec. 1775, Force, *American Archives*, 4:184–85.

29. Minutes, 19, 20 Dec. 1775, NYPC, Force, *American Archives*, 425–26, 429.

Fortifications ought to be erected at *Martelaer's Rock*, on the *Hudson-River*, and that a point of land at *Pooplopen's Kill*, on the said River, ought, without delay, to be effectually fortified."[30]

The New York Committee of Safety, again convened in the absence of the full Provincial Congress, received and read the resolution from Philadelphia on 10 January 1776 and on 16 January translated the resolution into work orders for the Highlands commissioners. The commissioners were to remove or redirect all timber designated for additional barracks on the island to the Popolopen Creek area. However, all timber physically on the island and "destined for the line now under construction" would be neither removed nor used until further orders since Marine Battery, as it would later be called, was almost finished. The Committee of Safety wanted the commissioners to estimate whether it should be completed to a depth of fifteen feet.[31]

Despite the recommendations of the New York investigating body, the Committee of Safety needed more information before it rendered a final decision to stop all further construction at Fort Constitution. It received it on 22 January in a letter written by Commissioner Thomas Grenell, dated 19 January 1776, in which he reported that workers had completed Marine Battery's foundation on the fourteenth. The curtain of large stones each from 500 to 1,000 pounds or even larger was now 140 feet long, 4 feet high "on an average," and 12 feet wide at the base tapering to a thickness of 10 feet at the top and lay 714 yards from the west point. Using the technique employed at Romans's Battery, the masons "filled in with the largest stones it would take, and the small vacancies filled with coarse gravel instead of mortar, as that could not be used at this season of the year." At the time of the stop order, Grenell had already supervised the laying of "the first range" of twelve-inch square timber for a breastwork to be three feet thick, "well braced, trundled; the height will be suitable to the gun-carriages." He further informed the Committee of Safety that he could extend the base to fifteen feet since he had the materials and labor on hand.[32]

Armed with Grenell's detailed information, on 23 January 1776 the Committee of Safety gave the commissioners permission to complete the

30. Minutes, NYCS, 3 Jan. 1776, CC, 5 Jan. 1776, Force, *American Archives*, 4:1019–20, 1033, 1642. The word *Popolopen* had many spelling variations during the late eighteenth century.

31. Minutes, 16 Jan. 1776, NYCS, Force, *American Archives*, 4:1034, 1051; Marine Battery was "C" on the Nicoll-Drake-Palmer map.

32. Grenell reported "from Bunn's Hill to the West point is seven hundred and forty yards," and he listed the cost of materials and labor for the work already done as £114 2s, minutes, 22 Jan. 1776, NYCS, Force, *American Archives*, 4:1064–65.

battery. Concluding that a parapet of only three feet thick—against the standard of twelve feet—would "by no means answer any good purpose"; it instructed them, therefore, to make the breastwork twenty feet thick. In a display of micromanagement, it even told them how to finish the task:

> [L]et the timber in front be at least three logs, or pieces, thick, and in the inside at least two pieces thick, and the inside of the parapet perpendicular; the distance between the front and the inside pieces of the parapet will be about fifteen feet, and that intermediate space filled up with fascines and earth.[33]

Concerned about the possibility of dead space that would limit the fields of fire from the battery, the Committee, based upon expert advice from someone, made a further "request":

> Please to take care that the upper part of the parapet be made so sloped, or descending, that the guns may, when necessary, be brought to bear on the water nearest to the battery, and the ground there adjoining to the water; and the outer face or front of the parapet should be built battering, or tend inwards, to prevent the weight of the earth from forcing the timber out of its place.[34]

The Committee even was aware of the dangers of enfilading fires because it directed that "A work should also be added at the left of the line, to secure the troops on the line, and the cannon and carriages, from being flanked by an enemy on the left." To save money, the Committee proposed that the Continental troops sent to garrison Fort Constitution could "make the fascines, and fill up the parapet." Colonel Isaac Nicoll would also have to rely on his three companies of Minutemen on the Island, totaling 162 militiamen, as of 13 February.[35]

On 12 February 1776, the commissioners provided the technical solution and asked permission to implement it:

> [T]o make the breastwork of said Battery twenty feet thick, we must make the stone-work of the wall equal to support such a breastwork; which will be as expensive, and take as much time as has already

33. NYSC to Grenell, 23 Jan. 1776, Force, *American Archives*, 4:1071.

34. NYSC to Grenell, 23 Jan. 1776, Force, *American Archives*, 4:1071.

35. NYSC to Grenell, 23 Jan. 1776, Force, *American Archives*, 4:1071. So far as is known, no work was ever added to the left of the battery as directed in the last sentence, *Calendar of Historical Manuscripts*, 1:238.

> accrued on it. If it be agreeable, we can make the breastwork with three pieces of timber thick, twelve by twelve on the outer face, and two the inside, taking in the whole width of the crown of the wall, except six inches for the sleepers of the platform to rest on, and to fill the space between the timber with earth, well rammed down.[36]

After referral to an internal committee, expert testimony, and some discussion, the Provincial Congress granted approval on 16 February 1776.[37]

Archaeologists confirmed that the construction of the rampart of Marine Battery conformed quite closely to the plan. They measured the stone-rubble rampart to be 130 feet long, set back 80 to 90 feet from the river. The exterior and interior faces were revetted with dry-laid stone masonry, as the commissioners had reported. At the level of the gun platform the rampart was in fact ten feet thick and was square with the base rather than tapering from twelve feet. Constructed with timber revetments filled with earth, the battery's parapet may have been twenty feet thick as it had a gun platform sixteen feet deep that rested on a rear stone foundation four feet thick. Romans designed the rear foundation here and probably on the other curtain as well in order to give the gun platform a forward pitch to help offset the cannons' recoil and to facilitate returning the gun to the firing or "in battery" position.[38] The Marine Battery was destroyed in October 1777, but the Americans would partially rebuild it in 1778 to protect the end of the Great Chain attached to the island.

Meanwhile, Bernard Romans was presenting his plan to a five-man committee of the Continental Congress. He apparently still had some influence with that body, because on 15 February the Continental Congress resolved:

> That no further works be erected on *Martelaer's Rock*, but, that those already erected there, be supported and garrisoned. That a Fascine Battery, to mount heavy Cannon, not exceeding eighteen in number, to be thrown up on the *Gravel Hill*, eastward of *Martelaer's Rock* . . . so as to command the *West Point*, the reach down the River from the *West Point*, and part of the reach up the River; and that a convenient road be opened from this Battery to the Barracks on *Martelaer's Rock*. That a Redoubt of Earth and Fascines be built on

36. Bedlow and Lawrence to NYPC, 12 Feb. 1776, Force, *American Archives,* 5:261.

37. Minutes, 15, 16 Feb. 1776, NYPC, Force, *American Archives*, 5:268, 270–71.

38. Jelks, "Archaeological Excavations," 21–29.

> the eminence on the east side of the River, opposite to the West Point marked on the draft A, to mount thirty Guns.[39]

Both batteries had been part of Romans's revised plan for the Highlands. This proved, however, to be Romans's last official act regarding the fortifications of the Highlands Department. The Continental Congress effectively sacked him on 13 February 1776, agreeing to pay him only through the ninth.[40]

The story of the fortifications on Martelaer's Rock loops full circle back to the letters "A" for the post proposed for Martelaer's Rock and "B" for the one at West Point on the roughly drawn map of James Clinton and Christopher Tappen in June 1775 and to Bernard Romans's flawed interpretation of his assignment. For almost six months, Bernard Romans had invested his talent and reputation trying to convert Clinton's and Tappen's original concept into fortifications that would effectively grant to the Americans control of the Hudson River. While he produced substantial feats of civil engineering, he was not able to build military works in a timely enough fashion that held out the promise of meeting the requirements and the budget of the Continental and New York Provincial Congresses.

The New York Provincial Congress had hired Romans as a military engineer to block the Hudson River at a point in the Highlands that would prove decisive beginning in January 1776. As his "imagination took wing," Romans squandered time and money trying to build a "Grand Bastion" rather than field fortifications better suited to the needs of the moment.[41] Of even greater significance, he chose to build it where it commanded little and could be dominated from almost every direction.

Successive delegations from the Americans' governing bodies investigated the works for which the commissioners and Romans were responsible and judged their efforts deficient. Romans responded to their criticisms with a plan in late November 1775 that, except for disregarding the high ground at

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39. Minutes, 13, 19 Jan., 15, 22 Feb. 1776, NYPC, Force, *American Archives*, 4:1056, 1672; 5: 297–98,https://archive.org/details/AmericanArchives-FourthSeriesVolume5peterForce/page/n147/mode/2up; map was not found showing the Gavel Hill Battery as "LL" and the Hill Cliff Battery as "A"; minutes, 13 Jan., 15 Feb. 1776, Ford, *Continental Congress*, 3:53, 4:152–53.

40. Minutes, CC, 13 Feb. 1776, Ford, *Continental Congress*, 4:133–34, https://www.loc.gov/resource/llscdam.lljc004/?sp=133&st=image&r=-1.214,0.668,3.427,1.669,0; minutes, NYPC, 21 Feb. 1776, Force, *American Archives*, 5:299. Pursuant to the orders of the CC, the NYPC, without mentioning Romans's name, directed Commissioner Thomas Palmer to request that Maj. Gen. Charles Lee provide a replacement engineer.

41. Diamant, *Bernard Romans*, 72.

the West Point, had greater merit than his original draft. It proved too little, too late as the sense of the successive reports undermined his superiors' confidence in his ability to meet their demands. With more time Romans might have developed the skills required of a military engineer, including being an effective communicator. With the colonies moving rapidly toward independence, the powers that be judged that time was a luxury that they could not afford to squander.

Romans's initial failure and his own assessments would lead his political and military masters to fortify Popolopen Creek and Pollepel Island even as they continued some efforts at Fort Constitution as well. As Romans's efforts signaled, events would prove that the Americans had too few men, too little time and money, and too little experience to perform all of these tasks effectively at the same time. While Romans would continue to serve the American cause as a captain in the Pennsylvania Independent Artillery until 1 June 1778, his time at Fort Constitution had come to an end.[42]

Perhaps the words penned by J. C. Pleydell in 1768 best indicate why success would finally be achieved at West Point in the first four months of 1778—Captain-Lieutenant Thomas Machin floated the chain across the river on 30 April—when failure had plagued the early work: "It is very certain, that many, after throwing away great part of their lives in handling the scale and compass, have yet been unable, on service, to fortify posts as they ought to be; that is to say, they have not known how to take every advantage of the ground, and judge of its strengths and defects."[43] This insight would become even more relevant as the American effort switched from Constitution Island to the "the grand post" on Popolopen Creek and the stretch of the Hudson at Pollepel Island and Plum Point. In the meantime, work would continue at Fort Constitution as other engineers and commanders strove to make Romans's work a valuable investment in a larger defensive scheme.

42. Romans's wife, Elizabeth, in her pension claim reported that the British captured Romans at sea in 1780 while en route to serve with the "Southern Army." According to her, he was murdered at sea in 1783 after completing his captivity in Jamaica (Phillips, *Notes*, 61–66, 69). The only biography on this obscure figure is Diamant, *Bernard Romans*, though even this book only offers conjectures as to Romans's eventual fate, 138–43; minutes, 9 Apr. 1776, Ford, *Continental Congress*, 4:266.

43. Pleydell, *Essay on Field Fortifications*, xii–xiii.

CHAPTER 4

CAPTAIN WILLIAM SMITH, THE HIGHLANDS DEPARTMENT, AND THE NEW FORT CONSTITUTION

As of 3 January 1776, Bernard Romans had vacated his blockhouse and would soon march with his Pennsylvania company of artillery to northern New York. A transient engineer, Captain William Smith, would try to revitalize the construction at Fort Constitution even as New York's Secret Committee, after 16 July 1776, in accordance with the Continental Congress's directive of 15 February, shifted the focus to the Popolopen Creek site and Pollepel Island.[1] To complicate the issue of priorities still further, Major General Charles Lee, Smith's superior, had been directed by General Washington to make Manhattan Island defensible. The Americans had reason to hurry as the British would choose to make the Hudson River the seat of the war in 1776 and 1777. The commissioners for New York faced a particularly difficult challenge: For better or worse, they had no resident engineer, and their responsibilities once again, by specific direction, encompassed the Hudson Highlands. Could they make Fort Constitution reach the potential that James Clinton, Christopher Tappen, and even Romans had seen for West Point and Martelaer's Rock in time to stop a British military expedition?

On 22 February 1776 the New York Provincial Congress received, read, and considered the new resolution from Philadelphia directing the construction of batteries of fascines and earth at Gravel Hill on Martelaer's Rock,

1. Minutes, 5 Jan., 15 Feb. 1776, Ford, *Continental Congress*, 4:34, 152–53; Force, *American Archives*, 4:1672; 16 July 1776, New York Provincial Convention, Papers, Secret Committee, Washington's Headquarters, Newburgh, NY; some are available in Jay, *Making of a Revolutionary*, 297–304.

on Nelson's Point across from West Point, and at Popolopen Creek. That body ordered Colonel Palmer, perhaps the most influential member of the committee who had inspected Fort Constitution in December, to be a commissioner himself and to supervise the construction of the works according to the latest resolution from the Continental Congress. Palmer would apply to General Charles Lee in New York City for an engineer to replace Bernard Romans, whose services had been terminated while the latter was in Philadelphia.[2] The new engineer offered by Lee was Captain William Smith, but he would act only as a temporary consultant. Having learned his new craft in the siege of Boston (he was originally an artilleryman), Smith was now General Lee's chief engineer for New York.[3]

Vouching that Smith was "extremely capable to judge and advise," General Lee agreed to spare him for an inspection of the works in the Highlands Department, which he made in late February.[4] Lee sent Washington a warning on 29 February that Smith "gives a most terrible account of it [Fort Constitution]. The expense of its construction has been enormous, its defects both in point of situation laying out finishing &cc., are numerous." On 1 March, Smith formally reported his findings to the Provincial Congress and presented his own plan:

> That a fort is laid out about five hundred yards to the eastward of Fort Constitution, on a commanding situation, commanding the passage up and down the river, and scours the West-Point. Between that and the line which is now laid out at Constitution Fort, is a very commanding height, on which ought to be placed a Redoubt, to prevent the works being enfiladed. To the southward, at the distance of about 1,700 yards is laid out a fort on a very commanding

2. Minutes, 15, 21 Feb. 1776, Force, *American Archives*, 4:1672, 5:299; Ford, *Continental Congress*, 4:133–34.

3. William Smith's name, with no middle initial, has made him an elusive figure. Lee referred to him as a captain in his "Report on the Defence of New York, March, 1776," Lee, *Papers*, 1:356. In May 1776, Smith reported that he was "now a Freeholder of New York" and a merchant, having been a "late Engineer to the Continental army with Rank of Lieut. Coln," application of Messrs. Smith and Duryee, *Calendar of Historical Manuscripts*, 1:303. This William Smith was apparently not William Stephens Smith, aide to Washington and husband of Abigail Adams, whose life is described in Roof, *Colonel William Smith and Lady*, as Merle G. Sheffield wrote in *The Fort That Never Was*, 15.

4. Lee, *Papers*, 1:356.

> height, which will command the northern and westward passage, of which drafts will be sent up.[5]

Lee judged his new plan to be more effective.

Smith cited "the line which is now laid out at *Constitution Fort*," clearly indicating Romans's and Marine Batteries. The fort "laid out about five hundred yards to the eastward of Fort Constitution" fits the known location of what would be called Gravel Hill Battery.[6] The "commanding height, on which ought to be placed a redoubt" was what would be known as Hill Cliff Battery, which had been recommended by Romans in his revised plan and endorsed in modified form by Nicoll, Drake, and Palmer. Romans had proposed the fort seventeen hundred yards to the southward with four heavy cannon ("I" on his revised map) "to prevent a Bombarding vessel from Lying at "K" [the West Point]."[7] If built, it would have been located on Nelson's Point, the high ground at the southern end of the railroad causeway north of the present-day hamlet of Garrison. Taking the recommendations in the report of Nicoll, Drake, and Palmer, the Continental Congress had ordered a battery built at Gravel Hill. Although Captain Smith had recommended a fort for Hill Cliff, he did not lay one out, apparently because it had not been authorized by Congress.

As a result of all the committees and their reports, several significant changes in the concept for the defense of the Highlands began to emerge. On Martelaer's Rock the emphasis shifted from the construction of European-style fortresses and grand bastions to the building of cheaper and more practical field fortifications. Captain Smith had recommended that the fortifications "be built of sods and fascines" because at Constitution Island there was a "salt-marsh meadow, which will supply sods necessary to build forts at that spot. That these works may be erected without Masons or Carpenters, the [gun] platforms excepted."[8] Additionally, the main effort on Martelaer's Rock shifted to the east where the artillery fire could reach south along the

5. Lee to Washington, 29 Feb. 1776, Force, *American Archives*, 4:1539, https://www.loc.gov/resource/mgw4.035_0619_0621/?sp=3&st=image. Smith's testimony was summarized in the minutes, 1 Mar. 1776, New York, *Provincial Congress*, 330, and 1 Mar. 1776, NYPC, Force, *American Archives*, 5:321–22; there is a discrepancy between these two accounts; in the sentence quoted, the placement of the punctuation around "To the southward" makes more sense as it correlates with the location of Romans's proposed battery.

6. Measurements made on a current map of the island reveal Gravel Hill Battery to be slightly over 400 yards from the site of Romans's blockhouse.

7. Romans, "Plan of a part of Hudson's River" ("Plan").

8. Minutes, 1 Mar. 1776, NYPC, Force, *American Archives*, 5:321–22.

length of the river to pummel enemy ships as they approached the bend at the west point, as they would need to slow directly in front of the guns to reset their sails to negotiate the difficult turn around the point. Finally, Smith had casually dropped West Point from his plan, perhaps because he thought that a work at Nelson's Point with its "very commanding height" would serve the same purpose.

As might be expected, the various changes in plans, the paper war between Romans and the commissioners, and the bitter winter that now had the Hudson frozen solid had slowed progress at the fortifications. Nonetheless, the New York Provincial Congress continued to invest funds (£1,750 from 22 January to 26 March),[9] and the commissioners—William Bedlow, Jonathan Lawrence, Thomas Palmer, and now Gilbert Livingston[10]—supervised a labor force, most of it at Popolopen Creek.

Within two weeks an unexpected delegation would judge the commissioners' work. On 2 April, Benjamin Franklin, Samuel Chase, and Charles Carroll departed New York City by sloop for Canada. The Continental Congress had commissioned this distinguished group to foster better relations with what was still hoped might become the fourteenth colony. The American invasion of Canada had proven a disaster, culminating in the failed American attack on Quebec on 31 December 1775. The group quite naturally chose the route of the Hudson for their journey and, purely by chance, anchored off Martelaer's Rock on the evening of 5 April. Out of "Curiosity," according to Franklin, Chase and Carroll went ashore on what became an impromptu inspection of the works now commanded by militia Colonel Isaac Nicoll, who had been appointed by the New York Committee of Safety for the posts in the Highlands on 16 January until Congress could assign a Continental officer.[11]

Not only was Colonel Nicoll absent when Chase and Carroll rowed ashore, but they found the works no longer manned by Continentals, their terms of enlistment having expired, but rather—since early December—by three companies of Orange County Minutemen. Commanded by Captains Thomas Moffatt (Blooming Grove), Samuel Raymond (Cornwall), and John Wisner (Florida and Warwick), these three companies of militiamen had only

9. Minutes, 22 Jan. (£1,250) and 26 Mar. (£500) 1776, Force, *American Archives*, 4:1068 and 5:1412.

10. Minutes, 1 Mar. 1776, Force, *American Archives*, 5:326.

11. "Instructions to the Commissioners," 16 Jan. 1776, and NYCS to Nicoll, 26 Mar., Force, *American Archives*, 4:1051, 5:1405.

127 of the 183 officers and men available "fit to do duty." On 8 November 1775 the Continental Congress had directed that New York mobilize 200 militiamen from Ulster, Orange, and Dutchess Counties and an artillery company from New York City with a company of sixty-seven men-at-arms to report to Fort Constitution immediately. At the time of the visit of Franklin and his colleagues, First Lieutenant Seth Marvin of Moffat's company commanded the militiamen upon whom the defense of the Highlands depended until the next increment of Continentals arrived.[12]

Alarmed by what the two men saw, they wrote Brigadier General William Heath, deploring the conditions they found. Their letter, dated 5 April 1776, and the journal kept by Carroll indicted the "defenceless condition" of what Carroll felt was a battery, undeserving of the name "fort," "being quite open on the northeast side." The letter pointed out that neither the Continental Congress's orders nor Captain Smith's designs had been executed. They reported on the fortifications that they observed: "On the South Bastion are 13 6 [pounders] and 1 9 pounder mounted. On the East Bastion are 7 9 [pounders] and 1 6 pounder mounted. . . . In the block House are 8 double fortified 4 pounders mounted. The Fort on the Land-Side, is intirely open."[13]

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12. New York Delegates to Committees of Dutchess, Orange, and Ulster Counties, 13 Nov. 1775, Force, *American Archives*, 3:1752–53.

John Grenell's company was still at Fort Constitution through 8 Dec., although his men's term of enlistment was expiring and three companies of Minutemen were already present. NYPC to Hancock, 8 Dec. 1775, Force, *American Archives*, 4:391. While militiamen were viewed as a temporary solution, Captain Samuel Raymond's and Captain Burn's companies were on duty as of 19 Jan. 1776; Captain Raymond's Company (73 officers and men), Captain Peter Hill's Company, Ulster County (68), and a company under Lieutenant James Butler (43) were there as of 13 Feb. Almost as soon as the delegation had departed, Nicoll dismissed Captain Raymond's Company of thirty-one men and replaced it with Captain William Jackson's 3rd Company (Hanover Precinct) from COL James Clinton's South Regiment of Ulster County; "A Return of Troops," 13 Feb., "Account of Expenses," 16 Mar., and Nicoll to NYCS, 8 Apr. 1776, Force, *American Archives*, 5:262, 1435; minutes, 5, 11 Jan., Ford, *Continental Congress*, 4:42, 55; Fernow, *Documents* (Colonial NY). See also the journal of Charles Carroll, Leonard, *Life of Charles Carrol*, 50–52, 279–281.

General Heath was a brigade commander in the vicinity of New York City at the time the letter was written. It isn't clear why the letter was written to Heath instead of Maj. Gen. Israel Putnam, who was the overall commander at that location. Perhaps Heath was better known to the authors, or perhaps they believed Heath had more influence with Congress than Putnam did. (The officer presumed to be Captain Wisner was given the name of Woshon in the report.) Franklin, Chase, and Carroll to Heath, 5 Apr. 1776, Franklin, *Papers* (ed. Willcox), 22:397–99.

13. Franklin, *Papers* (ed. Willcox), 22:397–99; also quoted in Force, *American Archives*, 5:811–12.

Carroll's journal amplified the letter by noting that the island was vulnerable to ground attack, especially from the east. He, in fact, thought that Major General William Howe with "enterprise" could capture the fort "with sixty men, and without cannon" by attacking over the marsh. While a battery had been planned for Gravel Hill and another to "sweep" the marsh, nothing had been accomplished toward the construction of either, except some leveling on the top of Gravel Hill. Furthermore, the Minutemen were reluctant to work in the freezing temperature, six hours per day being the extent of their effort. Cannons were present, but there were no artillerymen to man them, "81 Quarter Barrells and 1 whole Barrell of powder," and "Nothing but pork, Beef and flour, no Vegetables" comprised the diet on the island.[14]

The Franklin-Chase-Carroll letter to General Heath revealed that the curtains started by Romans had finally been completed. The inexplicably named "South Bastion" with its fourteen cannons mentioned by Chase and Carroll was the same battery heretofore called the southwest curtain or Romans's Battery. Because Chase and Carroll were very clear concerning what they saw on Gravel Hill, and recalling what Captain Smith had laid out and recommended, the "east Bastion" (Carroll said it was on the "west flank") with its eight cannons was Marine Battery.[15]

Planning and some physical progress on the island's fortifications continued during the remainder of April 1776. A letter from Commissioner William Bedlow to John Berrien, dated 30 April 1776, indicated that the barracks proposed in December at the rear of the Gravel Hill Battery would be necessary so that soldiers could respond to "an attempt to surprise it [the battery] by night."[16] The letter also strongly suggested that Gravel Hill Battery was, at best, in the early stages of construction. Commissioner Bedlow did assert, however, that a small redoubt, designed for a maximum of four cannons, was to be erected of timber and earth on the eminence between Gravel Hill and the "works to the westward" to maintain communications between

14. Force, *American Archives*, 5:811–12. This source has the letter from Franklin, Chase, and Carroll addressed to John Hancock, the president of the Continental Congress. In view of Carroll's journal, this is believed to be an editing error, although the letter was doubtlessly read before the Congress (Leonard, *Life of Charles Carroll*, 279–81).

15. The committee members were confused about the names of the batteries and the directions they faced, so I have relied upon the official reports rather than Carroll's designations (Leonard, *Life of Charles Carroll*, 279; Franklin, *Papers* [ed. Willcox], 22:398; also see the report of Livingston, Paine, and Langdon in Force, *American Archives*, 3:1657–58; Romans, "Plan"; and the report of Nicoll, Drake, and Palmer, Force, *American Archives*, 4:420–22).

16. A structure was eventually erected in this vicinity.

the two areas. Apparently, this was a local decision by the commissioners themselves, and Bedlow justified the decision by citing "Engineer *Smith*, and every gentlemen of the Continental Congress and officers of the Army who have come here" as saying it was necessary to fortify that location.[17] This was the beginning of Hill Cliff Battery.

Although Gravel Hill Battery and Hill Cliff Battery were not very advanced by the end of April, they were quickly put in order during May. Issac Nicoll, still the commander of the island's garrison, wrote to John McKesson on 20 May, "The Works heare are nearly Compleated and Can now mount at this Place 41 Peaces of Cannon."[18]

Concurrently, however, the commander in chief, George Washington, had become convinced of the lack of real progress in the Highlands and deemed it necessary to assume personal responsibility for the construction there. The New York Provincial Congress acknowledged his authority and the appointment of Continental officer Lieutenant Colonel Henry Beekman Livingston to replace its Colonel Nicoll. Livingston was the second in command of Colonel James Clinton's 3rd New York Regiment, of which four companies were already in the Highlands, primarily at Fort Montgomery, then being constructed on the north bank of Popolopen Creek at its confluence with the Hudson.

The Provincial Congress, however, failed to notify Nicoll that Livingston would replace him. When the latter arrived, Nicoll refused to relinquish command based on his earlier instructions to be relieved by a "proper Continental Officer." Washington had instructed Livingston to take command "if no superior officer is there." Based on the two sets of instructions, Nicoll decided not to give up the command to a mere lieutenant colonel.[19]

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17. Minutes, 15 Feb. 1776, Continental Congress, and Bedlow to Berrien, 30 Apr., Force, *American Archives*, 4:1672, 5:1153–54. It is amusing that in the resolution of 15 Feb., the Continental Congress cited a *maximum* of ("not to exceed") eighteen heavy cannons for the Gravel Hill battery. It is clear from Bedlow's letter that he believed that body had *specified* ("ordered") eighteen heavy cannons, and he explained that he would meet that requirement with fourteen guns there and four at Hill Cliff.

18. Nicoll to McKesson, 20 May 1776, McKesson Papers, New York Historical (NYH).

19. Washington to Livingston, 4 May 1776, in Washington, *Writings* (ed. Fitzpatrick), 5:10–11; also see Force, *American Archives*, 5:1189; and Livingston to McKesson, 19 May, *American Archives*, 6:510. Lord Stirling reported that "the command of the whole of both garrisons is still in the hands of Colonel *Nicoll*. . . . Lieutenant-Colonel Livingston has very prudently avoided any dispute with Colonel *Nicoll* about the command, rather referring the matter to your Excellency's [Washington's] determination." Stirling to Washington, 1 June, and minutes, 8 May 1776, NYPC, *American Archives*, 5:1493 and 6:673.

Livingston, without a job until Washington or New York made a ruling, inspected the fortifications and reported to the commander in chief that conditions were deplorable. Fresh food, rum, medical facilities, and boats were needed; the defenses were neglected, and no effort had been made to obstruct the river. He did think that "The fortifications here, with a few improvements, will render them almost impregnable and impassable if a boom was thrown across the river opposite them."[20]



Image 4.1: *Maj. Gen. Lord Stirling*, engraving by George R. Hall. (The Miriam and Ira D. Wallach Division of Art, Prints and Photographs: Print Collection. Courtesy of the New York Public Library Digital Collection.)

As a result of Livingston's report, Washington became even more determined to learn the actual status of the fortifications. He ordered that Major General Israel Putnam send Brigadier General William Alexander (Lord Stirling), Colonel Rufus Putnam, and Colonel Henry Knox, if available, to

20. Livingston to Washington, 14 May 1776, Force, *American Archives*, 6:445–46.

inspect the forts, make necessary modifications, and report on existing conditions.[21] Lord Stirling, a former British officer serving under General Israel Putnam, accompanied by Continental engineer Rufus Putnam and Captain-Lieutenant Winthrop Sargent, quickly set about his task and on 1 June 1776 forwarded his report to Washington.[22]

Stirling inspected both what he called Fort Montgomery at Popolopen Creek and Fort Constitution. He concluded that, while the two could have "an easy communication by land as well as by water," Fort Montgomery should be the "grand post." His Lordship suggested many changes in the defenses and was highly critical of Fort Constitution, finding it an indefensible extravagance. Formally naming the other batteries, as well as "Romain's," on one of his maps, he approved of the Gravel Hill, Hill Cliff, and Marine positions because they commanded the "approach up the river very well."

Conversely, however, Alexander had nothing but criticism for Romans's premier work, the "open" line or battery that he insured would forever be tied to its designer by so naming it. He gauged that it had been built "at a very great expense." He zeroed in on the central flaw in its design, finding that, despite its fifteen embrasures for cannons, it faced "the river at a right angle, and can only annoy a ship in going past." While the carpenters might have taken his descriptions of the wooden walls comprising the parapet of the battery and the blockhouse as compliments, a soldier would understand them to be condemnations of the engineer's work. The works were

> about seven feet deep, made of square timber covered with plank, and look very neat; he also built a log house or tower on the highest cliff, near the water, mounted with eight cannon, (four-pounders,) pointed out of the garret windows, and looks very picturesque. Upon the whole, Mr. Romans has displayed his genius at a very great expense and to very little publick advantage.[23]

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21. Washington to Putnam, 21 May 1776, in Washington, *Writings* (ed. Fitzpatrick), 5:69. Sargent made the inspection in place of Henry Knox.

22. Lord Stirling to Washington, 1 June 1776, Force, *American Archives*, 6:672–77, https://babel.hathitrust.org/cgi/pt?id=uiug.30112089752064&seq=399. No maps accompany the written report in that source. However, three maps labeled "No. 1," "No. 2," and "No. 3" and answering precisely the description of the written report are in the Olin Library, Cornell University. There is no doubt that these three maps, called "Plans" by Stirling, accompanied the report. Photographic copies of these maps also are in the USMA Library and have been published in Sheffield, *The Fort that Never Was*, Appendix G.

23. Stirling gave the detailed specifications for the wooden walls of Romans's Battery, finding that "the embrasures are within twelve feet of each other; the merlons on the

Echoing assessments by earlier inspectors, Stirling next critiqued the location of Fort Constitution and its vulnerabilities. He thought that

> The works in their present open condition and scattered situation are defenceless; nor is there one good place on the island on which a redoubt may be erected that will command the whole; however, I have marked in the plan (No. 3) those heights which are most commanding; yet every work on the island is commanded by the hill of the West-Point, on the opposite side of the river, within five hundred yards, where there is a level piece of land of near fifty acres in extent.[24]

He felt that those commanding heights across the river should be used to shore up the fort's limitations since West Point dominated Martelaer's Rock; he therefore recommended that the commissioners build a redoubt there just as James Clinton and Christopher Tappen had suggested almost a year previously.

Turning to Fort Constitution as a whole, he argued, like other inspectors before him, that the fortifications were vulnerable to ground attack. The works were all open and unprotected in the rear. Far worse, dominating terrain along the eastern shore was left unfortified, inviting disaster. He also figured that a redoubt "is necessary at the west end of the island, to command the approach that way, and to prevent a landing at the north side of the island."[25] He subsequently made specific recommendations to the commissioners concerning the construction and arming of the batteries at Hill Cliff and Gravel Hill. He also thought that the barracks proposed earlier should be built now for 100 men.[26]

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outside are but about two feet in the face." Stirling must have meant that the faces of the embrasures were two feet across, as the twelve feet of timber between the embrasures are technically defined as the "merlons" (Force, *American Archives*, 6:673).

24. Stirling to Washington, 1 June 1776, Force, *American Archives*, 6:672–77.

25. Stirling to Washington, 1 June 1776, Force, *American Archives*, 6:672–77.

26. Bedlow to Berrien, 30 Apr. 1776, Force, *American Archives*, 5:1154. Washington forwarded Stirling's "Plan" to Bedlow and the other commissioners, 10 June (Force, *American Archives*, 6:792–93). For Hill Cliff (marked B in "Plan No. 3"), Stirling proposed a battery "to mount three guns in front, and one on each flank; and that the other sides of the hill on which it is erected be enclosed by a breastwork of logs about one foot thick and seven feet high"; for Gravel Hill (marked A), a battery should be "extended westward to the foot of the hill B, with four embrasures; and on the northeastward in the manner as marked at G. The whole ground fronting the first approach up the river should then be either enclosed or inaccessible."



Image 4.2: *Constitution Island*, Plan N°. 3, May 1776. (Reproduced by permission of the Division of Rare and Manuscript Collections, Cornell University Library.)

Finally, Stirling critiqued the garrison of Fort Constitution, consisting of about 160 men from Captains William Jackson's 4th and Increase Child's companies of Colonel James Clinton's 2nd New York Regiment, Captain John Wisner's company of Minutemen from Florida and Warwick, and Clinton's three companies of 200 men at Fort Montgomery. He found the soldiers to be poorly supplied—fresh provisions issued only twice in six weeks—and "miserably" armed. Many had no muskets, and others were armed with weapons in such poor condition that he directed the blacksmith shop to be enlarged to serve as an armory.

Stirling showed six buildings on his "plan No. 3"; the two located to the north of Marine Battery ("C") were the barracks and store house built by Romans; the one immediately north of Romans's Battery ("D") was the barracks started in December 1775 and mentioned in the report of Nicoll, Drake, and Palmer. The sixth was the proposed third barracks behind Gravel Hill.

Stirling's report, with associated maps and appendices, provided the third and final comprehensive review of Fort Constitution and its infrastructure during the first two and a half years of the war and presented the only

detailed description of the battery built by Bernard Romans. Washington sent Stirling's recommendations to the Highlands commissioners for implementation.[27] Despite Stirling's insistence, supported by the numerous suggestions of others before him, that a redoubt must be built on the Plain at West Point, no works would be erected there until after the disaster of October 1777. Such construction as would be done at sites other than Popolopen Creek and Pollepel Island would merely be improvements to the fortifications and buildings on Martelaer's Rock.

Based on the suggestions from Thomas Palmer and Stirling, the commissioners authorized the construction of the extra barracks, since a foundation exists in the vicinity of "H" on Stirling's "plan No. 3." An archaeological excavation uncovered the stone foundation for "Stirling's Barracks" under a superficial mantle of leaves and dirt. The structure's north, east, and south walls were clearly visible, but no west wall was found. Based on an analysis of this foundation, the archaeologists judged the barracks to have been twenty feet wide, more than fifty-seven feet long, and two stories high. The foundation comprised roughly rectangular as well as "undressed" stones, dry-laid (without mortar) and two to two and one-half feet wide. The chimneys for two fireplaces were made of brick, while the rest of the structure was wooden. The charcoal around the foundation and the large number of shards of glazed window glass that "had fused from intense heat" indicate that the British undoubtedly destroyed the barracks by fire in October 1777.[28]

Although the British also destroyed Gravel Hill in 1777, the Americans rebuilt it in 1778 and called it Greaton's Battery (after Colonel John Greaton, 3rd Massachusetts Regiment), changing its trace significantly. The outline indicated on the ground today does not visibly disagree with maps drawn in 1779 and 1780, although the remains are so ambiguous that they could support the suggested pre-October 1777 trace proposed by Stirling. What appears to be a low berm or parapet can still be discerned at the eastern foot of Hill Cliff extending eastward. The trace, however, is not the straight line ("F") anchored on that hill as recommended on Stirling's map. The western portion of the battery is slightly to the north of the remainder on the east, suggesting that Stirling's section "F" was built a few yards to the rear of the

27. Washington to the Commissioners, 10 June 1776, Force, *American Archives*, 6:792; *Calendar of Historical Manuscripts*, 1:303.

28. Although the building to the northwest remains unidentified, archaeologists conducting a survey in the summer of 1971 concluded that the closer one in that direction was the smithy (Jelks, "Archeological Excavations," USMA Library, 45–50).

original trace ("A"), as recommended by Nicoll, Drake, and Palmer.[29] The two sections were connected by a short curtain at an angle between them. Structurally there is no indication of a stone foundation supporting the battery's ramparts, although it may simply be buried. Archaeologist Jack Mead surmised that the parapets were constructed of logs or fascines with spaces filled with gravel and soil and probably covered with sod. They averaged ten feet in width, and at least two embrasures are still visible today, validating Pierre L'Enfant's sketch of the battery in 1780. The western wall may have been protected by a ditch, giving it the appearance of being a double parapet. Any other definite conclusions about the battery are impossible based on the present condition of the ruins.[30]

At Hill Cliff, no evidence remains to indicate whether that battery was ever converted into a redoubt as Stirling had recommended. It is doubtful that it was. Only the dry masonry foundation of the original battery remains today. Some gravel on top is all that remains of the parapet. The depth of the rampart (twenty-six feet) led Mead to draw the battery's parapet and embrasures as he did in his archaeological report. The eastern and western walls agree with Lord Stirling's recommendations and Washington's directions for implementation. A parapet ten feet deep with interior and exterior faces built of logs and the gap filled with gravel would have supported a gun platform sixteen feet deep. There is also a small stone wall built farther down the hill in front of the battery that may have been calculated to obstruct an assault from the river.[31]

While Stirling's concern about the practice of using "notorious Tories" to perform "hard labour" at Fort Montgomery was a political issue left for New York's political leaders, the state's Provincial Congress and the Commander in Chief acted upon one of his suggestions with reasonable dispatch and finally passed complete control of the posts in the Highlands Department to the Continental Army. This change in responsibility came because Stirling thought that the commissioners were an unnecessary and expensive means of

29. Nicoll-Drake-Palmer report, 14 Dec. 1775, Force, *American Archives*, 4:421. The report suggested that two cannons "be mounted on a short curtain facing the reach above the West Point" at the Gravel Hill site. The curtain, if built, was poorly located because Hill Cliff masked its guns, and they could not cover much of the reach upriver past West Point.

30. Since no archaeological work has been done, the evidence is inconclusive. Erosion, vegetation, and the fact that this battery was rebuilt in 1778 and, in all probability, subsequently modified make a visual evaluation difficult. John H. Mead did the best he could with his survey in "Archaeological Survey of Constitution Island and Adjoining Fortifications, 1968–1969," USMA Library, 49–51 and following profile sketch.

31. Mead, "Archaeological Survey of Constitution Island," USMA Library, 45–47.

overseeing construction; he certainly may have considered them demonstrably ineffective as well. Therefore, to save money and to streamline the effort there, he suggested that "[o]ne good engineer, with artificers from the Army" replace the commissioners and the civilian carpenters, masons, blacksmiths, clerk, and "attendants." Action on the matter was swift. On 8 June, the Provincial Congress directed the commissioners to take all future directions from General Washington; on 11 June, Washington discharged them and abolished their jobs.[32] At last, rule by committee lost favor in the Highlands Department.

Having dismissed the commissioners, the commander in chief assumed "the sole direction of those Fortifications," promising to send an engineer to supervise construction. He further strengthened his control by mustering out the local Minutemen, replacing them with five companies of Colonel James Clinton's 2nd New York Regiment of Continentals, and placing Clinton in overall command of the Highlands Department. To the new commander, he passed his order: "As these are, or may become Posts of infinite importance especially the lower one, I cannot sufficiently Impress upon you the necessity of putting them into a fit Posture of Defence without delay." Initially, Clinton would be able to call upon the 235 officers and men of Captain James Rosekrans's 2nd Company, Captain John Belknap's 5th Company, and Captain Abraham Swartwout's 6th Company at Fort Montgomery and the 153 officers and men of Captain William Jackson's 4th Company and Captain Increase Childs's company at Fort Constitution to complete his charge.[33] After the passage of one year, the fate of the Highlands' defenses now passed back into the hands of the man who had originally assessed them.

Returned from the abortive expedition to Canada, Clinton would supervise a project, which he had recommended the previous June, that had so far failed to fulfill the promise of blocking the Hudson River in the Highlands.

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32. Two "Commissioners, with four carpenters, two blacksmiths and seven attendants, are at *Fort Constitution*; two Commissioners, one clerk, fifteen carpenters, and four masons, are at *Fort Montgomery*; the pay of these amount to at least eight hundred dollars per month, besides their provisions, &c.," Stirling to Washington, 1 June, minutes, 8, 13 June 1776, NYPC, Force, *American Archives*, 6:674, 1383, 1401.

33. Minutes, NYCS, 1 May 1776, "Present state of the Garrison at Fort Montgomery," Force, *American Archives*, 5:1076, 6:676, 1401; minutes, 27 Apr., NYPC, in Fernow, *Documents* (Colonial NY), 98. Washington to J. Clinton, 14 June 1775, in Washington, *Writings* (ed. Fitzpatrick), 5:138; also in *Founders Online*, National Archives, https://founders.archives.gov/documents/Washington/03-04-02-0409. "This Return of the Men and Arms in the Garrison at Fort Constitution & Montgomerie," Clinton to Washington, 10 June, "Military History of West Point," USMA Library, 4:80.3; *Calendar of Historical Manuscripts*, 1:307. Washington ordered Livingston to Long Island to command the rest of Clinton's regiment.

Since Henry B. Livingston was the senior officer present at the two forts, the commander of Fort Constitution, and Clinton's lieutenant colonel, Colonel Clinton officially assumed his new position smoothly, retaining two commissioners—Captain William Bedlow at Fort Constitution and Colonel Thomas Palmer at Fort Montgomery—so that construction could continue apace until a Continental engineer arrived. Reluctantly, Washington agreed to support this supervisory plan for the time being, although he expressed his hope that the new commander could make do with only one commissioner.[34] Clearly now the guiding force in the Highlands for the time being, Clinton turned to matters of command and construction.

Not long after Lord Stirling's visit, Fort Constitution, bristling with forty-one cannons and manned by Continental soldiers and New York militiamen, achieved its greatest, if short-lived, prominence as the sole completed work in the Highlands Department.[35] An unknown artist sketching at an unspecified time before October 1777 provided the sole pictorial representation of the island and its first-generation fortifications.[36] At first glance, the sketch appears to be overly schematic and worth little as true documentation of the works, but closer examination reveals the skyline of the island to be reasonably correct. Furthermore, if one uses one's imagination and visualizes the island barren of trees, the batteries may have appeared to be on the skyline as he showed them. The centerpiece is Romans's blockhouse with flags flying proudly above it. From left to right, Romans', Marine, Hill Cliff, and Gravel Hill batteries dominate the island's southern shore.

No embrasures appear in Romans's Battery, but Lord Stirling's excellent description of this work specifically accounted for fifteen embrasures. The

34. Clinton to Washington, 20 May 1776, Force, *American Archives*, 6:527; Washington to Clinton, 25 June, Washington, *Writings* (ed. Fitzpatrick), 5:175.

35. The number of cannons on carriages by type varies between Captain-Lieutenant Winthrop Sargent's inspection report (42 9-, 6-, and 4-pounders), 30 May 1776, and Col. Nicoll's "Account" (43), 29 May, Stirling to Washington, 1 June 1776, Force, *American Archives*, 6:677–78. Lieut. Col. Livington's "Return of the present state of the Garrison at Fort Constitution," 29 May, indicates that there were 41 cannons "fit for use." Conspicuously missing are heavy cannons. Washington dismissed all Minutemen from service at the fort on 13 June, leaving the Continentals (minutes, *American Archives*, 6:674, 1399, 1401). Militiamen would return by Sept. and remain a part of the garrison with Continentals under Brig. Gen. James Clinton (minutes, NYPConv., 6 Sept., Washington to NYCS, 9 Sept., minutes, NYCS, 30 Nov., George Clinton to NYCS, 1 Dec., NYCS and NYPC, New York, *Provincial Congress*, 1:612, 616, 650, 731; "November 1776," in Lesser, *Sinews of Independence*, 40, 42).

36. Sketch, *A view of Fort Constitution*, undated, Olin Library, Cornell University. A photographic copy is at USMA Library.

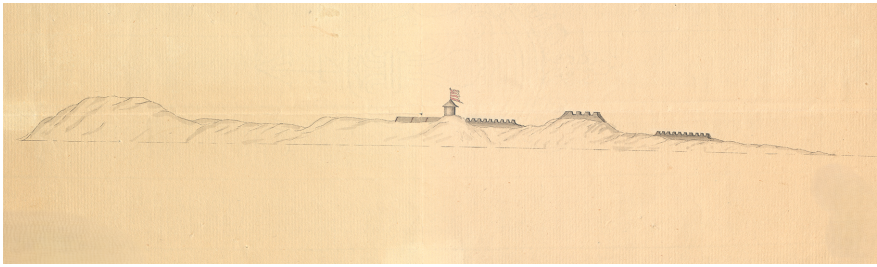

Image 4.3: *A View of Fort Constitution*, c. 1776. (Reproduced by permission of the Division of Rare and Manuscript Collections, Cornell University Library.)

sketch clearly shows eight embrasures in Marine Battery and three at Hill Cliff. This corresponds precisely with the data in the legend of Lord Stirling's "plan no. 3." Only nine embrasures can be counted in Gravel Hill Battery, whereas Stirling's map stated that there were eleven guns on that site. Nicoll, Drake, and Palmer had recommended two heavy cannons "to be mounted on a short curtain facing the reach above the West Point" at Gravel Hill.[37] If that curtain (on the western end of the battery) had been constructed, it might not have been visible from the artist's vantage point, possibly accounting for the disparity between the sketch and Stirling's map.[38] The artist unwittingly captured in his picture the power of the works that the British would see as they rowed up the river to capture them on 8 October 1777.

Mid-June marked the beginning of the fateful summer of 1776 when the British mounted their first major bid to gain control of the Hudson River, and it also marked the end of substantive construction on Constitution Island until 1778. Work had begun in October 1775, with the simultaneous erection of the blockhouse and Romans's Battery. These works were impressive to observe, but investigators consistently questioned their military value. No one except Romans was satisfied with their location, so the commissioners with the help of Captain William Smith and Colonel Rufus Putnam designed and built batteries that could engage hostile ships at maximum range and escape to some degree the dominating terrain across the river. Although principal reliance for blocking the river devolved on the forts at Popolopen

37. Nicoll-Drake-Palmer report, 14 Dec. 1775, Force, *American Archives*, 4:421.

38. Guthorn, *American Maps*, 38. The sketch, whenever it was drawn, could not have been made before May 1776 because Gravel Hill and Hill Cliff batteries would not have been in such an advanced state. The artist may very well have been Lord Stirling's unidentified cartographer, drawing the sketch as he prepared the maps to accompany His Lordship's report.

Creek, construction continued on the island.[39] Stirling's report reflected the work that had been done on Marine, Gravel Hill, and Hill Cliff batteries, but none appeared to have been directed toward the proposed fortification on Nelson's Point north of present-day Garrison. Moreover, although Lieutenant Colonel Henry Livingston raised the issue again after assuming command, no redoubt would rise above the West Point until 1778.[40]

From the beginning, nothing had been accomplished easily on Martelaer's Rock. With the British landing in New York in July 1776, even greater urgency was attached to the new twin forts on the Popolopen. In the autumn, Captain-Lieutenant Thomas Machin attempted to obstruct navigation with a chain across the river near Fort Montgomery, and Fort Constitution figured less and less in the scheme to defend the Highlands.[41] New York's Secret Committee shipped cannons from the island to Albany and to Fort Montgomery, weakened the garrison and stripped it of skilled cannoneers, and kept ammunition and food in short supply. Livingston, the garrison commander, wrote letters on matters too petty to warrant anyone's attention or addressing problems that seemed to defy everyone's solution. At one point in March 1777 the New York Provincial Congress even gave serious consideration to having Fort Constitution "dismantled" since it was in a "deplorable situation." While it would be cannibalized to support the other fortified sites, it would survive the battle of priorities and remain continuously, if weakly, garrisoned until October 1777, when the British would arrive to test the results of New York's, the Continental Congress's, and General Washington's investment.[42]

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39. The construction of Fort Montgomery involved additional mistakes in military engineering. Lord Stirling noted that the point of land across Popolopen Creek (where the west abutment of the Bear Mountain Bridge is today) dominated Fort Montgomery. There was no recourse but to fortify that point too. Thus, Fort Clinton came into being. Force, *American Archives*, 6:672, https://babel.hathitrust.org/cgi/pt?id=mdp.39015019226755&seq=398.

40. Livingston to Washington, 14 June 1776, Force, *American Archives*, 6:818.

41. Thomas Machin, engineer of the Highlands Department from July 1776 to October 1777, attempted to stretch a chain across the Hudson at Fort Montgomery in the autumn of 1776. The chain broke twice under the pressure of the changing tide. In the spring of 1777, his efforts were successful. Machin was also the engineer who successfully installed the Great Chain at West Point on 30 April 1778. As Machin was struggling with his first chain, Jacobus Van Zandt thought that it would be more effective stretched from Fort Constitution to the West Point; see Jacobus Van Zant to George Clinton, *Public Paper*, 1:273–75.

42. NYPConv to Hancock, 18 Mar. 1777, New York, *Provincial Convention*, 1:840.

CHAPTER 5

FORTS CLINTON AND MONTGOMERY IN THE NEW SEAT OF THE WAR, 1776–1777

While Fort Constitution rose imposingly from Martelaer's Rock by the summer of 1776, the initial failures there had led colonial leaders as early as October 1775 to seek alternative sites in the Hudson Highlands for fortifications and obstacles.[1] New York and Continental Congressional leaders had heard from visiting committees that Romans's Grand Bastion was inadequate and from Romans himself that Popolopen Creek, some six nautical miles downriver, had offsetting advantages. Since to this point New Yorkers had failed to obstruct the river even with all of their efforts concentrated at Martelaer's Rock, the key question in 1776 became: Could they now quickly build a complex of fortifications and obstacles over the length of the Hudson Highlands that was formidable enough to impede the British strategic plans? Beginning in January 1776, Continental and colonial politicians and soldiers would divert precious manpower and materials from Fort Constitution to three other forts—Montgomery and Clinton on Popolopen Creek and Independence at Peekskill Bay—and a chain and boom at Fort Montgomery and an outpost on the east bank at Verplanck's Point.[2] Workmen under the supervision of Captain-Lieutenant Thomas Machin, also responsible for the chain at Anthony's Nose, would sink chevaux-de-frise—iron-tipped wooden stakes protruding from sunken log cribs called caissons filled with rocks—in the river from Pollepel Island across to Plum Point near New Windsor

1. Morton, Dean, and Livingston, 7 Oct. 1775, Ford, *Continental Congress*, 3:281–82; General Philip Schuyler had supported the works on Martelaer's Rock and also advocated fortifying positions "both above and below" in a letter to John Hancock, 14 Oct., Force, *American Archives*, 5th ser., 3:1065.

2. Washington, *Writings* (ed. Fitzpatrick), 7:445, 474, 8:39.

on the west bank.[3] Behind these fortifications and obstacles, logistical complexes would spring up at Continental Village near Peekskill and at Fishkill. British joint operations against New York City beginning in June 1776 and raids into the Highlands in July and August 1776 and again in March 1777 added even greater impetus to the completion of this work.[4] By the fall of 1777, Americans would build an imposing barrier with which the British would have to contend as they planned to win the conflict in the new seat of war along the Hudson River.

The Continental Congress had shifted the priority from Fort Constitution to Popolopen Creek on 5 January 1776 when it resolved "that no further Fortifications ought to be erected at *Martelaer's Rock*, on the *Hudson-River*, and that a point of land at *Pooplopen*'s *Kill*, on the said River, ought, without delay, to be effectually fortified."[5] It followed this initial order with more detailed instructions on 15 February: "That it be recommended to the Convention, or Committee of Safety of *New-York*, to forward the Battery at *Pooplopen's Kill*; and that the said Battery be made of earth and fascines, and to mount a number of Guns, not exceeding forty."[6] The New York Provincial Congress had initially responded on 16 January by ordering the commissioners to send the timber at New Windsor "designed for the additional Barracks at *Martelaer's Rock*" to Popolopen Creek.[7] After receiving the go-ahead directive, it appointed Colonel Thomas Palmer, Esquire of Ulster County, as "additional Commissioner" and told him to "apply to General *Lee* for an Engineer to assist in that business; and that he immediately repair with the said Engineer to the Highlands."[8] When Major General Charles Lee agreed to spare his engineer Captain William Smith for the mission, the team, bolstered by the addition of Gilbert Livingston as a commissioner on 1 March, was now in place to begin work at Popolopen Creek.[9]

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3. Machin to Committee of Safety, 21 Jan. 1777, New York, *Provincial Congress*, 781.

4. Ruttenber, *Obstructions to the Navigation of Hudson's River*, 61–93; Hornor, *Obstructions of the Hudson River During the Revolution*, 1–17.

5. Minutes, NYCS, 3 Jan. 1776, Continental Congress (CC), 5 Jan. 1776, Force, *American Archives*, 4:1019–20, 1033, 1672. The word *Popolopen* had several spelling variations during the late eighteenth century.

6. CC to NYPC, 15 Feb. 1776, Force, *American Archives*, 5:298.

7. NYPC to Commissioners, 16 Jan. 1776, Force, *American Archives*, 4:1051.

8. Minutes, NYPC, 21 Feb. 1776, Force, *American Archives*, 5:299; Colonel Thomas Palmer, https://archive.org/details/franheitmanregoobernrich/page/424/mode/2up.

9. Minutes, NYPC, 1 Mar. 1776, New York, *Provincial Congress*, 1:332.

Even as work began in earnest across from Anthony's Nose, General Philip Schuyler was sustaining his forces of the Northern Department outside Quebec, Canada, and New York; and the Continental Congress and General Washington were placing their highest priority on preparing New York City and its harbor for, to their minds, the certain arrival of the forces of Vice Admiral Richard Lord and Major General William Howe.[10] As New York became the "chief theatre of the war," first Major General Charles Lee and then Major General Israel Putnam assumed responsibility for building fortifications on Brooklyn Heights, Long Island, at King's Bridge and Fort Washington on Manhattan Island, and at Fort Lee across the North River in New Jersey. Captain Smith, with Lieutenant Colonel Rufus Putnam, was putting his energy into the Americans' primary effort of fortifying New York City when he sailed north to assist with New York's smaller-scale task in the Highlands Department.[11]

The new grand post of the Department became Fort Montgomery, on the north bank of Popolopen Creek, named, or first called by this name, by Captain Smith to honor Major General Richard Montgomery, the fallen hero of the battle of Quebec. Goaded by the Continental Congress, Bernard Romans and the commissioners, after a visit there in December, had found the location on "Pooploop's Hill" to be "the best by much for any defensive work in the Highlands." With their judgment tempered by their experiences at Fort Constitution, the commissioners found many advantages to this new site:

> A little to the north of the house, on the hill, is a place where a battery of heavy cannon would obstruct any enemies coming up, as it commands the river down and up, the length of point-blank shot. Timber in plenty, near, to be had. No enemy can land at *Haverstraw* and cross the mountain, to annoy it by land. The height of the place, about one hundred feet above the river, and is not much wider over to *Anthony's Nose* than at this post.[12]

10. Washington to Maj. Gen. Lee, 8 Jan. 1776, Force, *American Archives*, 4:603–4; Washington to Maj. Gen. Israel Putnam, 29 Mar., Washington, *Writings* (ed. Fitzpatrick), 4:442–43.

11. By August 1776, the significance of the Hudson had filtered down to the militia regimental command level. Col. A. Hawks Hay to Washington, 2 Aug. 1776, Force, *American Archives*, 5th ser., 1:728; events and participants synthesized from appropriate entries in Boatner, *Encyclopedia of the American Revolution*.

12. Commissioners to NYPC, 7 Dec. 1775, Force, *American Archives*, 4th ser., 4:254–55, https://babel.hathitrust.org/cgi/pt?id=mdp.39015027756454&seq=217.

While they assessed the topography and resources accurately, they made a fatal assessment that would become an article of faith with everyone involved with the forts there: they postulated that "No enemy can land at *Haverstraw* and cross the mountain, to annoy it by land."[13] The Nicoll-Drake-Palmer delegation would reinforce this assessment of the site's inaccessibility to the enemy and would declare it "by far the most advantageous situation in the Highlands for a fortification."[14] As a consequence, the builders would concentrate their efforts in preparing for an attack from the river; the centerpiece of the defense would be the "Grand Battery" of six 32-pounders overwatching the expanse of water to the south from the Horse Race to the Dunderberg. Both Captain William Smith and Lord Stirling would echo the advantages cited by the commissioners and the congressional delegation, and Smith would stake out the trace of the fort in February 1776.

While Smith had staked out a bastioned Fort Montgomery that seemed to resemble Romans's Grand Bastion, he had placed it upon key terrain and had proposed a well-drawn plan for construction that was much more realistic than his predecessor's had been. He thought that "the fort may be built at an easy expense." He would hold the cost down, as instructed by the Continental Congress, by building a field fortification rather than a European-style stone fortress, taking advantage of existing materials, earth and wood, for timber and fascines. By using sod and fascines, "which nature has plentifully supplied at Pooplopen's Kill," an engineer could erect the works "without Masons or Carpenters, the platforms excepted."[15] As he had promised the New York Provincial Congress, Smith provided a sketch of his proposed fort; it was almost 400 feet from north to south with five angled bastions, fourteen embrasures for cannons, at least six of which

13. Commissioners to NYPC, 7 Dec. 1775, Force, *American Archives*, 4th ser., 4:254–55. "By Order of the Honerable Continental Congress the Fort which this is the Plan of was laid out Febr. 1776 at Vooplopen's Kiln in the Highlands of New York and Name'd after the brave Genl Mongomery Wm Smith Engineer," Heath Papers, National Archives, Washington, DC, vol. 2, roll 2, 220, on microfilm, USMA Library, original in Massachusetts Historical Society, Boston and in Guthorn, *American Maps*, 33. There is no north marker, so to orient the sketch, one must turn it upside down so the "D" ("Blind to the Entering Fort") on the north flank is readable.

14. Nicoll, Drake, and Palmer to NYPC, 14 Dec. 1775, Force, *American Archives*, 4th ser., 4:420–422.

15. Minutes, NYPC, 1 Mar. 1776, Force, *American Archives*, 4th. ser., 5:321–22. Smith is also referred to as a colonel; according to Henry B. Livingston, Smith had been a lieutenant colonel of artillery but resigned because of "a Frenche Gentlemans being promoted over his Head," Livingston to Yates, 14 Jan. 1776, *Calendar of Historical Manuscripts*, 2:23.

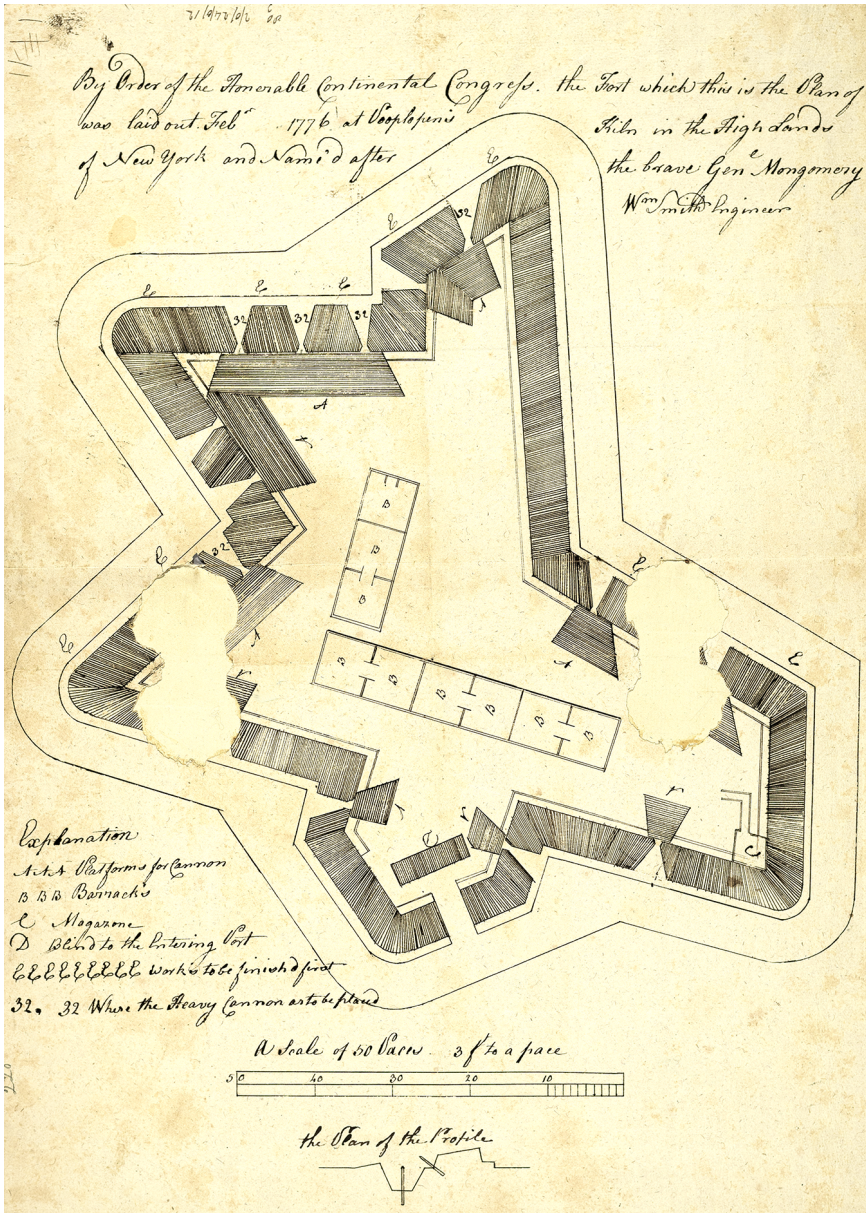

Image 5.1: William Smith's plan for Fort Montgomery: "By Order of the Honerable Continental Congress the Fort which this is the Plan of was laid out Febr. 1776 at Vooplopen's Kiln in the Highlands of New York and Name'd after the brave Genl Mongomery Wm Smith Engineer." (Reproduced by permission of the Collection of the Massachusetts Historical Society.)

were 32-pounders oriented to the south on the river, barracks in its center, and a magazine. Little had been done by April other than to mount the six heavy cannons. Colonel John Greaton's company commander from his 24th Continental Infantry (Massachusetts) reported bleakly that "here we are in an unsettled uncultivated Mountainous Wilderness, with about 3 or 4 Companies of undisciplin'd unarmed Country Troops, No Fort or Breastwork to Cover the Cannon which were Six pieces of 32 . . . the ground designed for a Fort only a Ledge of Rocks, & a verry disagreeable Scene before me." From his perspective the work started in earnest on 11 April when he noted in his diary: "began a Fortress." By July the six 32-pounders on garrison carriages were located along a planned curtain of over 200 feet that would come to be known as the Grand Battery; from this point, these guns could fire to their maximum range of up to three miles against ships proceeding up the river from the Dunderberg. The profile of the works at the bottom of Smith's sketch showed a glacis, ditch with a palisade (wooden fence) down the center, a parapet with fraises (wooden stakes) projecting outward, and a banquette ("fire-step").[16] While others would expand William Smith's design, he had laid out on the ground an initial trace upon which work would proceed to the fort's "final" state.

First Lieutenant William A. Patterson of the 15th Continental Regiment made a major change in the design in April 1776 that gave even more emphasis to the southern flank of Fort Montgomery than Smith had. His rendering of that battery was 100 feet long and 18 feet thick with the same number of embrasures as Smith had planned—five. Unlike Smith, he seemed to be more concerned about the higher ground directly to the south; he therefore extended the curtain as a straight line through an angled center with three embrasures for another ninety-eight feet to the west. He thus planned an extended battery of over 325 feet, open to the rear, rather than a fort with a south wall 100 feet shorter. He traced a supplementary curtain facing the southwest to which the five cannons on the right could be rolled back in case of an attack by land from that direction. To both Smith and Patterson the principal British threat would come from the south, *on the river*. Patterson

16. Smith had included at least five 32-pounders in his plan, "Plan" for Fort Montgomery, Feb. 1776, Heath Papers, USMA Library. For a glossary of terms about fortifications and cannons, see Duffy, *Fire and Stone*, 183–86; and Muller, *Treatise of Artillery*, xxxviii; Washington to Yates, 21 July, Force, *American Archives*, 1:483; 27 July, Smith, *Historical Memoirs*, 2:1; "A Return of the Artillery Stores & Ordinance at Fort Montgomery," 14 Nov., Papers of George Washington, Library of Congress, on microfilm, series 4, reel 38, USMA Library; 7 Apr., Romaine, *From Cambridge to Champlain*, 21–22.

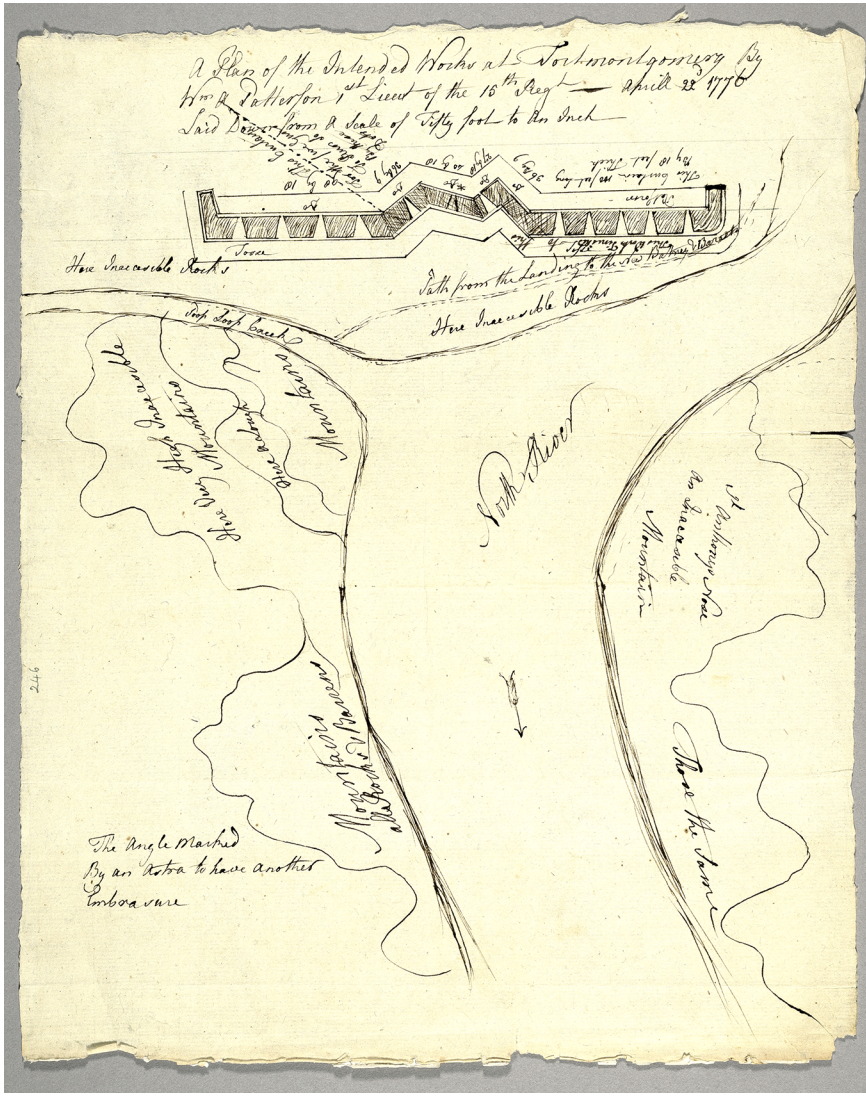

Image 5.2: "A Plan of the Intended Works at Fort Montgomery By Wm A. Patterson 1st Lieut of the 15th Regt—April 22 1776. Laid Down from A Scale of Fifty foot to An Inch." (Reproduced by permission of the Collection of the Massachusetts Historical Society.)

marked the terrain to the south as "very High Inaccessible Mountains"; persuaded that his observation was a fact, he planned his battery accordingly.[17] The commissioners and commanders would try to implement both blueprints, without their designers present, as they built the new fort.

Stymied by the inability to move building materials on the frozen Hudson and awaiting Smith's expertise, the commissioners were unable to focus their attention upon Fort Montgomery until March, when they began work in earnest.[18] They organized for their task by keeping William Bedlow and Jonathan Lawrence at Fort Constitution and sending Thomas Palmer and Gilbert Livingston the five miles south to Fort Montgomery. Colonel Isaac Nicoll, as overall commander, would have to split his time between the two forts.[19] These leaders had Minutemen from Colonel Palmer's own Southern Regiment from Ulster County, soon bolstered by Continentals, for labor.[20] Quartered in sloops until barracks became available and subsisting on "pork and bread," 140 "very uneasy and mutinous" militiamen nonetheless helped a party of masons and carpenters accomplish a remarkable amount of work in a short period of time. By 28 March, they had completed a storehouse to the west of the site and "a quantity of fascines" and were finishing a barracks, with the now standard dimensions of 80 by 20 feet for 160 men, behind the center of the curtain and a "bake-house" to its southwest. On 3 April, six 32-pounders with carriages from a total of thirty-five arrived from New York City so that the fort would be effective against British warships. On 27 April, Commissioner Palmer wrote,

> We have erected one large store-house, forty feet by thirty four; one barrack, eighty feet by twenty, two stories high, with a cellar under the half of it; a bake-house, sixteen feet by fourteen; a guard-house, twenty feet by fourteen; a large necessary, for soldiers; all which are now completely finished: a barrack, for officers, commissary, &c., forty feet by twenty, to be raised this day; a magazine, twelve

17. "Wm A. Patterson to Hon. &c," 22 Apr. 1776, and "A Plan of the Intended Works at Fort Montgomery By Wm A. Patterson 1st Lieut of the 15th Regt–April 22 1776," Sheffield Research Files, USMA Library.

18. Palmer to NYCS, 25 Jan. 1776, Bedlow to Berrien, 15 Feb., Force, *American Archives*, 4:1097, 1156.

19. Minutes, NYPC, 1 Mar., New York, *Provincial Congress*, 1:332; Isaac Nicoll to NYCS, 21 Mar., NYCS to commissioners, 30 Mar., Force, *American Archives*, 5:1395, 1416–17.

20. Palmer's Southern Regiment of Minutemen (Ulster), https://arw.fandom.com/wiki/Ulster_County_Militia.

> by eighteen feet, walls eight feet thick, so far complete as turning the arch on the top will finish it. We have, besides this, timber for another large barrack, eighty by twenty feet which will be the last we intend building; besides this, we have the timber and plank for the platform of the battery.[21]

On 14 February 1776, Major General Charles Lee had written to General Washington that "the batteries on the pass of Hudsons River will be secur'd as soon as possible, some of the heavy Cannon from hence must be sent up for the purpose—it is really a fine train."[22] From Captain Smith's overall plan for a fort, which included at least five of the heavy cannons, the commissioners chose to make Patterson's "Battery," now the Grand Battery, overlooking the most likely avenue of approach, the Hudson, their top priority.[23]

Two months later the commissioners would have Patterson's curtain laid out with two batteries finished. In early April the Franklin-Chase-Carroll delegation had been unimpressed with the report that William Bedlow gave them of Fort Montgomery and would conclude, "The fortifications directed by Congress 15 Feby, and laid out by Mr. Smith, remain wholy neglected."[24] Lord Stirling would report progress on 1 June, although what he saw were as yet still "open lines," of which some were "finished, designed, or begun," as indicated on his "Plan No. 2" or Thomas Palmer's "Plan of Fort Montgomery" from the same time. The southernmost angled curtain with embrasures for fifteen cannons and a battery to the west for five guns were the only parts of the extended curtain completed at the time of the general's inspection. The commissioners had complied with Smith's idea and used fascines, "filled in with strong good loam," for the ramparts. To strengthen them against cannon fire from enemy ships in the river, they were planning to "roughcast the

21. Palmer to NYCS, 28 Mar. 1776, Palmer to NYCS, 27 Apr., Force, *American Archives*, 5:1096, 1414, https://babel.hathitrust.org/cgi/pt?id=mdp.39015027756447&seq=612.

22. Lee to Washington, 14 Feb. 1776, Founders Online, https://founders.archives.gov/documents/Washington/03-03-02-0223.

23. Locations of the buildings are from "Plan of Fort Montgomery," Thomas Palmer, 1776, *Calendar of Historical Manuscripts*, vol. 1, opposite page 474; Franklin, Chase, and Carroll to Heath, 5 Apr. 1776, Franklin, *Papers* (ed. Willcox), 22:398. Henry Knox inventoried the cannons and mortars in the City of New York and reached a total of 121 cannons and 19 mortars, "A Return of the disposition of the Cannon, and of ten Companies of the Continental Regiment of Artillery, and one Colony Company of Artillery, commanded by Captain Hamilton, in and about the City of New-York," Knox to Washington, 10 June 1776, Force, *American Archives*, 6:920–21.

24. Franklin, Chase, and Carroll to Heath, 5 Apr. 1776, Franklin, *Papers* (ed. Willcox), 22:398.

faces of the embrasures with a strong mortar made of quicklime and sharp sand, of which there is plenty at hand." Stirling pushed for completion of the second barracks at "E"—"raised" by 27 September—and the magazine ("D") with its seven-foot-thick walls at the center of the fort. All in all, Stirling and his advisers, Colonel Rufus Putnam and Captain-Lieutenant Winthrop Sargent, seemed satisfied with the actual construction going forward above Popolopen Creek.[25]

While the construction at Fort Montgomery was meeting William Alexander's expectations, he had concerns about the vulnerability of the site that it occupied. He was particularly alarmed by the high ground 200 to 300 yards directly to the south that "commands all of the principal works." He argued that "the grand post" for the Highlands actually should be built there as "a regular strong work, capable of resisting every kind of attack, and of containing a grand magazine of all kinds of warlike stores." The complex of this work—to become Fort Clinton—and Fort Montgomery would then "command the passage of the river with so formidable a cross fire as would deter any attempt to approach with shipping." Prophetically, he noted that latter's curtain was "entirely defenceless on the land side," so he proposed that the commissioners "erect a small redoubt" to the northwest on high ground, to become Round Hill Redoubt.[26] General Alexander was correct in his assessment of the ground, and his report provided a pattern for the construction that would continue at Forts Constitution, Montgomery, and Clinton.

In the immediate aftermath of the Earl of Stirling's inspection, Colonel James Clinton, as commander in the Highlands Department, was the man responsible for implementing the general's recommendations. While he and Christopher Tappen had chosen the west point as the site for the engineering efforts, in mid-June he found himself focusing his attention on a fort named for his former commander in Canada, Major General Richard Montgomery. With the backing of a Secret Committee of his fellow New

25. Stirling's "Plan No. 2," Thomas Palmer, "A Rough Map of Fort Montgomery," Olin Library, Cornell University; and "Plan of Fort Montgomery," Thomas Palmer, 1776, *Calendar of Historical Manuscripts*, vol. 1, opposite page 474, https://archive.org/details/calendarofhistoro1newy/page/n485/mode/2up; BG James Clinton to NYC, 27 Sept., New York, *Provincial Convention*, 650; Stirling to Washington, in Washington to Bedlow and the other Commissioners, 10 June, NYPC, Force, *American Archives*, 6:672, 793.

26. Stirling to Washington, 1 June 1776, Force, *American Archives*, 6:672–77; marked "A" on "Plan No. 2," https://babel.hathitrust.org/cgi/pt?id=uiug.30112089752064&seq=399; "Plan of Fort Montgomery," Thomas Palmer, 1776, *Calendar of Historical Manuscripts*, vol. 1, opposite page 474, https://archive.org/details/calendarofhistoro1newy/page/n485/mode/2up.



Image 5.3: "A Rough Map of Fort Montgomery Shewing It's Situation on Puplopes Point Ground Plot of the Buildings." (Reproduced by permission of the Division of Rare and Manuscript Collections, Cornell University Library.)



Image 5.4: *Plan of Fort Montgomery*, No. 1, by Thomas Palmer, 1776, Calendar of Historical Manuscripts. (Courtesy of the New York State Office of Parks, Recreation and Historic Preservation.)

Yorkers, he and Major Tappen, one of its members, would resurrect the idea of booms drawn across the river to keep British warships at bay. Reacting to General William Howe's landing of troops on Staten Island on 2 July, the Convention of the Representatives of the State of New York, replacing the Provincial Congress on 10 July, would create the committee six days later "for obstructing the channel of Hudson's river," appointing John Jay, Robert Yates, Tappen, Robert R. Livingston, Gilbert Livingston, and William Paulding as its members. The committee would initially harness the maritime industry, including the shipyard at Poughkeepsie, to prepare fire ships to burn British ships that ventured upriver. However, meeting at Fort Montgomery three days later with the former commissioner, Captain William Bedlow, future Governor and New York Brigadier General George Clinton, and Clinton's brother James, it would throw its weight behind a boom across the river there with "Frames of Timber the points or ends to be shod with Iron" anchored below it.[27] Over time, this concept would evolve to a chain protected by a boom. Work would proceed on the boom, constructed of timber "45 feet and upwards" obtained by the Committee of Safety of Albany from Dr. Robert Van Rensselaer at Rensselaer Manor. Since the minutes and correspondence of the Secret Committee used the terms "frames," "boom," and "rafts" interchangeably, the exact dimensions of the boom are difficult to reconstruct. The final boom likely comprised four or five pointed logs of fourteen to fifty feet in length, bolted together ten to sixteen feet apart by two or three cross beams; the rafts would be fifteen feet apart and linked by "strong" 1½-inch chains. Regardless of its shape, it would never make it into the water at Anthony's Nose, and the British would destroy it at Fort Constitution. In the meantime, the Secret Committee would successfully block the river with a chain and cable from the frigate *Montgomery* protected by batteries of cannons on each side of the Hudson instead.[28]

Support for an obstacle in the Hudson would come from the commander in chief after he witnessed British warships passing his batteries in

27. Ford, *Continental Congress*, 16 July 1776, 526–27, and minutes of the Secret Committee, Washington's Headquarters, 19 July; many of these documents are printed.

28. Specifications for 150 white pine logs were both fourteen and fifty feet; see minutes, 19 July, 1 Aug. 1776; Secret Committee to Van Zant, Laurence, and Tudor, 22 July; Secret Committee to Gentln., 21 July; bill, Van Rennselaer, 5 Aug., 26 Nov.; minutes, Albany Committee of Safety, 6 Aug.; Visscher to Yates and note about G. Livingston to Albany Committee of Safety for 120 pine logs, 14 Sept.; G. Livingston to R. Livingston, 16 Sept.; committee (Rensselaer and Wendell) to Beeckman, 18 Sept., Papers of the Secret Committee; Ruttenber, *Obstructions*, 61–93; enclosure 6 to Clinton to Howe (No. 69), 21 Oct. 1777, Dutchess County, *Year Book* 21:111.

New York. He found that their relative freedom of action sustained "what I had long most religiously believed; and that is, that a vessel, with a brisk wind and strong tide, cannot, unless by a chance shot, be stopped by a battery, unless you can place some obstruction in the water to impede her motion within reach of your guns."[29] For a time, the fate of the chain would be in the hands of the Secret Committee as the soldiers focused on a raid by ships of the Royal Navy.

Brigadier General George Clinton was able to attend the meeting of the Secret Committee at Fort Montgomery on 19 July because he and his brother were responding to forays by the British ostensibly against "the passes" of the Hudson.[30] In the Highlands, commanders would always have to balance the priority given to construction against security, training, and readiness even when faced with a direct threat.

In the meantime, early in July, the largest armada the British Empire had ever sent abroad entered New York Harbor. Some 430 ships carrying over 34,000 British regulars, sailors, and German soldiers, under the joint command of the brothers Admiral Sir Richard Howe and General William Howe, passed through the Narrows and dropped anchor. Facing them on Manhattan and in Brooklyn were some 20,000 Continentals and militia under Washington's command. With landings first at Staten Island and then at Gravesend Bay, then part of Long Island, on 22 August, General Howe moved against Major General Nathanael Greene's 6,000 men atop Brooklyn Heights. In late August, Howe's main force slipped around now Major General Israel Putnam's troops and threatened the American works on Brooklyn Heights. Before Howe could finish them off, the Americans retreated across the East River to Manhattan. In mid-September, the two armies clashed again near Kip's Bay, sending Washington's army reeling northward up Manhattan island until Howe's advance guard was checked at Harlem Heights. In early October, the British again seized the advantage, landing at Pell's Point where Colonel John Glover's brigade mounted a stout defense. Later, on 28 October, the two armies battled to a draw at White Plains, north of Manhattan in present-day Westchester County. In just three months, the Continental Army had been pushed out of New York City and into the lower Hudson River Valley. Howe would subsequently take Fort Washington on Manhattan and then Fort Lee across the Hudson in

29. George Washington to brother Augustine, 22 July 1776, Works Progress Administration (WPA), "History," 5:10.05.

30. Washington to Clinton, 12 July 1776, Force, *American Archives*, 5th ser., 1:227.

New Jersey and finally push Washington's army across New Jersey and the Delaware River.[31]

Even as General Howe was opening the new "seat of war," Captain James Wallace was using his 20-gun, 6th rate frigate *Rose* and schooner *Tryal* (Lieutenant Jonathan Brown), supported by Captain Hyde Parker Jr.'s 44-gun, 5th rate frigate *Phoenix* and two tenders, *Shuldham* and *Charlotta*, "to cut off the communications between New York and Albany," alarming the inhabitants of the Hudson River Valley in the process.[32] General Washington thought that British troops, who could threaten the "Land Communication with Albany" and "our Northern Army," might be hidden on board the ships. Even if this was not the case, he did not want the ships to gather fresh provisions, disrupt friendly commerce, or arm local Tories. While Admiral Howe seemed most interested in having his two frigates "cut off the Supplies sent down the North River to that Town [New York]," all of Washington's fears would continue to spur efforts to block the river throughout the war.[33]

Despite the immediate British threat, Colonel James Clinton tried to focus his efforts on the forts insofar as possible. Day in and day out the commander had to balance regular guard details of a subaltern, a sergeant, a corporal, and twenty-one men at each fort to protect against Tory plots and British attacks with the demands for labor (fatigue) parties.[34] From the gar-

31. Schecter, *Battle for New York*, 112–16; Polf, *Garrison Town*, 5–7. Howe was a lieutenant general with the local rank of general as commander in chief; https://www.studylight.org/encyclopedias/eng/bri/w/william-howe-5th-viscount-howe.html.

32. While Captain Parker commanded the force, Wallace was making the greatest impression as he ranged about; "Disposition of His Majesty's Ships and Vessels in North America under the Command of Vice Admiral Shuldham," 24 May 1776, in Clark, et al., *Naval Documents*, 5:229. Elizabeth Tappen reported to her husband, Dr. Peter Tappen, that the Tories "seem to be as much Distressed about the ships coming up as the wigs," 19 July, *Historical Magazine* 5:108–09, https://archive.org/details/sim_historical-magazine-biography-of-america_1869-02_5_2/page/108/mode/2up; also in WPA, "History," 5:9.01–02.

33. Travis to Col. Humphreys, 12 July 1776, WPA, "History," 2.06, 6.08; Washington to Clinton, 12 July, Nathaniel Woodhull to Washington, 13 July, Washington to Committee of Orange County, 14 July, and Washington to President of Congress, 14 July, Force, *American Archives*, 1:227, 258, 329, 335, and Founders Online, https://founders.archives.gov/documents/Washington/03-05-02-0218; Ford, *Samuel Blachley Webb*, 2; R. Howe to Stephens, 28 July, Clark et al., *Naval Documents*, 5:1261.

34. George Clinton sent eighty of his men to reinforce Hay's regiment, Hay to Clinton, 14 July 1776, Hay to Washington, 19 July, Force, *American Archives*, 1:337, 452; Fernow, *Documents* (Colonial NY), 15:290. Earlier, with only 393 officers and men, James Clinton found that "We have been unable to Mount a Picket Guard for fear of Weakening the Working Party too much," "This Return of the Men and Arms in the Garrison at Fort

rison orders of 25 July, it is clear that he and his brother placed the number one priority on completing the "New Works" to the south of the Popolopen opposite Fort Montgomery. The militiamen in the garrison were to put labor into that new fort "as if working for themselves. . . to forward & compleat these Works in Season [before winter]." They would also man a small shed there at night. While their comrades were cutting wood and digging soil, one field officer and one subaltern, one non-commissioned officer, and ten privates per company were to guard the sloops and the landing from the creek at the south end of the fort and conduct "the other necessary Business of the Camp." With more troops now available, Clinton was able to have posts and pickets "on the Point of the Dunderbergh" and "on the Point of Anthony's Nose." If "the Serjants Guard" at the latter sighted an enemy vessel, it was to light a beacon and "discharge their Musquets" so that the picket at the former could alert the garrisons.[35] While they continued to labor, the Continentals and militiamen of Fort Montgomery and the "New Works" still could not forget the British ships in the river; the matrosses would even claim a possible hit with a 32-pounder ball on a tender taking depth soundings.[36]

George Clinton, as commander of a brigade of the Ulster and Orange County militia, however, was left relatively free to respond to reports of sightings of the ships at Tarrytown and landings near Peekskill and Haverstraw. Fearful of the consequences as the British landed on Staten Island and two of their ships ranged the river, he immediately mobilized three regiments of his brigade: Colonel Jesse Woodhull's East Orange or Cornwall Regiment (200 men), Colonel Jonathan Hasbrouck's 4th Ulster County Regiment (420 men), and Colonel James Clinton's old South or South End Regiment of Ulster County with 500 men led by Lieutenant Colonel James McClaughry. He deployed them first to the forts and then to reinforce local forces defending military stores at the threatened towns. He was able to reinforce the 400 men of Colonel Ann Hawkes Hay's Haverstraw Precinct Regiment at Haverstraw with eighty men led by Colonel Isaac Nicoll. Brigadier General Petrus Ten Broeck sent Colonel William Humphrey's 5th Regiment from Beekman's Precinct of Dutchess County to respond to the commander in

Constitution & Montgomerie," 10 June; James Haff confessed to being in a conspiracy to spike guns at the forts when the British sailed up the river, "Confession of James Haff," 22 June 1776, WPA, "History," 4:80.3, 89.2.

35. "Genl. and Garrison Orders," Fort Montgomery, 25 July, George Clinton, *Papers*, 1:267–69.

36. Clinton to Washington, 23 July, George Clinton, *Papers*, 1:286; 27 July, Smith, *Historical Memoirs*, 2:1; in Clark et al., *Naval Documents*, 5:1240.

chief's directive to guard "the post where the [post] road runs over *Anthony's Nose*."[37] With James Clinton's Continentals and the militiamen of the Hudson River Valley, Washington was doing what he could to limit the options available to the marauding enemy naval force.

Despite General Washington's actions, since leaving Staten Island on 12 July, the *Rose* and *Phoenix* had proven to be threat enough for the time being, highlighting the advantages that the British would enjoy throughout the war in the conduct of naval and joint operations. Passing through the cannonade of some 196 rounds from the American batteries around New York City, they had first anchored in Tappan Bay off Tarrytown to repair the damage and to take soundings of the depth of the river there. On the 16th, the squadron moved upriver to Haverstraw Bay, which it would use as a base of operation through the 25th. From here, the ships would move as far north as the Dunderberg, with the *Rose* and the *Tryal* even threatening some shipping at Peekskill until Captain Wallace decided that the "large Body of Rebels intrenched upon the heights directly over them" was too great a deterrent. The *Shuldham* and several barges took more depth soundings and, with the *Charlotta*, even chased a sloop aground near Haverstraw. At various times the ships exchanged fire with parties of militiamen even after they dropped down the river to Singsing (Ossining) near the Croton River on 25 July.[38] Before returning to Gravesend Bay on 22 August to participate in the landings on Long Island, the flotilla faced the attacks of five row galleys, the *Lady Washington* (Continental), the *Whiting* (Connecticut), the *Crane* (Connecticut), the *Washington* (Rhode Island), and the *Spit-Fire* (Rhode Island), on 3 August near Tarrytown and fire ships off Yonkers on 16 August, which cost the British the *Charlotta*, which "was Totally consumed." The *Phoenix* had had a particularly harrowing trip, having grounded on a mud flat near Tarrytown, as had one of the tenders near Stony Point, taken two shots to the hull, and narrowly averted the fire that cost the *Rose* her tender. The ships' crews had burned some houses and had some livestock to

37. Washington to Benson, 13 July 1776, Hay to Washington, 19 July, minutes, NYC, 6 Aug., Force, *American Archives*, 1:256, 452, 1478. Clinton to Washington, 15 July; Hasbrouck used two sloops to transport and house his soldiers, certificates, 1 Aug.; "Abstract of Returns and Pay of Colonel Hasbrouck's Regiment," 5 Aug., George Clinton, *Papers* 1:251–52, 293, 500; Fernow, *Documents* (Colonial NY), 15:278, 281, 289, 301.

38. One seaman and two Marines wounded and damage to sails, hull, and masts: journals, *Phoenix*, 12, 15, 16, 17, 18, 20, 25, 27 July, and *Rose*, 12, 17, 18 July 1776, journal of Captain Henry Duncan, *Eagle*, 12 July, in Clark et al., *Naval Documents*, 5:1037–38, 1102, 1124–25, 1157, 1213, 1240; N. Woodhull to Washington, 13 July, Force, *American Archives*, 1:258.

show for their efforts, but by operating freely from the river, they had caused psychological damage in the American command that would become apparent over a year later.[39]

Throughout the escapade of the *Rose* and the *Phoenix*, the militia proved, for better or worse, how reliant the defense of the Highlands Department was upon them. Arriving on foot, on horseback, and by sloop, citizen-soldiers had left their farms and businesses to respond to the call to arms from New York, Connecticut, and even Massachusetts. Elizabeth Tappen had observed at Poughkeepsie that "Troops [were] flocking here like swarms of Bees." George Clinton had integrated his regiments, including two Companies of Horse from Ulster and Orange counties of New York on the west shore, with those of General Ten Broeck from Dutchess County, Colonel Pierre Van Cortlandt's 3rd (North of Manor of Cortlandt) Regiment, Lieutenant Colonel James Hammond's First (South) Regiment from Westchester County, and Brigadier General John Fellows's 400 New Englanders from Massachusetts and Connecticut on the east shore near Peekskill. Into early August, Captain John Dorlon would continue to patrol the east side of the river from King's Ferry to Peekskill with two lieutenants and seventy-two privates from the 2nd Regiment of Minutemen from Dutchess County.[40] Although anxious to return home as soon as they had determined that the threat had passed, these men nonetheless deterred landing parties of Captain Parker's flotilla from doing even more damage; they may even have helped to change his mind about sailing as far north as Poughkeepsie to burn the two Continental frigates, *Congress* and *Montgomery*, that were under construction there.[41] Washington gave their overall performance high marks: "The Vigilance and Activity of the Militia where they were, have prevented their [British] landing and doing much Injury."[42] The presence of hundreds of militiamen had also given construction in the Highlands a lift.

39. Journals, *Phoenix*, 28 July, 2, 3, 16, 22 Aug. 1776, and *Rose*, 2, 3, 16, 21, 22 Aug.; Tupper to Washington, 3 Aug.; "A Letter from a Gentleman," *New-York Gazette*, 12 Aug., in Clark et al., *Naval Documents*, 5:1284–85, 6: 19–20, 37–39, 49, 206, 267.

40. Travis to Humphreys, 12 July, E. Tappen to P. Tappen, 19 July, *Historical Magazine*, 108, WPA, "History," 5:3.06, 9.01; Clinton to Col. Jonathan Hasbrouck, 14 July, Clinton to Woodhull, 14 July, Clinton to Washington, 15 July, Clinton to Capt. Dureland (Dorlon), 1 Aug., Clinton to Maj. [Abraham] Cuyler [1st Regt., Albany Co.], 2 Aug., George Clinton, *Papers*, 1:248, 249, 251–52, 280, 289; Fernow, *Documents* (Colonial NY), 15:262, 281, 285, 289, 301, 303, 305; minutes, NYPConv, 21 July, Force, *American Archives*, 1:1427.

41. Letter, Fort Montgomery, 23 July 1776, Force, *American Archives*, 1:547.

42. Washington to President of Congress, 27 July, Washington, *Writings* (ed. Fitzpatrick), 5:343.

As of 8 August, now in command of the New York militia levies from Dutchess, Ulster, Orange, and Westchester counties on both sides of the Hudson, General George Clinton used the more than 1,200 soldiers available to him for the limited periods of their service to start work on Fort Clinton (the "New Works") across Popolopen Creek and to build another fort, to be called Independence, at Roa Hook to protect Peekskill. He would leave the actual tasks to Second Lieutenant Thomas Machin and George's brother, James, a Continental brigadier himself as of 9 August, as the New York Convention had ordered him to "march with the new Levies to King's Bridge."[43]

Lord Stirling had made the first and strongest case for fortifying the hill that overlooked Fort Montgomery across Popolopen Creek to the north. George Clinton made an equally detailed assessment on 23 July in a report to General Washington. So concerned was he about the commanding nature of this ground that he lamented that "it is the spot our first Works shoud in my poor Judgment have been." He thought that if the enemy gained "possession of this Place by Land with equal numbers only, we will be in a bad situation." The higher elevation by forty-four feet of the site across the Kill allowed it to overlook "our works" to the degree that "every Gun on our Battery lays in open view of it." It also masked from American guns a possible landing site that the British could use for their assault. By 2 August, acting on his own analysis, that of the Secret Committee, and Washington's orders, he had "taken Possession of the Hill," and with the aid of a newly arrived engineer, Thomas Machin, took the first steps to fix the problem.[44]

Following the orders of General Washington, Lieutenant Machin would begin his association with the Hudson Highlands by tracing the lines of the new works to the south of Popolopen Creek that would become Fort Clinton. The traditional narrative of his life before he arrived in America showed a talented and well-connected engineer. Born near Staffordshire, England, on 20 March 1744, to John Machin, a mathematician, Thomas had fought as a

43. Pierre Van Cortlandt and Zeph.Platt to NYC, 18, 23 July, minutes, NYC, 8 Aug., minutes, 9 Aug., CC, Force, *American Archives*, 1:422, 1603. By 23 July, the tide of militiamen was ebbing as all but 300 on the east bank returned home; the Convention had specified that 200 men guard the pass "on Anthony's Nose." "An Act of New York Convention at Harlem," 8 Aug., Clinton to Machin, 10 Aug., George Clinton, *Papers*, 1:298–99, 308.

44. Yates, Jay, Livingston, Tappen, and Livingston to Washington, 18 July 1776, *American Archives*, 1:423; Clinton to Washington, 2 Aug., George Clinton, *Papers*, 1:283. The Grand Battery at Fort Montgomery is at 115 feet elevation; the center of Fort Clinton is roughly 159 feet.

fifteen-year-old cadet in the battle of Minden, Germany, and then learned civil engineering as a clerk for the "celebrated" engineer and mechanical inventor James Brindley, who built the Bridgewater Canal between Manchester and Worsley in England. Settling in Boston after a voyage to the East Indies and "examining" a copper mine in New Jersey in 1772, he had become a revolutionary, participating in "the destruction of the tea"—what would come to be called the Boston Tea Party—and the battle of Bunker Hill as an officer in Colonel Richard Gridley's Regiment of Massachusetts Artillery. Based on recent scholarship, the story of his early life has been radically revised. Rather than the son of a distinguished family, it appears that he arrived in Boston as a soldier in the British 23rd Regiment of Foot, from which he deserted on 28 July 1775. British Staff officer Maj. Stephen Kemble recorded in his diary: "Two Men of the 52d. Regiment Deserted from the Advanced post on the Charles Town side, and one from the 23d., a sensible intelligent fellow, some knowledge of fortification and Gunnery." With either biography, Machin clearly had engineering skills and the credentials to commend him to the commander in chief. He made a name for himself as an engineer after becoming Major General Artemus Ward's aide-de-camp, charged by the commander with erecting "fortifications for the defence of the Town and Harbor of Boston." With Machin now a member of Colonel Henry Knox's Regiment of Continental Artillery, Washington personally detailed him to the Highlands on 21 July to work for General James Clinton. Presenting his credentials as "an ingenious, faithful hand, and one that has had considerable experience as an Engineer," the commander in chief charged him "to act as Engineer in completing such works as are or may be laid out for the defence of the river and adjacent defiles on each side of the river."[45]

Machin would lose little time getting to work. Fort Clinton was one of his first priorities, and by 2 August General George Clinton would report to Washington that "the proper Works are laid out there by Mr. Machine

45. Machin's career summarized from *Dictionary of American Biography*, under "Machin, Thomas," and Simms, *History of Schoharie County, And Border Wars of New York*, 550–53. For the analysis of each of the aspects of his early life, see Bell, "The Early Life of Thomas Machin," in the blog *Boston 1775*, boston1775.blogspot.com/2013/03/the-early-life-of-thomas-machin.html; Bell, "The Holes in Thomas Machin's Biography," *Boston 1775* (blog), boston1775.blogspot.com/2013/03/the-holes-in-thomas-machins-biography.html; "The Truth about Thomas Machin," Bell, *Boston 1775* (blog), boston1775.blogspot.com/2013/03/the-truth-about-thomas-machin.html; Longstreth, "Thomas Machin and his Chains," https://allthingsliberty.com/2020/11/thomas-machin-and-his-chains/. Kemble, "Journals of Lieut. Col. Stephen Kemble," *Collections of the New-York Historical Society for the Year 1883*, 50. Washington to the Secret Committee, J. Clinton, Machin, G. Clinton, 21, 26 July 1776, Force, *American Archives*, 1:485–86, 601.

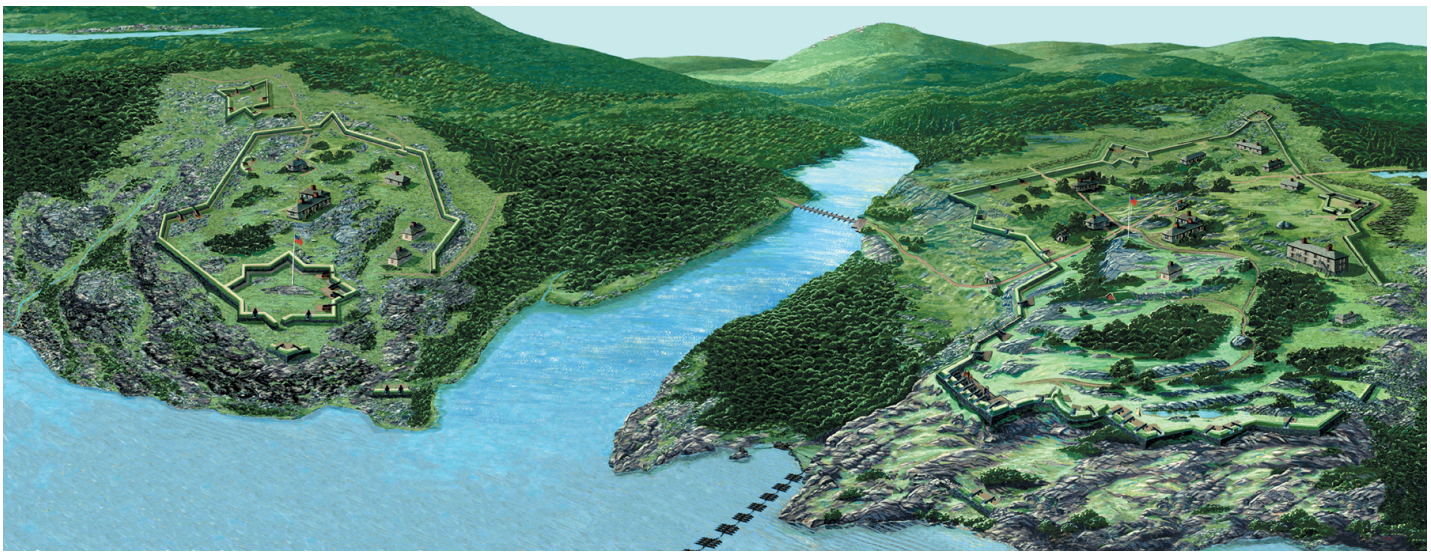

Image 5.5: *Two Forts View*, by John H. Mead and Robert Wallace. (Courtesy of the New York State Office of Parks, Recreation and Historic Preservation.)

which shall be carried on with the greatest Dispatch and Oeconimy." He would initially conceive this work as "a small Breast Work for Musquetry" of fascines bolstered by "A few Cannon."[46] The troops responded to the call for speed in building the curtains; on 16 August Christopher Tappen and Gilbert Livingston, attorney and legislator, of the Secret Committee reported their "great pleasure to see that the Works on the South West side of the Creek had been carryed on with Spirit." Three days later, Tappen would elaborate in a letter to General George Clinton, now at King's Bridge, that this activity at the New Works was at the expense of Fort Montgomery where, since he had left, "nothing has been Done." James Clinton would confirm this to his brother two weeks later, reporting that "we turn out all hands on Duty Every Day to work on the Battery, &c." for which four 12-pounder cannons had been "mounted." He also reported that work was proceeding on three barracks: one at Fort Constitution, one at Fort Clinton, and one at Fort Independence; they were stalled for lack of nails. The Garrison Orders for Fort Montgomery throughout October and November 1776 tasked officers to command fatigue parties constructing the "New Works" and reminded carpenters, masons, and workers at both forts to "follow the Directions of Mr. Machin the Engineer." Although Machin would add two redoubts and a barracks to the expanding works, Fort Clinton would never replace Fort Montgomery as the principal post.[47] He would also use his skills on the fort across the Hudson at Red (Roa) Hook near Peekskill.

The term *fort* may have been too grandiose to define the works, laid out in mid-August by Machin, to which would be attached the name of Independence. Located on Roa Hook near the Brower house to command the entrance to the Peeks Kill, by 20 August it would be "an Entrenchment of about Eighty yards Long and ten feet wide and about three feet and a half Deep." Major Israel Thompson, assisted by Machin, would command the garrison of three companies and battle the effects of "a Very Rainy season" to put the "works in a Good state of Defence." When not working and pulling guard, the 136 officers and men of the companies of Captains Deronde, Jacob Onderdonck (King Street, Haverstraw, 2nd Orange County Militia

46. Clinton to Washington, 23 July, 2 Aug., Force, *American Archives*, 1:545, George Clinton, *Papers*, 1:283, 285.

47. Tappen and Livingston to Humphrey, 16 Aug. 1776, Papers of the Secret Committee; Tappen to G. Clinton, 19 Aug., J. Clinton to G. Clinton, 8 Sept., Force, *American Archives*, 1:315, 337; garrison orders, 16, 19–31 Oct., 3–27 Nov., David Bevier, "His Orderly Book," 19 July 1776–23 Oct. 1777 (with gaps), New York State Library. Holland, "Plan of Fort Montgomery & Fort Clinton," USMA Library.

Regiment), and John Nicoll (2nd Company, 2nd Regiment, Ulster Co.) would huddle in huts that Thompson had had the soldiers build until a barracks could be finished.[48] Henry Wisner, a miller and legislator, argued that the fort needed two 18- or 24-pounders to be useful so that "*British* ships might be kept from anchoring in *Peekskill Bay*." Machin was dubious about Fort Independence's worth as he told Wisner "that the building of any fortifications in this part of the country would be labour badly spent, and worse than lost."[49] His insight would prove prescient.

While Machin supervised construction throughout the southern Highlands, the Secret Committee had been gathering resources for the project that would tax its and his engineering skills the most—assembling and floating a chain across the Hudson at Popolopen Creek. The initial chain would be a patchwork affair over which Machin could exercise little quality control. The core of the barrier—one-quarter of the total length—that would finally stretch 1,800 feet across the river was a chain of two-inch bar iron originally ordered by General Charles Lee from New York Commissary Peter T. Curtenius to obstruct the Sorel (Richelieu) River flowing from Lake Champlain into Canada; the German ironmaster John Jacob Faesch fashioned it at his ironworks in Mt. Hope, New Jersey. After the failure of the Canadian expedition, Major General Philip Schuyler had considered using it at Fort Ticonderoga but had agreed to release it to the Secret Committee, sending it to Albany.

From Albany the Secret Committee moved the Sorel chain to the Continental Shipyard at Poughkeepsie where the "Superintendants for building the continental Frigates," Jacobus Van Zandt, Augustus Lawrence, and Samuel Tudor, would build the rafts upon which the chain would float and oversee the construction and the assembly of the chain. The subcontractor,

48. Clinton to Lieut. Col. Cuyper [Gilbert Cooper], 9 Aug. 1776, Clinton to Thompson, 12, 18 Aug., Thompson to Clinton, 20 Aug., Nicoll to Clinton, 20 Aug., J. Clinton to G. Clinton, 8 Sept., George Clinton, *Papers*, 1:302–4, 311–12, 316–18, 337. Clinton originally assigned four companies to the task: CPT Jacob Conckling's Company (4th Regiment, Ulster Co.) proceeded to King's Bridge; 1LT Silvester Salisbury commanded the Kingston Company of Horse (1st Regiment, Ulster Co.); the others were probably from Blooming Grove; Fernow, *Documents* (Colonial NY), 15:290, 298, 299, 302. The exact location of the fort remains elusive; on some maps it appears near the river, and on others on the high ground near the present Monteverde Restaurant.

49. Wisner to NYC, 19 Oct. 1776, Force, *American Archives*, 2:1131; Wisner operated three gunpowder mills near Goshen, NY, and supplied gunpowder to the Continental Army, *Biographical Directory of the United States Congress 1774–Present*, https://bioguideretro.congress.gov/Home/MemberDetails?memIndex=W000655.

"The Smiths," George Smart, Isaac Van Duzen, Theophilus Anthony, and James Odill, would use the Sorel chain as the pattern for forging the remainder of the chain at the Shipyard and Anthony's "blacksmith's mill" at Milton Ferry, four miles below Poughkeepsie, opposite Milton, Ulster County. The chain would thus have links two inches square forged from over twenty-two tons of iron supplied by Robert R. Livingston Jr. from his Ancram furnace at Livingston Manor. Livingston would be hindered in his task by the lack of rain that limited the water available to run his furnace. Faced with the British threat to the south, the Secret Committee would grow impatient with the delays caused by nature, distance, and its own decision to use a single contractor from New York, rather than asking for help from Robert Erskine's furnace in Ringwood, New Jersey, or the one in Salisbury, Connecticut.[50]

While the chain, when completed, was to go in the river at Fort Montgomery, the alternate site for it was Fort Constitution should the former site be "found impracticable." The Secret Committee even went so far as to appoint a committee of Robert Harpur, Henry Wisner, Jacob Cuyler (silversmith, member of the Albany Committee of Correspondence, and legislator), and Gilbert Livingston to erect a "fortification" at West Point "in order to Defend the Chain." With no battery yet available at West Point to support Fort Constitution and only 100 more feet of chain required to the south, the Secret Committee would, however, persist with its original plan.[51]

The second major component of the barrier was a series of at least twenty-seven wooden rafts upon which the chain would float. For £1,000, Robert R. Livingston Jr. and Dr. John White supplied the timber from white pine trees felled near Livingston Manor north of Kingston. Carpenters—ten from Kingston—and blacksmiths, probably following the original specifications for the boom, fashioned each raft from five spars ten feet apart, each fifty feet long; they bolted the logs in place with three crossbars. The tips of the spars, "shod with iron," pointed downriver, making each float a menace to a

50. Washington to Schuyler, 3 May 1776, Yates to Schuyler, 20 July, minutes, 19, 20, 21, 22 July, Secret Committee, "Instructions to Messrs. Van Zandt, Tudor & Lawrence," 22 July, Schuyler to Yates, 25 July, Paulding and G. Livingston to Curtenius, 25 July, Curtenius to Paulding and G. Livingston, 26 July, Paulding and Livingston to R. Livingston, 6 Aug., Secret Committee to R. Livingston, 16 Aug., R. Livingston to Committee, 20 Aug., Yates to G. Livingston, 11 Sept., G. Livingston to Yates, 14 Sept., R. Livingston to Tudor, 20 Sept., R. Livingston to Yates, 24 Sept., 2 Oct., Livingston to Secret Committee, 25 Sept., minutes, NYC, 21 Sept., committee minutes, 27 Sept., 9, 11, 14 Oct., Papers of the Secret Committee. Many of these documents are printed in Ruttenber, *Obstructions*, 61–93; Ransom, *Vanishing Ironworks of the Ramapos*, 36, 298–301.

51. Minutes, 25 July, 14 Oct., Secret Committee, Papers of the Secret Committee.

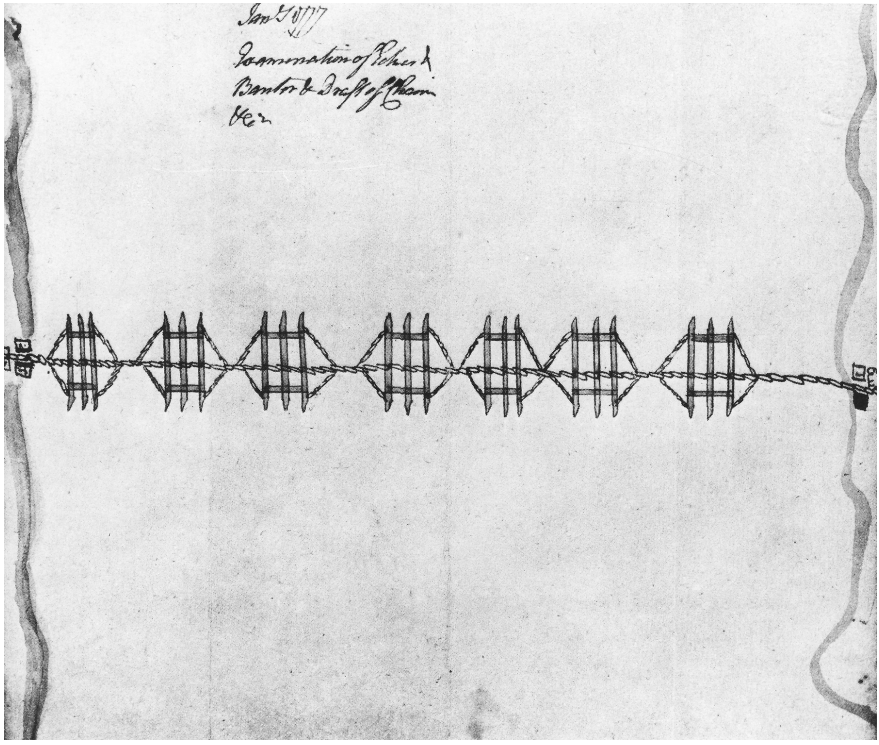

Image 5.6: "Draft of Chain," Fort Montgomery, by Thomas Machin, January 1777. (Courtesy of the New York State Office of Parks, Recreation and Historic Preservation.)

ship's hull itself. Chains of 1½-inch bar iron secured the rafts one to another. On 1 November, Dr. Ebenezer Young, Gilbert Livingston, and Henry Wisner began supervising the movement of these components for the barrier from Poughkeepsie to Fort Montgomery; John McKesson at Fishkill reported that "part of the Chain went down to the Forts yesterday [2 November]." Around 18 November, with the assistance of Captain John Hazelwood, who had gained experience obstructing the Delaware River, Dr. Young and his laborers used an "Engine [capstan or windlass] to Stretch the Chain with" to float it across the Hudson and to fix it to the east shore. Subjected to the actions of the tide and current backing up an "immense weight of water" behind the "bulk" of the log barrier, the chain, after only a few hours, snapped once and then again a second time; an investigating commission, led by James Clinton, determined that the culprits were a swivel from the original Sorel chain and a clevis fabricated at Poughkeepsie "and no flaw to be seen in any Part of said Chain." In frustration the Secret Committee would call upon

Thomas Machin "to alter and fix the Chain" since he thought that it would float "with proper alterations."[52]

Before being assigned the task of repairing the chain, Machin had been hard at work designing the anchor points for its ends and batteries to protect them. He now turned his attention to the chain itself. He had it and its rafts moved to New Windsor and over the course of the winter "completely fixed" the logs for "buoying" the chain. He added anchors and cables to the structure to stabilize it and then anchored it on both shores; a sketch of the chain shows that the Secret Committee had planned for it to pass through "a large iron Roller" and "[two] Blocks and Purchase" on the western bank under the Grand Battery to adjust the tension placed on it by the flowing water. Soon after 23 March 1777, now Captain-Lieutenant Machin successfully anchored the chain in the river where it would float until removed by the British in the fall. On George Clinton's orders, he would "draw a Cable across the River in Front of the Chain this Morning [9 July], every Thing being prepared for it, & the Montgomery's Cables spliced & fixt for the Purpose." British General Sir Henry Clinton would report the value of the chain and rafts at £70,000, and Commodore William Hotham would observe that the chain and boom showed "strong proof of labour, industry and skill."[53] The Secret Committee

52. 150 white pine logs were originally ordered for a boom, 21 July 1776. Theoretically, thirty-two rafts could have been constructed from the 160 logs; assuming each raft to be fifty feet wide with fifteen feet separation, twenty-seven rafts would span the 1,800 feet of river. Contract, Christopher Tappen, 26 July, Tappen to G. Livingston, 27 July, J. Clinton to Jay, 12 Aug., minutes, 16, 19 July, 1, 13 Aug., Tappen and Livingston to Johannis Sleght, 21 Aug., Sleght to Committee, 22 Aug., bill for 160 logs, 14 Sept., receipt for "Superintending the Fixing of the Chain," Ebenezer Young, 10 Aug. to 25 Dec., Papers of the Secret Committee; as of 11 Oct. Peter Tappen wrote, "I hope we shall now in a few Days git the Chain acrosst the River here as it is almost Done," Tappen to G. Clinton, 11 Oct., McKesson to Clinton, 31 Oct., 3 Nov., George Clinton, *Papers*, 1:378, 404, 412; minutes, NYCS, 22 Oct., Force, *American Archives*, 3:264; NYCS to Hancock, 28 Nov., minutes, 30 Nov., New York, *Journal of the Committee of Safety*; 1:723, 726; minutes, 9 Dec., Papers of the Secret Committee; James Clinton's committee report, Ruttenber, *Obstructions*, 83 fn, 136 fn. Neither Washington nor Heath mention the chain in the record of the former's visit on 11–12 Nov.; Heath wrote Washington that the chain broke twice, Heath to Washington, 18 Nov., Papers of George Washington, Library of Congress, on microfilm, USMA Library, series 4, reel 38, and Founders Online, https://founders.archives.gov/documents/Washington/03-07-02-0126.

53. Sketch, n.d., minutes, 9, 11, 14 Oct., 30 Nov. 1776, Papers of the Secret Committee. There is no evidence that the roller and blocks were actually used; it is likely that Machin used rock-filled log cribs as anchors; Clinton to NYC, 23 Mar., Clinton to Putnam, 9 July 1777, George Clinton, *Public Papers*, 1:675–76, 2: 93, 163; enclosure 7 to W. Hotham to Lord Howe, 24 Oct., Dutchess County, *Year Book*, 20:92; enclosure 6 to Sir Henry

had spared neither money nor effort in fulfilling its mission of obstructing the Hudson in the Highlands.

With construction ongoing in the southern Highlands and the chain and rafts at New Windsor for the winter, Machin could supervise work at both places even as he focused his energy on adding a barrier across the Hudson from Plum Point to Pollepel Island near the east bank (also called Pollepel's or Bannerman's Island). General Schuyler had given the Secret Committee the idea of sinking caissons—log cribs—in the river; the Committee had rejected the site Schuyler had suggested, probably Con's Hook, nearer Buttermilk Falls, for the shallower stretch of water at the entrance to Newburgh Bay. Faced with the initial failure of the chain at Popolopen Creek, General James Clinton championed Schuyler's idea, specifying that the caissons would in fact be chevaux-de-frise, and sold it to the Committee in the meeting in November. The Americans had had some success with this type of obstacle in the Delaware River and in the Hudson between Forts Lee and Washington.[54]

The Secret Committee charged Gilbert Livingston and Henry Wisner with surveying the Hudson to determine the best site. Based on their soundings of the river, they recommended the area around Pollepel Island because the channel there was only fifty feet deep as compared to an average of eighty feet elsewhere. While the depth here was the shallowest, the expanse of water was going to create an engineering challenge as it was 2,450 yards from the shore at Plum Point to the island. (Perhaps estimating rather than measuring, Wisner and Livingston inexplicably reported the measured width of the river here to be 53 chains or 1,166 yards.)[55] After some attempts by the New York Convention to give General Schuyler responsibility for the barrier, the task would pass to Generals William Heath and James and George Clinton and Machin. After the committee completed the soundings, General George Clinton began the effort on 1 December with 500 men from his brigade stationed at Peekskill.[56] Calling for axes, "three or four light anchors and cables drag ropes, screws, scows, and other boats for collecting of stores," Clinton sent Lieutenant Machin off with 100 men to cut timber.

Clinton to Sir William Howe (No. 69), 21 Oct., Dutchess County, *Year Book*, 21:111; Hodge to NYCS, 13 July, Clark et al., *Naval Documents*, 9:281.

54. For details of these earlier efforts, see Diamant, *Chaining the Hudson*, chap. 3; Ruttenber, *Obstructions*, 97–113; NYCS to Hancock, 28 Nov., minutes, 26, 30 Nov., New York, *Committee of Safety*, 1:719, 723, 726; Clinton to Putnam, 9 July 1777, George Clinton, *Papers*, 2:93.

55. Heath to Washington, 26 Nov. 1776, Heath Papers, 2:77.

56. Minutes, 27, 30 Nov., 1 Dec., New York, *Committee of Safety*, 1:721, 725, 727.

He created a temporary camp near the site with blacksmiths' shops, bake ovens, and barracks.[57]

General Schuyler had provided a plan for the caissons that Captain Machin, now in charge of the day-to-day construction, may have followed. He proposed that Machin's 150 carpenters construct a base of timber thirty to forty feet square and then a frame the same height "well braced (as if intended for a House of six stories) to prevent the sides spreading." They would then cover the sides and bottom of the frame with 1½-inch planks and caulk the cracks with tar so the box could be floated between two boats to the spot where the artificers would sink it by filling it with stones. A tackle attached to each corner would allow them "to keep it in a perpendicular Position" as it began to take on water. From these caissons would protrude chevaux-de-frise with points shod with iron forged at Robert Erskine's Ringwood Furnace in New Jersey. By 12 March, the soldiers and laborers, including captured Tories, assigned to the task had used some of the forty-five to fifty-foot logs cut earlier for the rafts and boom, and General George Clinton reported that "a number of frames and blocks are ready for sinking." He projected that "those Works will be completed by the middle of April." In July, Clinton took two 12-pounders for Fort Montgomery from New Windsor and assigned Machin in their stead a brass 24-pounder to protect the barrier. The New York Convention recognized that batteries of artillery would be necessary "as any such obstruction, unless defended by fortifications from the shore, must be useless."[58]

The most immediate prospective beneficiary of the works near New Windsor was the logistical complex growing up at the village of Fishkill, over five miles inland from its landing and the Continental Ferry (Beacon) on the Hudson. At the intersection of the Albany Post Road to Poughkeepsie from Peekskill and the road from Fishkill Landing to Danbury, Connecticut, Fishkill was an ideal site for magazines, a distribution center

57. Minutes, 4 Dec. New York, *Committee of Safety*, 1:735; G. Clinton to President of NYC, 1 Dec., George Clinton, *Papers*, 1:440.

58. George Clinton complained that the "great Part" of the raft of seventy-four logs thirty feet long and sixty-seven thirteen or fourteen feet long was too short and had arrived too late for the "blocks," Clinton to G. Livingston, 12 Dec. 1776, Papers of the Secret Committee. Schuyler to Clinton, 7 Dec., voucher, 27 Dec., Erskine to Clinton, 27 Mar. 1777, George Clinton, *Papers*, 1:449–50, 499–500, 685; minutes, 6, 22 Jan., instructions to committee of Albany delegates, Cuyler and Taylor, 27 Feb., New York, *Committee of Safety*, 1:761, 781–82, 816–17; report of Cuyler and Taylor committee to NYC, 12, 18 Mar., minutes, NYC, 26 Mar., New York, *New York Convention*, 1:831–32, 840–41, 851; Clinton to Machin, 3 July, Simms, *Schoharie County,* 559.

for transportation by wagons, sloops, and boats, and a marshaling point. Beginning in the fall of 1776, the Upper Barracks, storehouses, magazines, and workshops built around Isaac Van Wyck's farm in Clove Valley and a hospital and the Lower Barracks near Clove Creek enjoyed the protection of the Highlands to the south. Wiccopee Pass between Bald Hill and Round Mountain was the only north-south avenue of approach available for commerce as well as a British land offensive up the Hudson.[59] In November 1776, with the assistance of Captain Jean Louis Imbert, a French engineer in the Continental Army, Judge William Duer supervised the construction of the original buildings, the Lower Barracks three miles south of Fishkill designed to accommodate 2,000 men. There were at least four structures, two on each side of the road, and each was to have had two "mudwalls." Troops would occupy these barracks, huts, and the ten Upper Barracks to protect the New York Convention meeting in Fishkill from September 1776 until April 1777, support the activities against local Tories by the Committee for Detecting and Defeating Conspiracies, and the logistical activities taking place in the smithies, armory, storehouses, and stables.[60] Washington would direct the New Hampshire militia under Colonel Thomas Tash and Lieutenant Colonel Joseph Welch augmented by a troop of the Connecticut Light Horse to report to Fishkill to help the Ulster County Rangers in the effort against the Tories; he would route Major Elisha Sheldon with the rest of the Fifth Regiment of the Light Horse and two companies of Connecticut's First Regiment of militia through there to White Plains.[61] Bustling with activity in late 1776, the Fishkill Depot Encampment would continue to expand over

59. The best coverage of the Fishkill Supply Depot is Goring, "The Fishkill Supply Depot and Encampment During the Years 1776–1778," New York State Office of Parks and Recreation, unpublished; I accepted his interpretation of the sequence of construction of the Lower and Upper Barracks. Archaeological reports for the Fishkill site may be found at the Fishkill Historical Society (see Bibliography); Huey, "Test Excavations at the Fishkill Barracks and Supply Depot Sites" (unpublished); for local history, see Willa Skinner, *A History of Fishkill*.

60. McKesson to G. Clinton, 31 Oct., 7 Nov. 1776, George Clinton, *Papers*, 1:406, 419; 9 Nov., Smith, *Historical Memoirs*, 2:38; Erskine, "No. 6 & 7, (both sides) Road from Newborough to Peekskill," in "Surveys Done for His Excy. General Washington," USMA Library; and Erskine, "Military Map of 1778," *New-York Historical Society Quarterly Bulletin*, Jan. 1923, 128–29; Tilghman to Duer, 17 Oct., Force, *American Archives*, 2:1096.

61. Minutes, NYCS, 10 Oct. 1776, minutes, Connecticut Assembly, 16 Oct., Gov. Jonathan Trumbull to Washington, 21 Oct., note, Washington, 22 Oct., Harrison, 27 Oct., Welch to New Hampshire Committee of Safety, 31 Oct., Force, *American Archives*, 2:1171–72, 1264, 1313, 3:238, 457.

the course of the war as it supported the Continental Army, the militia, and the fortifications of the Hudson as its major logistical center.

The New York Committee of Safety had energized the efforts at Forts Montgomery, Independence, and Constitution by sending an investigating committee in early September to give it "a full and clear view of these important fortresses."[62] James Duane would be the spokesman for the group that included militia Brigadier General Abraham Ten Broeck, Jacob Cuyler, and militia Colonel Robert R. Livingston. Over a period of several days, Duane would provide a report alarming enough to lead to a call-up of 600 militiamen—400 short of James Clinton's request—from Ulster (200), Albany (150), Dutchess (175), and Orange (75) counties and an appropriation of $2,500 for tools, nails, and ordnance supplies, including bar, ball, and grape shot for 6- and 9-pounders, to support the efforts at the forts, including Fort Independence, a work that was "very imperfect, but will be extremely useful." The Fishkill Supply Depot would provide some of the tools, lead, and thread; John Schenck, the agent for the forts, would have to requisition or purchase the rest, from nails to lime to sheepskins. The committee found 764 militiamen and soldiers of the 2nd New York Continental Battalion (Regiment) at work in the Highlands: 398 at Fort Montgomery, 216 at Fort Constitution, and 150 at Red Hook; and ten carpenters under the supervision of a Captain Burns reported to Machin for construction. While Fort Clinton was "still incomplete," "considerable progress" had been made there, including in late August the mounting of four 12-pounders on loan from the Salisbury Furnace in Connecticut on carriages from the shipyard in Poughkeepsie. Because of the personal lobbying by John Jay on behalf of the Secret Committee, Governor Jonathan Trumbull of Connecticut would authorize six more 12-pounders and ten 6-pounders for use at Fort Montgomery. In addition to supporting Clinton's bid for more troops, the committee members also called for fortifying the west point "to render *Fort Constitution* tenable." Colonel Johannes Synder, 1st Battalion, Ulster County, would command the force of militia Levies for their two-month deployment; the first three companies would arrive on 27 September.[63]

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62. Minutes, NYCS, 2, 12 Sept. 1776, Force, *American Archives*, 1:1562, 2:686.

63. Minutes, NYCS, 5, 6, 7, 9 Sept. 1776, Abraham Yates to Schenck, 10 Sept., Snyder, to NYC, 18 Oct., Force, *American Archives*, 2:666–76, 678, 1124; Tappen to G. Clinton, 19 Aug., J. Clinton to G. Clinton, 8 Sept., George Clinton, *Papers*, 1:315, 337; minutes, meeting, Governor and Committee of Safety, CT, 27 July, Jay to Secret Committee, 7 Aug., Tappen and Livingston to Humphrey, 16 Aug., Papers of the Secret Committee; Fernow, *Documents* (Colonial NY), 15:120, 297–98; J. Clinton to

On 8 September, General Washington seconded the call for 600 militiamen to defend the forts in the event of an attack and to erect "New Works and Fortifications, by which they may be rendered more secure." In a separate note to his commander of the Highlands Department, Brigadier General James Clinton, he wrote, "I must intreat you in the strongest Manner to exert yourself to the utmost of your Abilities in making those two posts at the Highlands as defensible as possible. Their great Importance must be obvious to every person." In his reply, Clinton was delighted at the reinforcement and assured his commander in chief that he was each day "busy in fortifying these garrisons with the outposts as fast as possible," using as many of the troops at Fort Montgomery as possible to work. In addition to the guard, cooks, and the sick, he had exempted only "those Detach'd in the Artillery, who are employed daily in makeing Cartriges, &c., and learning the Artillery Exercise." As the situation was becoming more desperate in New York City, the leaders of the state and the Continental Army were putting resources into the defense of the Hudson River, gauging that its "possession" was vital to the "safety of this State" and "the defence of our common liberties."[64] As the Hudson became even more important with more troops stationed there, supply depots expanded at Fishkill and Peekskill to support them.

Like its counterpart Fishkill to the north, Peekskill had been growing as an administrative and logistical center. The town of some 200 people, perched between the Hudson and a landing on the Peeks Kill, comprised only some twenty houses, including the Daniel Birdsall House and Henry Mandeville's Tavern. Concurrent with the withdrawal of the Main Army into New Jersey after the battle of White Plains, Major General William Heath would arrive with his division of over 4,000 men fit for duty. As the new commander of the Highlands Department, effective 12 November, he made his headquarters at the Birdsall House and began the conversion of the town and Continental Village along the Albany Post Road near Robinson's Bridge to the north into a major military depot as soldiers pitched their tents and began building huts and barracks and erecting defensive field works.

NYC, 27 Sept., New York, *Provincial Convention*, 650; G. Clinton to Burns, 9 Aug., Simms, *Schoharie County,* 552–53, https://www.loc.gov/resource/gdcmassbookdig.historyofschoharo1simm/?sp=560&st=image&r=-0.537,0.758,2.073,0.982,0.

64. Minutes, NYCS, 7 Sept. 1776, Washington to Yates, 8 Sept., Washington to J. Clinton, 8 Sept., Founders Online, https://founders.archives.gov/documents/Washington/03-06-02-0200; J. Clinton to Washington, 10 Sept., Founders Online, https://founders.archives.gov/documents/Washington/03-06-02-0216; also in Force, *American Archives*, 2:240, 276, 671, 675.

The thirty-nine-year-old William Heath, a farmer from Roxbury, Massachusetts, had shown an interest in politics and the military early in his career, and both carried over to his service in the Continental Army. He had commanded the Ancient and Honourable Artillery Company of Boston and then served as the regimental commander of the Suffolk County militia regiment. He was also a member of the Massachusetts General Court, the provincial Committee of Safety, and the provincial congress. As a militia brigadier general, he directed the pursuit of the British from Concord, was promoted soon thereafter to major general, and two days later was commissioned a brigadier general in the Continental Army. A year later the Continental Congress promoted him to major general. After a failed attempt in January 1777 to take British Fort Independence, near Spuyten Duyvil, "Washington reprimanded him and never again entrusted to him any important operation in the field." He did, however, trust him four times over the course of the war with command of the Highlands Department.

Heath had had the opportunity to accompany the commander in chief on his first personal tour of the Highlands in November 1776 and to receive his assessment and instructions. With the Clintons, Lord Stirling, Brigadier General Thomas Mifflin, and Colonel Rufus Putnam, Washington and Heath had visited Forts Constitution and Montgomery on 11 November, and early the next morning the commander in chief and Heath reconnoitered "the Gorge of the Highlands" four miles northeast of Peekskill and near to Beverley Robinson's mills and the adjacent bridge over Canopus Creek, which bore his name. They found Fort Montgomery to be "in considerable forwardness"; at Fort Constitution, without even going ashore, they decided with "the glance of the eye" that West Point "was not to be neglected." Engineer Putnam would stay in the area to conduct a survey of the passes, roads, and mountains.[65] During that two-day tour, Washington and his key leaders had seen firsthand the area of the Hudson River Valley with which they would become even more familiar in the future.

The day of Washington's departure, Heath assigned George Clinton's brigade of New York militia to the "heights above Peek's Kill Landing," and Brigadier John Morin Scott's New York militia and three regiments of Continental Line regulars—Colonel William Prescott's 7th (Massachusetts),

65. 11, 12 Nov. 1776, Maj. Gen. Heath, Memoirs, 76; Putnam to Washington, 19 Nov., Washington Papers, reel 40, microfilm, USMA Library; for the reprimand, see Washington to Heath, 3 Feb. 1777, Founders Online, https://founders.archives.gov/documents/Washington/03-08-02-0246;https://www.studylight.org/encyclopedias/eng/bri/w/william-heath.html.

Colonel Jonathan Ward's 21st (Massachusetts), and Colonel Samuel Wyllys's 3rd Connecticut of Brigadier General Samuel H. Parsons's brigade—to "the Gorge at the South Entrance of the mountains," north of Robinson's Bridge. With a set of barracks, referred to as "Number One" already under construction on the heights overlooking Peekskill Village, the newly assigned soldiers went to work erecting "Barracks & Works."[66] While there would be a constant turnover of units and men as Heath responded to the shifting British threat in Westchester and New Jersey and as soldiers' enlistments expired, construction progressed rapidly at "Barracks Number Two" at the base of O'Dell's (Gallows) Hill, on field works atop Gallows Hill itself, at "Barracks Number Three," a mile further north, and at two redoubts near Widow Arkles's house positioned high above the "gorge." The works erected at Gallows Hill would for a time have a brass 24-pounder, five iron 12-pounders, and "the Ship Guns" to cover the southern entrance into the Highlands leading to Continental Village and the more distant Fishkill.[67]

Originally the bivouac site for Brigadier General Parsons's Connecticut Brigade in November 1776, Continental Village would expand to four barracks for up to 2,000 troops, the office and stores of Deputy Quartermaster David Campbell, a commissary store, stables, and a "Continental barn." By late December, Heath would complete construction of the barracks at Peekskill and storehouses, as well as a magazine and a number of small redoubts on the hills, including a circular redoubt on Fort Hill, surrounding the town, despite the fact that Thomas Machin thought that "building any fortifications in this part of the country would be labour badly spent, and worse than lost." Heath would use Fort Independence on the river at Red (Roa) Hook as the anchor.[68]

While some companies were placing barriers into the Hudson and raising barracks and field works around Peekskill, others focused on additional batteries and forts that would further strengthen the entire Clove-Highlands region. A South Redoubt on Sugar Loaf Hill served as a link between the twin forts on the Popolopen, and Fort Constitution and gave depth to the defenses of Continental Village. Across the Hudson to the southwest at

66. Patterson, *Peekskill in the American Revolution*, 1, 3, 17, 28; 11 Nov. 1776, Heath Orderly Book, on microfilm, USMA Library, original in Massachusetts Historical Society, Boston; Washington to Heath, 12 Nov., Washington, *Writings* (ed. Fitzpatrick), 6:275; Council of War, 13 Nov., Heath to Morgan, 19 Nov., Heath Papers, 2:118, 135, USMA Library; Nov., Lesser, *Sinews of Independence*, 40; Heath, *Memoirs*, 76–77.

67. 18 Nov., 6, 7, 10 Dec. 1776, 3, 4 Jan. 1777, Heath Orderly Book, USMA Library.

68. Wisner to NYC, 19 Oct. 1776, Force, *American Archives*, 2:1131.

the mouth of the Ramapo-Smith's Clove, Camp Ramapough—"two lines of entrenchments" with a redoubt, later augmented by a two-story blockhouse—would, over the course of the war, guard this key pass from New Jersey and Sidman's Bridge over the Ramapo River near Suffern's Tavern (present-day Suffern, New York.)[69]

General Heath would station two of the remaining regiments from General Parsons's Brigade, Colonel Jedediah Huntington's 17th and Colonel John Tyler's 10th Continental Infantry (both from Connecticut), there in November 1776. Assigned to Brigadier General George Clinton for better command and control and integration with the militiamen of Ulster and Orange counties when most of the Continentals moved to Paramus, New Jersey, on 11 December, these 400 Continentals would do the initial construction and manning of the works at the entrance to the Clove.[70] Tasked by Heath with "Fortifying of the Pass," with the advice of Machin, Huntington had put his initial emphasis on breastworks ("a Musquetry line") and barracks, recommending that "by & by" the site could use "three or four Pieces of small Artillery."[71]

On 28 December Clinton would report that there were no finished barracks at Sidman's Bridge, and "tho' there is a Redoubt & Lines so far compleated as to be well defended we have not a single Piece of Artillery."[72] Clinton would divide his time and troops between the Ramapo area, northeastern New Jersey, and New Windsor. He would rotate his militia regiments into Camp Ramapough and the surrounding area for the rest of the winter of 1776 and the spring of 1777. While Forts Montgomery and Clinton had also benefited from the effort given to them over the months, Clinton faced the same problems with manpower there that his brother did in the Clove.

Over the course of the winter of 1776–1777, the American army was stretched to its limits and the effects were felt in the Highlands Department.

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69. Bogert, "Cantonment in the Clove," *North Jersey Highlander* 7:10–14; one of MAJ John André's sources revealed that on 2 August 1779, soldiers from BG Huntington's and Parsons's brigades were "at Work fortifying the Sugar Loaf Hill and another," MAJ John André's "Intelligence," Clinton Papers, Clements Library. Some sources called Middle Redoubt South Redoubt, but MG Heath clearly differentiated among the three in his naming of the fortifications in his Highlands Department in 1779, Washington, *Writings* (ed. Fitzpatrick), 17: frontispiece.

70. Heath to Huntington, 13 Nov. 1776, Heath Papers, USMA Library, 2:119; 13 Nov., 11 Dec., Heath, *Memoirs*, 76, 90; 13 Nov., Heath Orderly Book, USMA Library; Heitman, *Historical Register*, 20–21; Rose, "History of the Fortifications," *OCHS Journal* 18:35.

71. Heath to Huntington, 13 Nov.; Huntington to Heath, 23 Nov., Heath Papers, 2:119, 153, USMA Library.

72. Clinton to President, NYC, 28 Dec., George Clinton, *Papers*, 1:495.

Although Washington secured victories over the Germans at Trenton and the British at Princeton, New Jersey, he nursed his army through winter quarters at Morristown as individual and unit enlistments expired.[73] The successive commanders of the Highlands Department, Generals Heath, McDougall, and Putnam, found that the strength of their command reflected not just this reality in general but Washington's perception of the British threat as well.

Militiamen would bolster the depleted ranks of the Continentals until spring. General George Clinton would maintain control over the militia of Orange, Ulster, Dutchess, and Westchester counties and use levies of 500 men raised by the New York Convention to guard the New Jersey entrance to the Clove and to build the chevaux-de-frise at New Windsor. As the militia returned home, James Clinton, under criticism from the New York Committee of Safety and Convention, would struggle to garrison Fort Constitution and to finish the twin forts on the Popolopen with the five companies of his 2nd New York. On 2 December he would report that he had to "keep About 70 men on guard at both places. I have likewise 50 men who Does Duty out of the 5 Comps. of my Regt in the Artillery. So that I will not be Able to Carry on Any work here without it be getting of firewood and the Necessary Duty About the Garrisons." In February 1777 he would report 196 officers and rank and file at Fort Montgomery in the 2nd New York and the "Train of Artillery" (2nd Continental Artillery Regiment) and 128 at Fort Constitution in the 4th and 5th New York Regiments, Colonel Jacobus Swartwout's New York Militia, and the 2nd Artillery.[74]

In March 1777, the British would show the limitations of the incomplete American defenses with a raid against the logistics depot at Peekskill. General Howe sent Lieutenant Colonel John Bird, 15th Regiment of Foot, with a force of over 500 men from his own, the 23rd, 44th, and 64th Regiments, aboard four transports north in late March "to take or destroy a considerable Magazine which the Rebels had formed at Peekskill." The frigate *Brune* (32 guns), the galley *Dependence*, and another galley escorted the expedition.

On 12 March Brigadier General Alexander McDougall assumed command of the Highlands Department from General Heath when the latter went home on leave to Roxbury, Massachusetts; Heath would then

73. National Park Service, *Morristown*, 29.

74. Clinton to Heath, 2 Dec. 1776, "A Return on the Men garrisoned at the Forts Montgomery and Constitution," 12 Feb. 1777, Heath Papers, USMA Library, 2:225; instructions to committee of Albany delegates, Cuyler and Taylor, 27 Feb., NYCS, *Committee of Safety*, 1:816–17; report of Cuyler and Taylor committee to NYC, 12, 18 Mar., minutes, NYC, 26 Mar., *New York Convention,* 1:831–32, 840–41.

command the Eastern Department for some seventeen months. Before the British fleet reached Tarrytown Bay, McDougall had transferred munitions and all of the artillery, except two iron 12-pounders and a brass 3-pounder, to the Fishkill Supply Depot. He had also begun preparing the commissary and quartermaster supplies remaining for transfer northward, but the arrival of the British interrupted what he estimated would have taken two more days to achieve. He had found it necessary to divide his small force and to send a "Captains Command" the nineteen miles to reinforce militia (250 total soldiers) protecting forage at Wright's Mill, northeast of Tarrytown between White Plains and North Castle; it was the target, he believed, of the raid based on the information that he had received on 20 March from an exchanged American artillery officer. He hedged his bet, however, by keeping a "Serjeant's Command" at Fort Independence and by retaining 225 rank and file from Colonel Henry B. Livingston's 4th New York and Colonel Philip Van Cortlandt's 2nd New York behind Mandeville's Tavern on the heights above Peekskill to oppose Bird's forces; 287 officers and soldiers from the 2nd New York, Colonel Lewis Dubois's 5th New York, and the "Train of Artillery" were at Fort Montgomery.

At 1:00 p.m. on Sunday, 23 March, McDougall found himself with his small force facing Bird's landing party of 500 to 600 men in eight flatboats coming ashore at Lent's Cove supported by twelve ships. Outnumbered and surprised, McDougall chose to burn Barracks Number One on the Peekskill Heights and as many of the stores in and near the village as possible and then to withdraw with his men and artillery two miles to a defensive position on Gallows Hill and nearby Pierre Van Cortlandt's Upper Manor House to protect Continental Village. Alerted by the alarm fired at Fort Constitution at 4:00 p.m., General George Clinton had called out Colonel Jesse Woodhull's Cornwall (Orange) and Colonel James McClaughry's South End (Ulster) Regiments of militia to reinforce Fort Montgomery and ordered Colonel Jonathan Hasbrouck's Fourth Regiment (Ulster) to proceed to Fort Constitution. Despite Clinton's efforts, the short response time had left McDougall on his own at Peekskill, except for any assistance he could receive from nearby Fort Independence and Colonel John Lamb's Artillery Regiment.

Supported by four 3-pounder field pieces manned by sailors and infantrymen from the 15th Regiment of Foot, Bird's men occupied Cronck's Hill (Drum Hill) and then completed the destruction of the "the lower Barracks" (Barracks Number One), the remaining storehouses and workshops, 150 new wagons, tools, rations, and 400 hogsheads of rum. They also captured



Image 5.7: *Major General Alexander McDougall (1732–1786)*, by Edgar Brown Smith. (Used by permission of the Fraunces Tavern Museum, New York City.)

supplies, "chests of arms," and "artillery stores" that the Americans lacked sufficient time to destroy. McDougall's forces, with his detachment of artillery from Colonel John Lamb's Artillery Regiment, made his stand near Barracks No. 2 at Gallows Hill.

Responding to McDougall's call for help, Lieutenant Colonel Marinus Willett, a veteran of the French and Indian War and the Canadian expedition, arrived at about 3:00 p.m. that Sunday with eighty men of Colonel Peter Gansevoort's 3rd New York from Fort Constitution. Late Monday afternoon, Willett persuaded McDougall to allow him to attack the British advance guard of 200 men occupying "strong ground" near the Van Cortlandt Upper Manor House. While McDougall mounted a demonstration—"owing to our amusing them on Horseback, with a small party of Foot"—Willett moved

through "a Gully," probably along the stream bed to the east of the Upper Manor House, with his force against the British right flank. McDougall tried to complete a double envelopment by attacking the enemy's left flank as Willett gave "him a fire on their rear." Unfortunately, according to McDougall, Willett's men fired "at too great a distance," allowing the British to fall back from the trap. Willett aggressively "pressed on, fired smartly on them, addressed his men to fix Bayonetts, on hearing which, the enemy fled with great precipitation to the main Body" in and south of Peekskill, toward Lent's Cove. At the cost of two men killed and four or five wounded, Colonel Willett had prevented Bird's raiding party from advancing on Continental Village and Fort Independence. With the magazine "totally destroyed" at the cost of four men killed and five wounded, and under pressure from Willett's and McDougall's troops, Bird's expeditionary force returned that night to their ships and sailed back down the river.[75]

The British high command would be equally pleased with the raid against the supply depot at Danbury, Connecticut, on 26 April.[76] While these excursions successfully destroyed Continental supplies, they, along with the earlier naval raids, clearly convinced the Americans that the British valued the American installations on the east side of the river. In October, when General Israel Putnam reflexively deployed his forces to protect them, General Henry Clinton would be able to use Bird's previous actions at Peekskill to develop a credible feint, thoroughly duping Putnam and ultimately wreaking havoc as far north as the New York capital of Kingston.

While the work on both Forts Montgomery and Clinton had initially centered on the batteries over-watching the Hudson, until October 1777 Brigadiers George Clinton, now in command of the two forts, and in his absence James Clinton would focus their efforts on shoring up the landward

75. "A Return of the Men in Garrison at Fort Montgomery," 7 Mar. 1777, Heath Papers, USMA Library, reel 2. For a detailed account of Bird's raid, see Curran, *Attack at Peekskill*; Patterson, *Peekskill*, 39–44; Clinton to Hay, 24 Mar., George Clinton, *Papers*, 1:679–80; Richard Lord Howe to Stephens, 31 Mar., Clark et al., *Naval Documents*, 8:234; Washington to Trumbull and to Heath, 29 Mar., Washington, *Writings* (ed. Fitzpatrick), 7:332–33, 328 fn.; distance to Wright's Mill calculated from Chevalier de Villefranche's "A Map of the East Side of the North River," New York Historical; Livingston to Washington, 29 Mar., and McDougall to Washington, 29 Mar., Washington Papers, reel 40, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-09-02-0018; McDougall would report that "the enemy cannonaded us, but we suffered only the loss of one man mortally wounded"; 27 Mar., Smith, *Historical Memoirs*, 2:97; W. Willett, *Military Actions of Colonel Marinus Willett*, 9–25, 40–42. For another version of events, see Fox, *The Story of Early Peekskill*, 70–72.

76. Account by British officer, 21–28 April, Clark et al., *Naval Documents*, 8:455–57.

defenses at both sites. At Fort Montgomery this would lead to an enclosure larger than Captain Smith had originally conceived as Captain Machin used high ground to protect the western and northwestern approaches along Popolopen Creek and the road to the Forest of Dean with three redoubts connected by parapets. The northernmost of these, North Redoubt, had a dry-laid masonry foundation; its salient faced due north and overlooked a drop-off into Negro Creek. Middle Redoubt guarded against an attack along the north bank of Popolopen Creek, while Round Hill Redoubt watched over the road leading from the Forest of Dean. The resulting field works, most with stone foundations, followed the natural lines of the terrain and almost completely enclosed the grounds, within which were six soldiers' barracks, the officer-commissary barracks, the artillery storehouse, provisions storehouse, the soldiers' necessary (latrine), the magazine, the guardhouse, and the bake house. All of the outlying works with four 12-pounders and thirteen 6-pounders protected the Grand Battery of six 32-pounders and the water batteries that in turn guarded the chain stretching across the Hudson to the base of Anthony's Nose; unfortunately, only one 6-pounder likely was mounted on a traveling carriage, with the rest on garrison carriages, limiting their mobility during an attack. On 25 July General George Clinton's command at Fort Montgomery totaled 508 officers and rank and file, including 325 soldiers of all ranks of Colonel Lewis Dubois's 5th New York Regiment, 159 of Colonel Johannes Snyder's 1st Regiment of Ulster County Militia, and 24 in Captain Jonathan Brown's Company, 2nd Continental Artillery.[77]

Fort Clinton had received recent priority in construction because the high ground upon which it sat dominated Fort Montgomery. While the rear of the fort facing its sister was incomplete, this roughly circular work was

77. "Returns of Troops at Forts Montgomery, Constitution, and Independence," 25 July 1777, returns of regiments at Fort Clinton, 9, 23 July, George Clinton, *Papers*, 2:89, 93, 97, 124, 135; Colonel William Allison's 3rd Regiment of Orange County Militia was at Fort Montgomery on 7 July with 195 militiamen of all ranks; his regiment would fight on 6 October, George Clinton, *Papers*, 2:80; George Clinton to Court of Inquiry, "Report of the Court of Inquiry on the Loss of Fort Montgomery" to Washington, 5 April 1778, hereafter cited as "Court of Inquiry," Alexander McDougall Papers, New York Historical (NYH), on microfilm, USMA Library. The theory of expanding the features of the fort out to higher ground was formulated by COL John Robertson based on scaling the plans to the terrain; a similar theory is applicable to the fortifications built at West Point starting in 1778; Holland, "A Plan of Fort Montgomery & Fort Clinton," Stirling's "Plan No. 2"; Mead, "Archeological Report on Fort Montgomery," Introduction, "Fort Montgomery 1776–1777 Restoration," "Map of Fort Montgomery 1776–1777," and "Comments Regarding Bolton's Report of 1916," (no page numbers), USMA Library; "Return of Artillary and Ordinance Stores at Fort Montgomery," 7 Mar., McDougall Papers, USMA Library, reel 2.

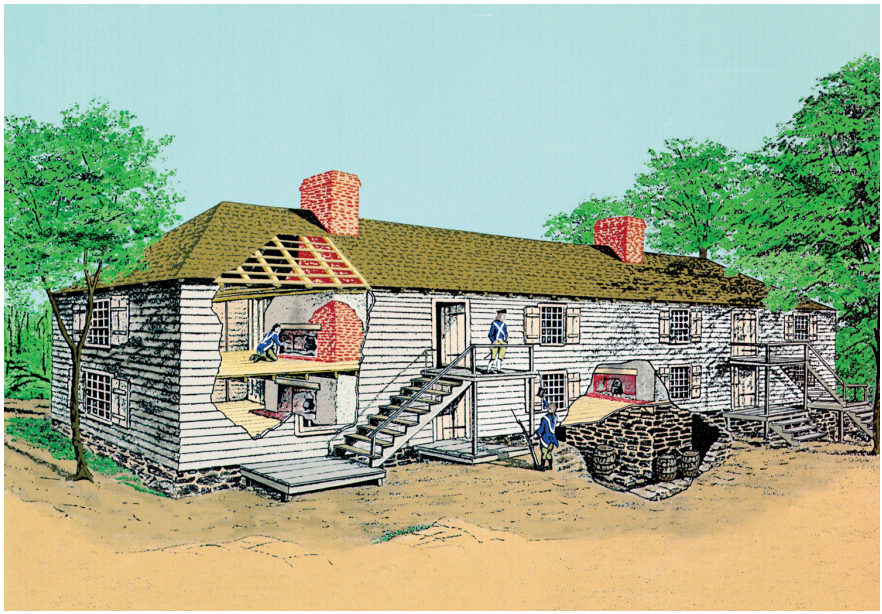

Image 5.8: *Main Barracks*, by John H. Mead. (Courtesy of the New York State Office of Parks, Recreation and Historic Preservation.)

anchored by two star-redoubts, one of four points or bastions and the other of eight. In early July from Clinton's brigade there were 686 militiamen of all ranks in the fort with 388 in Colonel James McClaughry's (McClaghry) 2nd Regiment of Ulster County Militia, 159 in Colonel Levi Pawling's 3rd Regiment of Ulster County Militia, and 139 in Colonel Jesse Woodhull's 1st Regiment of Orange County Militia at Fort Clinton. Like its cousins at Fort Constitution, the West or Outer Redoubt had a dry-stone masonry foundation topped by a parapet of timber and soil. Captain Andrew Moody (Moodie) of the 2nd Continental Artillery referred to the area between the redoubts as an "open field." Fifteen cannons, manned by forty artillerymen on the day of the battle, protected the fort itself, including the eight-pointed redoubt: three 18-pounders, one 12-pounder, ten 6-pounders, and one 4-pounder. The four-pointed redoubt to the southwest had three 6-pounders fired by nine men.[78] Colonel Dubois estimated that a garrison of two thousand men was needed to defend both forts properly; unfortunately, on the day of the battle fewer than 700 were present.[79]

78. "Capt. Moody's of Col. Lambs Redgment Testimony, No. 2," "Court of Inquiry."

79. "Genl. Putnam, No. 25," "Court of Inquiry." Clinton to Washington, 9 Oct. 1777, Clark et al., *Naval Documents*, 10:94; a carpenter by trade from Poughkeepsie, then

With the chevaux-de-frise at New Windsor, Fort Constitution, Fort Independence, Forts Clinton and Montgomery, and the chain to the foot of Anthony's Nose, the fortifications of the Hudson Highlands to all appearances represented a formidable complex blocking the Hudson River. The 1,385 troops manning these forts were both Continentals and militia. In July 1777, General Putnam commanded five brigades ("McDougals-Parsons-Varnums-Glovers-Huntingtons") in his department with 1,194 soldiers garrisoning Forts Clinton and Montgomery and Major John Porter commanding Fort Constitution with 89 soldiers from Colonel Edward Wigglesworth's 13th Massachusetts (6th Continental) Regiment, 15 artillerymen of Captain Gershom Mott's Company of the 2nd Continental Artillery Regiment, and 51 Dutchess County militiamen, commanded by Major Maurice Pleas. Lieutenant Colonel Roswell Hopkins commanded 36 officers and rank and file of Colonel Morris Graham's 6th Dutchess County Militia at Fort Independence. Connecticut Brigadier General Jedediah Huntington reported on 9 August from Peekskill Landing that "we have four good Brigades in fine Health & Spirits," in addition "several Parties of Militia from the State of Connecticut." By the time of the battles at Forts Clinton and Montgomery in October, there would be only Brigadier General Samuel H. Parsons's Continental (Connecticut) Brigade near White Plains, the 5th New York Regiment at Forts Clinton and Montgomery, and local militia regiments; by General Putnam's count there would be 1,188 Continentals and 2,000 militiamen on both sides of the Hudson near Peekskill and the forts.

Diverted by General Howe since the summer, Washington had tried to cover all bets by maintaining his Main Army in New Jersey to protect Philadelphia while charging Major General Israel Putnam, the commander of the Highlands Department since 12 May, to protect the critical passes into the Highlands and Major General Horatio Gates to face Lieutenant General John Burgoyne in the Northern Department. In July the commander in chief had moved his force from Bound Brook to Smith's Clove, and "upon some pretty strong presumptive evidence, I threw two divisions over the North River." Deciding that Philadelphia was the British "object," he had "counter

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Captain Dubois had raised a company in the 3rd New York Regiment and led it during the Canadian campaign. On 28 Sept. there were 749 officers and soldiers in the 5th New York and COL Allison's 3rd Regiment Orange County Militia, "Return of the Men Garrisoned at Fort Montgomery," Heath Papers, USMA Library, reel 2. A reconciliation of the number of soldiers at the Twin Forts was recently done by Peter Catul, who argues in an unpublished study entitled "Forts Montgomery and Clinton Battle Numbers" (Dec. 2024) that 640 American soldiers fought in the battle.

Marchd, and got to Coyells Ferry on the Delaware." Nonetheless, as late as 22 August, still unsure of Howe's actual destination, Washington was once again prepared to send his army "towards Hudson's River."[80] Continuing to cover his bets, on that date he ordered Putnam to send General Glover's Massachusetts brigade of 1,155 soldiers to join General Gates in the Northern Army, and on the 28th, Brigadier General Alexander McDougall's Connecticut (911) and Brigadier General James Varnum's Rhode Island and Connecticut (1,000) brigades to join him and the Main Army. The stage was now set for British strategy to unfold on several fronts over the course of the summer and fall of 1777.

80. Washington to John Augustine Washington, 5 Aug. 1777, and to Page, 21 Aug., Washington, *Writings* (ed. Fitzpatrick), 9:20–21, 113. 140 present for duty, "A Return of Captain Gershom Mott's Company," "Return of Major Porter's corps at Fort Constitution," "A Weekly Return of Colo. Morris Graham's Regiment of New York Militia," 9, 17, 24 July, George Clinton, *Papers*, 2:92, 94, 96, 114, 118, 127, 135; https://revolutionarywar.us/continental-army/massachusetts/#ma-porter; BG Jed Huntington to Major Jabez Huntington, 16, 29 July, 9 Aug, 1777, Huntington Papers, Connecticut Museum of Culture and History; "Genl. Putnam, No. 25," and "Capt. Moody's of Col. Lambs Redgment Testimony, No. 2," "Court of Inquiry." Lesser, *Sinews of Independence*, 49, 55; Washington appointed Putnam to command the Highlands Department on 12 May 1777, but he limited the scope of his command to the "other side of the North River; Peeks Kill and its dependencies," giving Governor George Clinton command of the Twin Forts, Washington to Israel Putnam, 12 May, 22, 28 July, 14, 23 Sept., Washington to McDougall, 1 August 1777, The Papers of George Washington, Founders Online:
https://founders.archives.gov/documents/Washington/03-09-02-0398
https://founders.archives.gov/documents/Washington/03-10-02-0353
https://founders.archives.gov/documents/Washington/03-10-02-0485
https://founders.archives.gov/documents/Washington/03-10-02-0444
https://founders.archives.gov/documents/Washington/03-11-02-0225
https://founders.archives.gov/documents/Washington/03-11-02-0310.

CHAPTER 6

GENERAL SIR HENRY CLINTON'S FUTILE HUDSON RIVER CAMPAIGN, OCTOBER 1777

By the fall of 1777, Americans had built what appeared to be an imposing complex of fortifications on the Hudson River, stretching from Fort Independence on the south to Pollepel Island to the north.[1] They were, however, undermanned and thus dependent upon the ability of the militia to mobilize quickly and in sufficient numbers as General George Washington moved his Main Army south to confront a possible attack by Sir William Howe against Philadelphia. Were they formidable enough in their own right to stop a British expedition mounted from New York City to link up with Lieutenant General John Burgoyne's army advancing out of Canada? With all of these projects still works in progress up to the actual campaign of October 1777, the Americans faced a daunting task, particularly because once Washington committed himself to shadowing the army of Howe, he left Major General Horatio Gates, commander of the Northern Department, to deal with Burgoyne and temporary Brigadier General Barry St. Leger and Major General Israel Putnam with about 1,100 Continentals and the militia of New York and Connecticut to face Major General Sir Henry Clinton. With the right kind of luck for the British, American prospects appeared bleak.

1. This chapter is based on James M. Johnson, "'Making the best use of your joint forces': Joint and Combined Operations on the Hudson River, 1777 and 1781," advanced research project, Naval War College.



Image 6.1: *Maj. Gen. Israel Putnam*, by Dominique C. Fabronius. (Retrieved from the Library of Congress, www.loc.gov/item/2012647522.)

Major General Israel Putnam had served with Connecticut troops in the French and Indian War, during which he was captured by a French and Indian force and later exchanged for French prisoners. He was a member of the Sons of Liberty in the early 1770s, and by 1775 he was the third-highest-ranking officer in the colonies, a brigadier general and a major player at Bunker (Breed's) Hill. In 1776, Putnam helped to organize the defense of New York City and commanded half of the force on Long Island, and in 1776–1777, he participated in the defense of Philadelphia. "Old Put" was renowned for his courage and charismatic leadership. General Washington highlighted his qualities of leadership as he charged him with preparing the defenses of New York City: "Your Long Service and Experience will, better than any Particular directions at this Distance point out to you the Works most proper to be

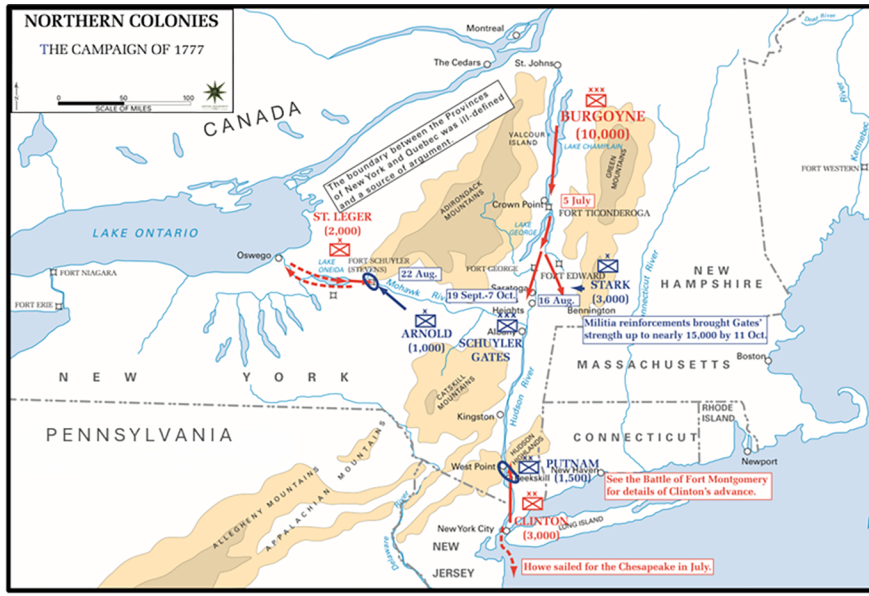


Image 6.2: *Northern Colonies. The Campaign of 1777.* (Courtesy of the United States Military Academy's Digital History Center, Department of History.)

First rais'd & your Perseverance Activity & Zeal will lead you, without my recommending it to Exert every Nerve to disappoint the Enemys Designs."[2] "Old Put" would need to exhibit his courage and charismatic leadership as he prepared to face the British in the months ahead.[3]

Fortunately for the Americans defending the Hudson River Valley, Lord George Germain and his generals had badly coordinated the British strategy for 1777. This failure had left Sir Henry Clinton, the commander of Crown forces in New York, with a dilemma: how best to protect his base on Manhattan Island and, at the same time, facilitate the operations of Sir William Howe with his army of fifteen thousand in Pennsylvania, General John Burgoyne's offensive from Canada with over seven thousand men, and St. Leger's diversion down the Mohawk Valley with some two thousand regulars, Natives, and provincials. Howe had given Clinton the discretion

2. Washington to Maj. Gen. Israel Putnam, 29 Mar. 1776, Papers of George Washington, Founders Online, National Archives, https://founders.archives.gov/documents/Washington/03-03-02-0421.

3. Patrick J. Mahoney, "Israel Putnam," ConnecticutHistory.org, https://connecticuthistory.org/israel-putnam-a-youthful-trailblazer-turned-colonial-militiaman-2/.

to act "offensively, in case the opportunity should offer."[4] Sir Henry Clinton had explained to General Howe that "the Highlands were of so much consequence, that they [the Americans] never wou'd leave them unprotected, that they wou'd ever be in very strong force there, that I thought there was no chance of ever opening that road with less than his whole Army." It would also require Clinton to revert to a "very strict defensive."[5] Finally convinced of the grave situation faced by Burgoyne to his north, Clinton would take the "opportunity" that Sir William had offered and conduct a joint amphibious operation against the American fortifications in the Hudson Highlands. While Sir Henry would capture his objectives in the Highlands in his cooperative venture with Commodore William Hotham and even destroy the capital of New York at Kingston in a model joint campaign, at the more important strategic level, he would fail to spring "Gentleman Johnny" Burgoyne from his self-made trap at Saratoga. Despite the fact that Howe had defeated Washington's army and captured Philadelphia, the war would go on.

On paper, General Putnam still had enough forces to give Sir Henry a fight and substantial fortifications well placed to make any expedition against the Highlands difficult. As early as 12 May 1777, Washington had personally taken steps to increase the odds against the British when he sent Major General Nathanael Greene to the Highlands Department to inspect the defenses and correct any errors he might find. He charged Greene with ensuring that the defenses were ready to defeat an attack from either land or water and to guard against a "coup de main" from the west. Greene and his committee, consisting of Brigadier Generals Alexander McDougall, Henry Knox, George Clinton, and Anthony Wayne, reported that additional water obstacles were all that was needed to complete the defenses. In their collective judgment, the addition of a boom and cables to bolster the chain and the presence of two armed galleys and the two New York frigates would combine with the batteries of the forts to "render it impossible for the Shipping to operate there." If the river remained blocked and if "the Passes into the Highlands be properly guarded, which can be done with about four

4. Howe to Clinton, 9 July 1777, H. Clinton, *American Rebellion*, 22.

5. 8 Aug. 1777, "Conversation with G. H., New York," Sir Henry Clinton Papers, Clements Library; Howe to Clinton, 9 July 1777, H. Clinton, *American Rebellion*, 22. King George III had knighted William Howe in the Order of the Bath on 13 Oct. 1776 and Henry Clinton on 11 Apr. 1777, https://en.wikipedia.org/wiki/List_of_knights_companion_of_the_Order_of_the_Bath.

or five thousand Troops, the rest of the Army will be at liberty to operate elsewhere."[6]

Unfortunately, a key assumption of the generals' report would unhinge the whole scheme: "[T]he Enemy will not attempt to operate by Land, the passes through the Highlands are so exceed[ingly] difficult."[7] Like James Wolfe at Quebec, Sir Henry Clinton found that the seemingly difficult proved the key to success; he either read Greene's report or simply ignored the obstacles. Washington had read the report; he repeatedly reminded Putnam to "secure the passes into the highlands," for obstacles there "with the natural Strength of the Ground, must render the approach of an Enemy extremely difficult without considerable loss."[8] While Washington had the correct operational vision, tactically, if the passes were *not* adequately blocked, all of the positions in the Highlands shared the same weakness: they were open to land attack from the rear. Despite Washington's concerns, Putnam's lack of all-around security would prove fatal.

Accepting the generals' assessment that the British would attack from the river, Putnam proceeded with his defensive planning. The passes aside, except for the number of troops, he would come close to meeting the generals' prescription. By his own returns, which Washington used to make his decisions, Putnam had 2,608 men after 2,500 soldiers had been stripped out for Major General Alexander McDougall's expedition to New Jersey to counter a diversionary move by Sir Henry Clinton and then to join Washington's Main Army. Putnam, however, reported to Washington on 8 October that he had only 1,500 fit for duty at the time of the attack: 1,200 Continentals and 300 militiamen; he would revise this to 1,100 Continentals, artillerymen, and 2,000 militiamen in his testimony before his Court of Inquiry in April 1778.[9] Militia companies would not report in large enough

6. "Continental Army Generals to General Washington," 17 May 1777, Clark et al., *Naval Documents*, 8:987; Founders Online, https://founders.archives.gov/documents/Washington/03-09-02-0446.

7. "Continental Army Generals to General Washington," 17 May 1777, Founders Online, https://founders.archives.gov/documents/Washington/03-09-02-0446; Sparks, *Correspondence of the American Revolution*, 1:377.

8. Washington to Putnam, 7 Aug., 14 Sept. 1777, Washington, *Writings* (ed. Fitzpatrick), 9:35, 219, also in Papers of George Washington, Founders Online, https://founders.archives.gov/documents/Washington/03-10-02-0544; https://founders.archives.gov/documents/Washington/03-11-02-0225.

9. Washington to Putnam, 14 Sept. 1777, Washington, *Writings* (ed. Fitzpatrick), 9:218; Putnam to Washington, 8 Oct. 1777, Clark et al., *Naval Documents*, 10:72; "Genl. Putnam, No. 25," "Court of Inquiry"; artillerymen estimated at 88 in the forts.

numbers to make up the difference between Putnam's actual force and the requirement the generals had specified in their report.

The defenses the generals had viewed showed promise against the threat from the river they anticipated. The British, upon their arrival in October 1777, faced a Fort Constitution comprising Romans's Battery and Blockhouse, Marine Battery, and Hill Cliff and Gravel Hill batteries rated at forty-one artillery pieces, but which had, as of 29 May 1777, no more than twenty-nine actual cannons in place: nine 9-pounders, eighteen 6-pounders, and two 4-pounders. On 4 July, Putnam would commit the 9-pounders to the Continental frigate *Congress*, which had considerably fewer than its rated capacity of twenty-eight guns.[10] To man the works and the guns, Captain Gershom Mott reported that the total garrison on 6 October numbered thirty of his artillerymen (matrosses) from Colonel John Lamb's Regiment of Artillery and "about 100 new levies of Militia" under Major Zachariah Dubois from Colonel Jonathan Hasbrouck's Regiment of New York militia; for some reason Mott failed to remember some sixty-seven Continentals from Colonel Lewis Dubois's 5th New York Regiment that the regimental return showed as being there.[11]

Fort Montgomery was a sprawling work over-watching a chain that stretched over 1,700 feet from a cove below its Grand Battery to the base of Anthony's Nose. Until General George Clinton could place booms in the river to protect the chain, he, its commander for the battle, had substituted a cable made by splicing together three smaller cables from the Continental

10. Report of Francis Nicoll, Joseph Drake, and Thomas Palmer to the NYPC, 14 Dec. 1775, Papers of the Continental Congress, USMA Library, 312–19; also in Force, *American Archives*, 4th ser., 4:420–22; Stirling to Washington, 1 June 1776, *American Archives*, 4th ser., 6:672–78; minutes, 25 Feb. 1775, and report of Smith to the NYPC, 1 Mar. 1776, New York, *Provincial Congress*, 223–24, 322, 330; Franklin, *Papers* (ed. Willcox), 22:397–99; Romans, "Plan"; minutes, 13 Feb. 1776, Ford, *Continental Congress*, 4:133–34; "A Retur[n] of Ordinance Stores at Fort Constitution May 29th 1777," George Clinton, *Papers*, 1:846; "Orders of Major General Israel Putnam," 4 July 1777, Clark et al., *Naval Documents*, 9:215. (Captain Smith, the engineer of Major General Charles Lee, traced out Gravel Hill on a site identified but not fortified by Bernard Romans; Smith would also propose a trace for Fort Montgomery.)

11. "Capt. Motts Evidence, No. 16," "Court of Inquiry"; note to the "Return of the Men Garrisoned at Fort Montgomery, 28th Sept. 1777" and "Return of killed & wounded Col. Dubois Reg" indicated that "1 Capt 2 Lieuts 3 serjeants 2 Drums & fife and 59 Rank & file on Commd at Fort Constitution of which number the Capt & 6 privates are Returned sick Absent," McDougall Papers, NYH; "Col. Hasbrouck's Reg't. of Militia-Services 1776 to 1778," Pratt, *Account of the British Expedition*, 68.

frigate *Montgomery*.[12] The length of the fort itself from the tip of "Round Hill" redoubt on the northwest to the Grand Battery on the east was over 1,400 feet. Maps and drawings of the fort emphasize the strength of the works facing the river.[13] The heart of these defenses against an attack from the river was the 100-foot-long Grand Battery with ramparts eighteen feet thick; according to First Lieutenant William A. Patterson of the 15th Regiment, the battery with its five 32-pounders "Rakes the River Pretty Well For Three Miles."[14] The rest of the fort had one more 32-pounder, ten 12-pounders, fourteen 6-pounders, and two 3-pounders on traveling or field carriages as of 20 June. The landward ramparts were "comparatively open with the works poorly situated and incomplete."[15]

On higher ground to protect Fort Montgomery's southern approach and connected to that fort by a bridge across Popolopen Creek was Fort Clinton. This circular work was anchored by two star redoubts, one of four points or bastions and the other of eight. Fifteen cannons, manned by forty artillerymen, protected Fort Clinton itself, including the eight-pointed redoubt: three 18-pounders, one 12-pounder, ten 6-pounders, and one 4-pounder; unfortunately, only two 3-pounders were on traveling or field carriages. The four-pointed redoubt to the southwest had three 6-pounders fired by nine men.[16] According to the Court of Inquiry, "the Garrisons consisted of Col Dubois Regiment of Continental Troops amounting to about 300 including Sergts.—about 100 of Col Lambs Artillery, and about 300 of Short Levies and Militia."[17]

General Putnam did have one other trump card to play: a naval flotilla was present north of the chain to provide firepower and support. Its two New York frigates had been conceived by the Continental Congress when, on 13 December 1775, it had passed a resolution authorizing the construction

12. G. Clinton to Washington, 11 July 1777, Hodge to NYCS, Fernow, *Documents* (Colonial NY), 9:260, 281.

13. Holland, "A Plan of Fort Montgomery & Fort Clinton," USMA Library.

14. "Wm A. Patterson to Hon. &c," 22 Apr. 1776, and "A Plan of the Intended Works at Fort Montgomery By Wm A. Patterson 1st Lieut of the 15th Regt–April 22 1776," used by permission of the Mass. HS; also in Sheffield Research Files, USMA Library.

15. Carr and Koke, *Twin Forts of the Popolopen*, 29; it is unclear how many of these might have been at Fort Clinton, "A Return of Ordinance Stores at Fort Montgomery this twentyeth Day of June 1777," George Clinton, *Papers*, 2:45.

16. "Capt. Moody's of Col. Lambs Redgment Testimony, No. 2" "Court of Inquiry."

17. "Genl. Putnam, No. 25," "Court of Inquiry"; Clinton to Washington, 9 Oct. 1777, Clark et al., *Naval Documents*, 10:94; for the number Peter Cutul, "Forts Montgomery and Clinton Battle Numbers."



Image 6.3: *Fort Montgomery*, by Joseph F. W. Des Barres. (Courtesy of the New York State Office of Parks, Recreation and Historic Preservation.)

of a fleet of thirteen frigates to challenge the Royal Navy, to be built at a cost of $66,666.67 each. New York would build and outfit two of the thirteen, *Congress* and *Montgomery*. The 682-ton *Congress* was rated at 28 guns and had a deck length of 126 feet and a beam of 34 feet; the 563-ton *Montgomery* was rated at 24 guns with a deck length of 119 feet and a beam of 32 feet. Superintendents Jacobus Van Zandt, Augustus Lawrence, and Samuel Tudor would oversee the work in Poughkeepsie, on the eastern shore of the Hudson, some thirty miles north of Fort Montgomery. Despite Congress's deadline of March 1776 for the ships to put to sea, the superintendents did not launch *Montgomery* and *Congress* until November of that year. Delayed by work stoppages, material shortages, and the diversion of naval stores to Brigadier General Benedict Arnold's fleet on Lake Champlain, the shipyard worked to complete and outfit the frigates even as the British landed at Staten Island and British frigates *Phoenix* and *Rose* ranged north as far as Peekskill Bay in July ostensibly in search of the warships. When they were finally launched,



the two new frigates spent the winter on Rondout Creek near Kingston. The Continental generals had recommended moving the two ships to protect the chain at Forts Clinton and Montgomery in their report in May 1777, and the Continental Marine Committee had acted almost immediately by ordering them southward from Poughkeepsie.[18]

By 13 July they would be joined by the New York sloop *Camden* and the Continental row galleys *Shark* and *Lady Washington*. By scouring the region for armament, each of the ships had some cannons: the *Montgomery* with a crew of thirty-six, eight 12-pounders; the *Congress*, at least the nine 9-pounders from Fort Constitution; the *Camden* with a crew of eighteen, six 6-pounders,

18. *Continental Congress*, 13 Dec. 1775, Tuder to NYConv, 12 Dec. 1776, Continental Marine Committee to NYCS, 26 June 1777, Clark et al., *Naval Documents*, 3:90, 7:460, 9:177; J. F. Millar, *Building Early American Warships*, 27. For more about the two frigates see Johnson, "Warm Reception in the Hudson Highlands," *Sea History*, also in *Key to the Northern Country*, 211–17.

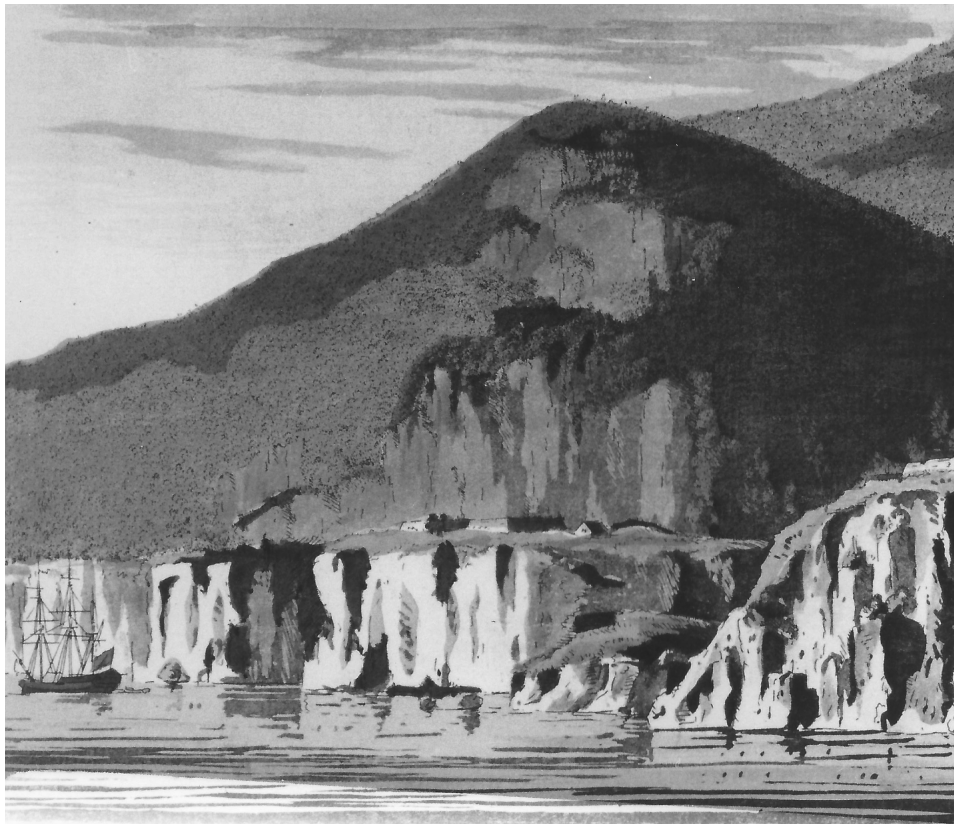
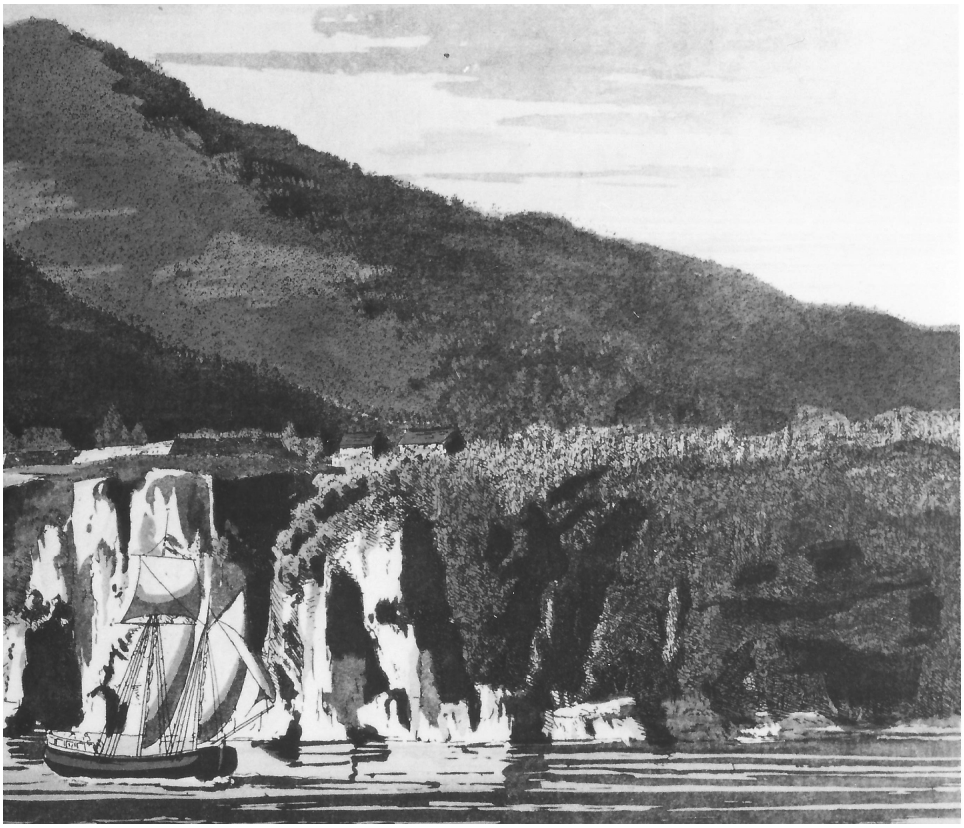


Image 6.4: *Fort Clinton*, by Joseph F. W. Des Barres. (Courtesy of the New York State Office of Parks, Recreation and Historic Preservation.)

four 4-pounders, and twelve swivels; the *Shark* with a crew of eighteen, four 9-pounders; and the *Lady Washington* with a crew of twenty, one 32-pounder and eight 3-pounders. Captain John Hodge of the *Montgomery* and Captain Thomas Grennell of the *Congress* had scraped together crews from experienced sailors, soldiers, and even "Deserters, Boys &."[19]

Undermanned and under-gunned, the Hudson's navy suffered from its organization and from the mission senior leaders had assigned to it. The Continental Marine Committee had established a workable command relationship that linked its ships with the ground force: Grennell and Hodge were "to follow such orders as may be given you by his Excellency the

19. 14 Aug. 1776, "Memorandum of Stores Necessary for the Sloop Hudson & . . . Camden," Papers of the Secret Committee; Clinton to Putnam, 15 June 1777, Hodge to NYCS, 13 July, Clark et al., *Naval Documents,* 9:118, 281; "Capt Hodge's Evidence, No. 7," "Court of Inquiry."



General, or the Commanding officer appointed to direct the operations in that quarter, using your best judgment in the execution of such orders as you may receive." This meant that rather than Israel Putnam, George Clinton, as the overall commander of the two forts, exercised authority over the ships. Clinton ordered Hodge "to defend the chain & cooperate with the garrison in the defence." Because the mission of the ships was to protect the chain, their movement was hindered by the need to remain near it.[20]

One other twist complicated the issue of authority: Hodge did not exercise command over the *Congress*, and as Sir Henry Clinton's army approached on 5 October, George Clinton, to avoid the potential disaster of losing both

20. Continental Marine Committee to the NYCS and to Captains Grennell and John Hodge, 26 June 1777, Clark et al., *Naval Documents*, 9:176–77; George Clinton to Court of Inquiry, 1778; "Genl. Orders," 6 Oct. 1777, George Clinton, *Papers*, 5:311.



Image 6.5: General Clinton (Sir Henry). (Retrieved from the Library of Congress, https://www.loc.gov/item/2001697132.)

frigates, would order the *Congress* to sail to Fort Constitution, which he considered "the Station safest for the Ship and most proper to annoy the Enemy." Although Hodge rated the galleys "manned and in a proper state of defence" and his own ship "in great forwardness," he would find that his inflexible mission and the actual state of his small force would limit the contribution he would be able to make to the outcome of the upcoming battle.[21]

Sir Henry Clinton set the Hudson River Campaign of 1777 in motion on 2 October when he and Commodore William Hotham transported 3,000 men aboard some forty-seven ships and numerous flat-boats, landing first at Tarrytown 4 October, then Verplanck's Point on 5 October, and finally at Stony Point on the sixth. By nightfall, following violent assaults on Forts Montgomery and Clinton after a twelve-hour march overland, Clinton occupied the twin forts on the Popolopen, opposed only by the small garrisons there under the command of brothers George and James Clinton.

21. Putnam to NYCS, 5 June 1777, Livingston and Duer to Van Cortlandt, 31 May 1777, Hodge to NYCS, 13 July 1777, Cortlandt to the President of Congress, 11 June, and Clinton to Washington, 9 Oct. 1777, Clark et al., *Naval Documents*, 9:24, 42, 90, 281, 10:94.

The *Montgomery* and the other vessels fought gallantly despite their inadequate crews and guns, but George Clinton reported to Washington on 9 October that "the Ship *Montgomery*, . . . it being the Tide of ebb, and the Wind failing, she fell down so near the Chain, that Captn Hodge was constrained to set her on Fire to prevent her falling into the Hands of the Enemy."[22] And despite George Clinton's best efforts to protect the *Congress*, disaster was in the cards for that frigate as well. Her acting commander, First Lieutenant Daniel Shaw, with the assistance of some sixteen artillerymen at Fort Constitution, burned her on 7 October to prevent her from falling into the hands of the British.

With Major General Israel Putnam remaining idle first at Peekskill and then at Fishkill, by 8 October Sir Henry Clinton was able to occupy Fort Independence, burn Continental Village, break the chain across the river, and occupy Fort Constitution on Martelaer's Rock to the north. After passing the chevaux-de-frise anchored on Pollepel Island, Hotham's advance squadron under Captain Sir James Wallace would range the river unimpeded as far north as Poughkeepsie. He would have to bypass the Fishkill Supply Depot probably because of its distance from the Hudson and the presence of Putnam's forces on the east side of the river.

From 16–26 October, Major General John Vaughan and Wallace would sail as far north as Livingston Manor in a vain attempt to link up with Burgoyne's ill-fated army. The highlight of this expedition would be a naval landing at Rondout Creek that culminated in Vaughan's burning of Kingston, the capital of New York. George Clinton's forces would resist this attack to no avail; however, Putnam would finally mass enough forces on the west bank of the Hudson, cooperating with Brigadier Samuel H. Parsons's 1,500 soldiers on the east side to give Vaughan pause. The knowledge that Burgoyne had surrendered and orders from Clinton made up Vaughan's mind, and he and his force slipped back down the river, abandoning Fort Clinton—renamed Fort Vaughan in his honor—on 26 October. With no navy left, American forces could only harass the departing flotilla with cannon fire and musketry as it withdrew.

Sir Henry Clinton's Hudson River Campaign was at an end less than a month after it had begun. As events would have it, despite Clinton's series of tactical successes, the campaign that changed the complexion of the war had played out upriver at Saratoga. Burgoyne's surrender to General Horatio Gates gave France the opportunity to confront Great Britain in a world war. All of that was, however, in the future. In October 1777, why had Sir Henry

22. Clinton to Washington, 9 Oct. 1777, Clark et al., *Naval Documents*, 10:94.

Clinton's expedition against the Hudson Highlands and beyond been so successful? Why had George Clinton and Israel Putnam failed so badly as they attempted to counter Sir Henry's maneuvers?

At the strategic level, the Hudson River Campaign was a sideshow. Howe in Pennsylvania and Burgoyne advancing from Canada occupied the limelight in the British bid to end the war. After the fact, Howe would even argue that his campaign was designed to keep Washington's Main Army occupied while Burgoyne split the rebellion along the "line of the Hudson."[23] Sir Henry Clinton would have to take the forces that remained and do the best that he could to accomplish his primary mission of protecting New York City and to mount an expedition up the Hudson as well.

For a time, General George Washington would move his army between Clinton and Howe, unwilling to abandon the Hudson yet determined to oppose any British move against the American capital of Philadelphia. Once Howe's intentions became clear by his landing at the Head of Elk, Maryland, in late August 1777, Washington reluctantly committed to Philadelphia. Putnam and George Clinton were on their own. The commander in chief expected them to defend the Highlands Department with a paltry force of Continentals and the militia that he had importuned the governors of New York, New Jersey, and Connecticut to provide.

For both Sir Henry Clinton and Washington, the Hudson River would exert a powerful pull as a theater of operations. Even as General Washington contemplated the possible objectives—New England, Philadelphia, or even Charleston—of General Howe's army through August 1777, he never relaxed his concern for the Highlands or lost his clear conception of first Sir William's and then Sir Henry's capabilities and possible intentions for that region. Washington wrote Putnam on 1 August, "The importance of preventing Mr. Howe's getting possession of the Highlands by a coup de main, is infinite to America, and in the present Situation of things, every effort that can be thought of must be used."[24]

From Chester, Pennsylvania, outside Philadelphia, the commander in chief considered that Howe might be "practising a deep feint, merely to draw our attention and whole force to this point" and away from a move up the

23. Howe, *Narrative*, 21.

24. Washington to Putnam, 1 Aug. 1777, Washington, *Writings* (ed. Fitzpatrick), 9:1, https://oll.libertyfund.org/titles/ford-the-writings-of-george-washington-vol-vi-1777-1778; also, Papers of George Washington, Founders Online, https://founders.archives.gov/documents/Washington/03-10-02-0487.

Hudson to "form a junction" with Burgoyne's army. This thought caused him to countermarch Major General John Sullivan's division toward Peekskill because at the time he still believed "the North River is their Object and that they will make a rapid push to obtain possession of our posts there."[25]

Although Washington made Howe's army his primary objective once it had landed in Maryland, he ascribed to Clinton the ability to accomplish what he had earlier thought Howe planned: "to attack you [Putnam] below while Burgoyne comes down upon you." He was convinced that Clinton had both the forces and the resources to use "a sudden embarkation and a favourable Wind" to steal a march on Putnam. Unfortunately, with General Gates crying for reinforcements to stop Burgoyne and Howe threatening the American capital, even as Washington increased the intelligence effort directed against New York City and warned Putnam to be "vigilant," he stripped him of most of the Continentals upon which he could be expected to anchor his defenses.[26] "Old Put" would have to rely upon the fortifications of the Highlands Department, a few ships, a handful of Continentals, and the militia of New York and Connecticut to oppose any move Clinton might choose to make.[27]

As Washington had feared and predicted, General Clinton had developed a plan for an operation against the fortifications in the Highlands to assist Burgoyne's stalled expedition. Based upon a tailored naval and ground force, this plan would bring decisive combat power to bear through surprise, deception, and maneuver. From his intelligence, Sir Henry took the measure of the forts and Putnam's forces and, finding them to be in an "unguarded State," decided to launch a "Coup de Main" against them.[28]

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25. Washington to Sullivan, 1 Aug. 1777, Washington to John Augustine Washington, 5 Aug. 1777, Washington, *Writings* (ed. Fitzpatrick), 9:3, 20, Founders Online, https://founders.archives.gov/documents/Washington/03-10-02-0489, Founders Online, https://founders.archives.gov/documents/Washington/03-10-02-0533.

26. Washington to Putnam, 11, 13, 22 Aug., 14, 23 Sept. 1777, Washington, *Writings* (ed. Fitzpatrick), 9:55–56, 60, 115, 218–19, 254; also available at Founders Online, https://founders.archives.gov/documents/Washington/03-11-02-0225;

27. Putnam to G. Clinton, 4 Oct. 1777, Clark et al., *Naval Documents*, 10:36, https://www.history.navy.mil/content/dam/nhhc/research/publications/naval-documents-of-the-american-revolution/NDARVolume10.pdf.

28. Clinton to Howe, 9 Oct. 1777, Clark et al., *Naval Documents*, 10:98, https://www.history.navy.mil/content/dam/nhhc/research/publications/naval-documents-of-the-american-revolution/NDARVolume10.pdf; Col. Beverley Robinson provided key information about the Highlands, as he did reporting on the condition of the roads from Peekskill to Fishkill and on the western shore to Stony Point, and landing sites, 15 Aug. (23:3), 22 Aug. (23:14), Oct. (26:10), before Oct. (24:33), "Intelligence," 13 July, cannons, (22:39), 8 Aug, "Conversation with G. H., New York," Clinton Papers, Clements Library.

As Clinton and Hotham finalized their plan for the upcoming operation, the commodore accepted his supporting role in the convention of command that had evolved from the Seven Years' War. He initially objected to the nature of the operation because he seemed to consider it a raid that would not permanently retain any forts captured.[29] That objection did not deter him long from the acceptance and execution of Clinton's concept of the operation. Clinton asked his naval commander to meet him for dinner on 3 October to "settle our plan of Operations."[30] Throughout the campaign, Hotham did everything that he could to ensure the success of the joint operation even as he shouldered his responsibilities as commander of the fleet in New York, in the absence of the Admiral Viscount Richard Howe.

Hotham organized his forces optimally so that he and his captains could put the soldiers ashore and support them with cannon fire and logistics. Clinton wrote Sir William, "The Commodore has assisted me with his Advice, and every Effort."[31] This was high praise indeed from one who had placed heavy responsibility on Sir Peter Parker for their failure at Charleston the year before. General Vaughan had equal praise for Hotham's subordinates: "I can't be too thankful to Sir James Wallace Captain Stanhope, and the rest of the Officers of the Navy for their great Attention and Assistance upon that Expedition."[32] While Hotham did not reciprocate the personal compliments in his dispatches to Admiral Howe, he did praise the successes that Clinton and the army achieved. He acknowledged the difficulties that the soldiers had faced ashore feeling that "it redounds the more to the Credit of an Enterprize, which was formed and executed with equal Judgment, Valour and Success."[33] With unity of command assured, Clinton and Hotham set the affair in motion.

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29. H. Clinton, *American Rebellion*, 72 n. Willcox notes that Commodore William Hotham "consented to make the attack only reluctantly and at the last minute." In the original, Clinton's handwriting is difficult to read, "Memoranda," Sir Henry Clinton Papers, Clements Library. Hotham mentions no disagreement in his letter to Admiral Howe in William Hotham to Clinton, 1 Oct. 1777.

30. Clinton to Hotham, 2 p.m., 2 Oct. 1777, Clark et al., *Naval Documents*, 10:16.

31. Clinton to Howe, 9 Oct. 1777, Clark et al., *Naval Documents*, 10:100.

32. Vaughan to Clinton, 26 Oct. 1777, Clark et al., *Naval Documents*, 10:300, https://www.history.navy.mil/content/dam/nhhc/research/publications/naval-documents-of-the-american-revolution/NDARVolume10.pdf.

33. For the expedition, 19 transport ships could carry 6,533 tons of cargo and 4,000 troops, "A List of Transports that can carry flat Boats," (24:30) Sept. 1777, Sir Henry Clinton Papers, Clements Library. Hotham to Admiral Howe, 9 Oct. 1777, Clark et al., *Naval Documents*, 10:97.

Clinton's opening gambit was to unveil a deception plan. His campaign in the Hudson Highlands thus actually started on 11 September 1777 with a letter from Sir Henry to Burgoyne and a diversionary raid into the area around Elizabeth Town, New Jersey. Clinton designed the raid to "possibly operate in favor of either Sir William Howe or General Burgoyne, or might at least draw off some part of the force that protected the Highlands, which were the destined object of my next move." Washington, in fact, took the bait and dispatched General McDougall with 1,500 men from Putnam's army to respond to the threat.[34] Clinton's letter promised a move with about two thousand men against the Highlands in some ten days if reinforcements arrived from Europe.[35] Burgoyne's response of 21 September, received on the 29th, agreeing that "an attack or even the menace of one upon Fort Montgomery would be of great use to him," and the arrival of 1,700 British and German reinforcements on the 24th spurred Clinton to action.[36] At dinner on 3 October, he and Sir Henry finalized the plan for an operation that had already begun that morning.

From a garrison of almost ten thousand men Clinton organized a powerful strike force, which he then marshaled with the commodore's ships for an initial landing at Tarrytown, New York, twenty-four miles above the Battery.[37] Hotham quickly tailored a naval force to support Clinton's expedition. Selecting about 3,000 troops for his expedition, Sir Henry would leave behind some 7,000 to man the fortifications around New York City; the commodore would leave a number of ships, including the frigates, *Experiment*, *Apollo*, and *Galatea*, to protect the port.[38]

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34. Washington to Putnam, 10 and 14 Sept. 1777, Washington, *Writings* (ed. Fitzpatrick), 9:201, 218, Founders Online, https://founders.archives.gov/documents/Washington/03-11-02-0187. Founders Online, https://founders.archives.gov/documents/Washington/03-11-02-0225.

35. H. Clinton, *American Rebellion*, 70–71.

36. H. Clinton, *American Rebellion*, 72.

37. Mileage based on U.S. Dept. of Commerce, *Coast Pilot*, 256–263.

38. "State of Troops, British, and German under the Command of Lieutenant General Sir Henry Clinton, at New York and Posts depending, October 1, 1777," George Clinton, *Papers,* 2: opposite 516; Howe, *Narrative*, 23, 107; H. Clinton, *American Rebellion*, 63-64; Hotham picked the commanders of these ships for duty with the expedition, Commodore Hotham to Vice Admiral Viscount Howe, 9 Oct. 1777, Clark et al., *Naval Documents*, 10:96; "Disposition of His Majesty's Ships and Vessels employed in North America under the Command of Vice Admiral the Viscount Howe," 28 Aug. 1777, Clark et al., *Naval Documents*, 9:838–843.

For the first phase of the operation, Captain Cornthwaite Ommanney from the frigate *Tartar* (28 guns) would lead the supporting squadron of the brig *Diligent*, the frigate *Mercury* (20 guns), and the armed galleys *Dependence* and *Spitfire* to a station near the objective of Tarrytown, dropping anchor at midnight, 3 October. From 4 October, because of his "Knowledge of the River," Captain Sir James Wallace of the *Experiment* would command this advanced or flying squadron, excluding the *Tartar*, from the armed vessel *Friendship* (22 guns), reinforced by the armed galley *Crane* and sloop tender *Hotham*. For the landing itself, Hotham detailed Captain Philemon Pownoll of the *Apollo* to command three divisions of flatboats and bateaux, assisted by Captain Thomas Jordan of the *Galatea* (2nd division) and Commander John Stanhope of the sloop *Raven* (3rd division).[39]

About 5:00 p.m. on 3 October this flotilla rendezvoused with and embarked Major General William Tryon's 1,100 troops from the 57th and 63rd Regiments and Fanning's and Bayard's Provincial Corps (the King's American Regiment and the King's Orange Rangers respectively) at Spuyten Duyvil Creek. The *Tartar* "Made the Signal for the Troops to Land [and] fired 4 twenty four Pder. Round Shot to Cover the Troops Landg." The Redcoats landed from Pownoll's forty-two flat-boats at 5:00 a.m. on 4 October, with the loss of only one man, to occupy the heights overlooking Tarrytown. The British had brought overwhelming combat power to bear and were flawlessly following landing doctrine.[40]

The operation continued to unfold like clockwork. The next two divisions joined the first at Tarrytown on 4 October. The second division under Sir Henry comprised over one thousand soldiers: Germans in the Regiment de Trumbach, 250 Jägers, Captain Erckert's Anspach Grenadier Company, Loyalists in Emmerich's Chasseurs, Colonel Beverley Robinson's Loyal American Regiment, and the New York Volunteers, and regulars, including 100 Highlanders from the 71st Foot (Fraser's Highlanders) and probably one troop of the 17th Regiment of Light Dragoons. The final division of some 800–900 men of the 7th Royal Fusiliers, 26th and 52nd Regiments linked up later in the day in eleven transports and some small vessels, escorted by Hotham's flagship, the 4th rate *Preston* (50 guns), which had sailed directly

39. Hotham to Viscount Howe, 1 Oct. 1777, Clinton to Hotham, 2 Oct. 1777, Hotham to Admiral Howe, 9 Oct. 1777, journals, 3 Oct. 1777, of *Tartar*, *Diligent*, *Apollo*, *Experiment*, and *Mercury*, Clark et al., *Naval Documents*, 10:12, 16, 96.

40. Hotham to Admiral Howe, 9 Oct. 1777, journals, 4 Oct. 1777, of *Dependence*, *Experiment*, and *Preston*, Clark et al., *Naval Documents*, 10:96-100.

from New York.[41] With a line of communications secure to Tarrytown, the force prepared for the next hop to Verplanck's Point.

The second phase of Clinton's campaign focused on the landing sites near the King's Ferry that he and Hotham had chosen for the operations in the Highlands. Using surprise and deception and capitalizing on the mobility given him by Hotham's ships, Clinton executed a feint on the eastern bank of the Hudson at Verplanck's Point. He described this deception campaign colorfully, noting that "every proper Jealously having been given for every Object but the real one."[42] At Tarrytown, Clinton embarked his entire force in the transports and flat-boats on the night of 4 October and, preceded by Wallace's flying squadron, sailed upriver to Verplanck's Point. At about noon on Sunday, 5 October, the troops in the flat-boats landed there unopposed, supported by the fires of the *Diligent* and the galleys. Wallace moved his vanguard "up to Peaks Kill [Peekskill] Neck to mask the only Communication they had across the River on this Side of the Highlands."

At dawn on 6 October, aided by fog, following his "Plan," Clinton completed the maneuver by landing all but the 400 soldiers of Bayard's and Fanning's Corps left to guard the eastern shore at Verplanck's Point for the overland attack against Forts Montgomery and Clinton. The ships and transports displaced and anchored off Peekskill landing so that they would be in position to support the final assaults. On 27 September, Clinton had revealed that he had had two objectives for the operation: destroying the cannons at the forts in the Highlands and "a stronger Motive . . . the Diversion it may occasion in favour of Your Excellency [Howe] & Genl. Burgoyne."[43]

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41. Hotham to Admiral Howe, 9 Oct. 1777, Clinton to General Howe, 9 Oct. 1777, journals, 3 Oct. 1777, of *Tartar*, *Diligent*, *Apollo*, *Experiment*, and *Mercury* and journals, 4 Oct. 1777, of *Dependence*, *Experiment*, and *Preston*, Clark et al., *Naval Documents*, 10:12, 16, 96-100; Kemble, "Kemble's Journal, 1777," 132–33; Pratt, *An Account of the British Expedition*, 9. "Journal of the Honourable German Infantry Regiment von BOSE," David Center for the American Revolution, American Philosophical Society, S. 17, hereafter cited as "Journal of von Bose" (complete citation in Bibliography); for a list of 19 transports that could carry "flat Boats" and 6,533 troops, see return, Sept., in Sir Henry Clinton Papers, Clements Library. Governor Tryon's plan of 20 Sept. divided the British force into two divisions, 1,150 with the 63rd Regiment (300) to embark on transports and 1,560 with the 35th Regiment (300) to march from King's Bridge, "Disposition for the troops," Sir Henry Clinton Papers, Clements Library.

42. Clinton to Howe, 9 Oct. 1777, Clark et al., *Naval Documents,* 10:98; Captain Lord Francis Rawdon-Hastings provided detailed notes and sketches of Verplanck's Point, (24:32), Sept. 1777, Sir Henry Clinton Papers, Clements Library.

43. Orderly Book, King's American Regiment, 18 Dec. 1776–12 Nov. 1777, typescript, USMA Library; Fortescue, *History of the 17th Lancers*, 43–44; Johnston, *History of the*

At the operational level of war, from the time that Sir Henry Clinton's troops had first gone ashore at Tarrytown until 26 October when the campaign ended, Israel Putnam reacted to the initiative of his opponent. His intelligence had been good. General Parsons at White Plains had warned him on 25 September that British reinforcements had arrived in New York and that "they were soon to move out of the City, supposed up the River, to attack the Forts in the Highlands." His immediate reaction had been to implore Governor Jonathan Trumbull of Connecticut and Governor Clinton of New York to send militia to the Highlands Department. While the governors duly issued the orders, no militia responded from Connecticut and "very few" from New York until after the forts had fallen. Washington's hope that Putnam would "draw in such a Force of Militia, as will effectually secure your post against any attempt from New York" proved to be only a hope.[44]

Heeding Washington's advice not to be caught too far to the south in the face of Clinton's naval assets, Putnam conceded Tarrytown and disposed his forces in the Highlands so he could react to threats on either side of the river. To Washington he argued that he had lacked the force to react to the landing at Tarrytown, which was probably just as well, considering Sir Henry's plan. He focused his personal attention on, and weighted his defenses around, Peekskill and the heights northward, feeling "it Impractable to quit the Hightes (which we had then Possession off) & Attact the Enemy, Brigadier General Parsons & myself went to Reconnoitre the ground near to the Enemy." Clinton's feint and the actions of Hotham's ships on the morning of 6 October misled him when they seemed to threaten first Fort Independence and then Verplanck's Point with "an apparent design to land Troops." He and Parsons removed themselves from the decision point by reconnoitering toward Peekskill, realizing too late in the early morning fog that Clinton was loose on the west bank of the river. Putnam thus left General George Clinton

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Cameronians, 148; Moorsom, *Fifty-Second Regiment*, 16; Woollright, *History of the Fifty-Seventh*, 64-65; Wylly, *History of the Manchester Regiment*, 65; Wheater, *Royal Regiment of Fusiliers*, 72; journals, 5 Oct. 1777, *Mercury*, *Dependence*, and *Diligent*, Hotham to Admiral Howe, 9 Oct. 1777, and Clinton to General Howe, 9 Oct. 1777, Clark et al., *Naval Documents*, 10:42–43, 96, 98; Clinton to Howe, 27 Sept., Sir Henry Clinton Papers on microfilm, USMA Library; "Plan for assault on Highland forts," 6 Oct. 1777 (24:41), Sir Henry Clinton Papers, Clements Library.

44. Washington to Putnam, 11 Aug. 1777, and Washington to Putnam, 22 Aug. 1777, Washington, *Writings* (ed. Fitzpatrick), 9:56, 115; "Genl. Putnam, No. 25," "Court of Inquiry."

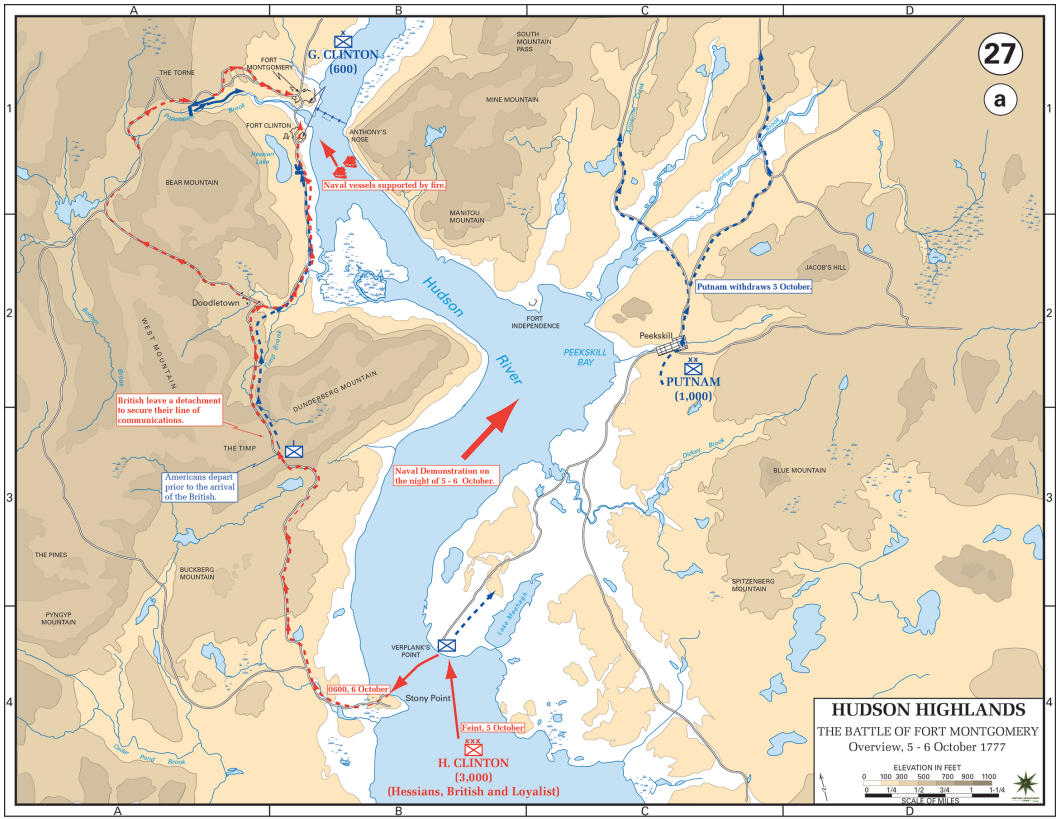

Image 6.6: *Hudson Highlands: The Battle of Fort Montgomery.* (Courtesy of the United States Military Academy Digital History Center, Department of History.)

to fend for himself on the Popolopen since the forces that he sent to reinforce the beleaguered garrisons would not be able to get over the river in time.[45]

Under the command of Governor (Brigadier General) George Clinton, the Continentals, militiamen, and Levies of Orange and Ulster counties defended Forts Clinton and Montgomery. Colonel Dubois had estimated that it would take 2,000 men to defend the forts; instead, Governor Clinton's garrisons were outnumbered three-to-one by Sir Clinton's 2,100 attackers. The 5th New York had 29 officers and 268 rank and file at the time of the attack. One hundred artillerymen in Colonel John Lamb's Artillery and 300 militiamen from Orange and Ulster counties—Lieutenant Colonel James McClaughry's New Windsor Regiment, Colonel William Allison's Goshen Regiment (23 officers and 242 rank and file), and Lieutenant Colonel Elihu Marvin of Jesse Woodhull's Cornwall Regiment—rounded out the garrison. McClaughry was a member of the Committee of Safety for the precinct of New Windsor; Allison was a member from Goshen of the first provincial convention of New York from 1775 to 1777; and Woodhull was a member of the New York State Senate from 1777 to 1781. Colonel Lewis Dubois, commander of the 5th New York Regiment, Lieutenant Colonel William Smith Livingston, Webb's Additional Continental Regiment (Connecticut), and Major Samuel Logan, 5th New York commanded the three redoubts on the western face of Fort Montgomery with some 350 men "in a single rank, behind the parapet, and were not sufficient in number to occupy those lines of the redoubts from whence opposition might have been made to the assailants." About half of Colonel Lamb's Artillerymen fired the six 32-pounders in the Grand Battery at Commodore William Hotham's naval flotilla.

Governor Clinton placed his elder brother Brigadier General James Clinton in charge of Fort Clinton south of Popolopen Creek with the remaining 350 soldiers. Lieutenant Colonel McClaughry commanded the Outer Redoubt of Fort Clinton with ninety of his New Windsor militiamen and nine artillerymen manning three 6 -pounder cannons. Captain Andrew Moody spread his other forty cannoneers around the unfinished works: "15 imediately under his Command . . . in the Fort [star redoubt] - 15 in the lower Battery - 9 in the outer Redoubt - & the remainder in the open field between the two Redoubts," manning the rest of the twelve cannons: three 18-pounders, one 12-pounder, seven 6-pounders, and one 4-pounder. The militiamen

45. Hotham to Admiral Howe, 9 Oct. 1777, and Clinton to General Howe, 9 Oct. 1777, Putnam to Washington, 8 Oct. 1777, Clark et al., *Naval Documents*, 10:42–43, 72, 96, 98, https://founders.archives.gov/?q=%20Author%3A%22Putnam%2C%20Israel%22%20Recipient%3A%22Washington%2C%20George%22&s=2111311111&r=67.



Image 6.7: *George Clinton*, by John Trumbull. (Courtesy of the Collection of the Public Design Commission of the City of New York.)

with Lieutenant Colonel Marvin of Colonel Woodhull's Regiment (16–18) and Colonel Allison's Regiment defended the rest of Fort Clinton, including the star redoubt.[46]

As Clinton and Hotham transitioned to the tactical level for the attack on the two forts on Popolopen Creek, they smoothly played their respective roles as ground and naval commanders. Hotham skillfully landed the British, provincial, and Hessian forces at Stony Point relinquishing control to the general. Once ashore, Sir Henry's plan of attack involved a two-prong advance over some twelve miles on Fort Montgomery from the west and Fort Clinton from the south. Clinton constituted under Lieutenant Colonel Mungo Campbell an advance guard of 500 regulars from the 52nd and 57th Regiments and 400 provincials under Colonel Beverley Robinson from the Loyal Americans, New York Volunteers, and Emmerich's Chasseurs; he charged Campbell to seize the pass through the Dunderberg, march behind Bear Mountain, and then attack Fort Montgomery. Clinton designated Major General John Vaughan to lead the main attack through the Dunderberg Pass and Doodletown against Fort Clinton with 1,200 soldiers from the grenadier and light infantry companies of the 7th and 26th Regiments, the fusiliers of the 26th and 63rd Regiments, one company of the 71st Regiment, a troop of the 17th Light Dragoons, and the Hessian Chasseurs. General Tryon commanded the rear guard of the 7th Royal Fusiliers and the Musketeer Regiment de Trumbach; Clinton charged him to maintain the line of communications with the navy.

Governor Clinton had ordered Major Samuel Logan with eighty 5th New Yorkers to march to the vicinity of King's Ferry to watch for a possible British landing there. After observing some forty "Boats full of Men" landing at Stony Point, he followed his original orders and returned to Fort Clinton rather than opposing Clinton's vanguard as it passed over the Dunderberg Mountain, which would have been an ideal spot for a delaying action as it was a "very narrow & difficult Passage or Defile on the Height of the Dunder Barrack." George Clinton next sent out First Lieutenant Patton Jackson with twenty regulars of the 5th New York "to observe their motion, he had not advanc'd above 3 Miles when he was ambush'd and Fired on by the Enemy's advanc'd guard." At about 10:00 a.m., General Vaughan's column next engaged fifty Continentals of the 5th New York under the command of Lieutenant Colonel Jacobus Bruyn and fifty militiamen commanded by Lieutenant

46. "Captain Rosicrans, No. 1," "2nd, Answers," "Captain Moody's of Col. Lamb's Regiment, No. 2," "Court of Inquiry"; Brink, *Militia*, 19.



Image 6.8: *North Redoubt*, by Dahl Taylor. (Courtesy of the New York State Office of Parks, Recreation and Historic Preservation.)

Colonel McClaughrey near Doodletown. The Americans withdrew to "a Stone Breast Work" at the south end of Lake Sinnipink (Hessian Lake) near the present-day Bear Mountain Inn "where they made a stand for sometime, and after retreated in Middling good order under the cover of the garrison Cannon, into the same, having expended nearly all their Ammunition."[47]

Brigadier General James Clinton assumed command of Fort Clinton at about 1:00 p.m. and prepared to defend "the south lines. . . in the best manner the number would allow, having only about 200 of the militia." Lieutenant Colonel Marvin remembered that "the works were unfinished, Part of the Breast works not half raised, that there were not half men enough in the Fort to man in a single Rank the south Lines of the Fort." [48]

Lieutenant Colonel Campbell's march to Fort Montgomery consumed the morning and afternoon to negotiate the difficult approach march from Doodletown around Bear Mountain and across Popolopen Creek. As his column approached the Torne (mountain) on Furnace Road about three-quarters of a mile from Fort Montgomery, it came under fire (eight or nine volleys) from a 3-pounder field piece under the command of Captain Ephraim Fenno, supported by Major Jacob Newkirk of the Cornwall Regiment with 70 militiamen and 20 Continentals of the 5th New York Regiment. After capturing the cannon and Fenno, Campbell's men faced the fire of a 12-pounder commanded by Lieutenant Oliver Laurence, Lamb's Artillery, "sent out about 150 paces in Order to rake aside Way by which the Enemy were obliged to pass"—enfilading fire.[49]

After capturing the cannons and pushing back the American skirmishers, Campbell began his attack at about 3:00 p.m. with the New York Volunteers, Loyal Americans, and Emmerich's Chasseurs attacking the North Redoubt, the 57th Regiment of Foot Round Hill Redoubt, and the 52nd Regiment the South Redoubt. The Americans put up a spirited defense until dark, starting with artillery fire when his forces were about 200 yards out; both sides fired repeated volleys of musketry. By 4:00 p.m., Captain Rosekrans of the 5th New York reported that the troops in the redoubts "at first gave the Assailants a regular Fire by Platoons or Divisions—but soon run into a promiscous Fire as did the Enemy—the Assailants frequently changed their ground, but still continued their Apprach."[50]

47. "Genl. [James} Clinton, No. 13," "Court of Inquiry."

48. "Lt. Col. Marvin, No. 9," "Court of Inquiry."

49. "Colonel Dubois, No. 10," "Court of Inquiry."

50. "Captain Rosicrans, No. 1," "Court of Inquiry."



Image 6.9: *Redoubt Attack*, by John H. Mead. (Courtesy of the New York State Office of Parks, Recreation and Historic Preservation.)

After Campbell rebuffed Lieutenant Colonel Livingston's demands that he surrender his forces in a parley, he triggered the main offensive at about 5:00 p.m. with his final attack on Fort Montgomery. Although Campbell died from a stab wound by Captain Rosekrans or was shot as he entered the works leading his 52nd Foot, the momentum of his assault carried Fort Montgomery in about forty-five minutes. Captain-Lieutenant Machin of Lamb's Artillery observed that "the Enemy came up several times within 80 paces of the Fort & were broke & repulsed, finally they formed a Solid Column from the Centre by files under Cover of a Rock at about 100 Paces from the Fort and in that form run up the Parapet—upon which everyone got himself off as well as he could." Throughout the combat, Governor Clinton, according to Machin, disposed "his men in the best manner possible—and exert himself to the utmost for the defence of the Post—that in passing from one Redoubt to another as he did several times, he was exposed to ye heaviest Fire without any Cover." Colonel Dubois emphasized the tenacious defense: "The Enemy advancing after two or three Repulses finally carried the forts but not till after it was dark—the Garrison did not quit their Redoubts till the Enemy had a strong Column between the Redoubts—and untill they were drove out at the Point of the Bayonet." Major Jacob Newkirk of the Cornwall Regiment observed that "after the two upper Redoubts were carried; & the Militia were coming out of the south Redoubt just as the dusk of the Evening—the Governour met them, & obliged them to return into the Redoubt, & exhorted them upon hearing a Shout [from the British] at Fort Clinton, to keep up their Courage, & not quit their Post." As night was falling, Governor Clinton's brother and subordinates advised him that "in Consideration of the important Place he filled in the state to secure his Retreat from the Fort in Time—but that he protested he would not leave the Fort as long as he had a man remaining with him—that the Governor narrowly escaped after the Enemy were in full Possession of all the Redoubts."[51]

51. "Captain Rosicrans, No. 1," "Capt. Thomas Machin of Colonel Lambs Artillery, No 5," "Lt. Saml. Inglis of Colonel Dubois Regiment, No. 6," "Major Newkirk of the Militia, No. 11," "Brigadier General James Clinton, No. 13," "Court of Inquiry"; eyewitness account of Black Continental Benjamin Latimore, 5th NY, Department of Veterans Affairs, U.S. National Archives, https://catalog.archives.gov/id/196154753. James Clinton identified the fifty men commanded by Lieut. Col. McClaughery as being from Col. William Allison's Goshen Regiment; for a discussion of the route of march of the British force from Stony Point to Doodletown, see Richard J. Koke's unpublished paper, "The March of the British Army from Stony Point to Doodletown, October 6, 1777," 1937; John Hills and William Faden, "Plan of the attack of the Forts Clinton & Montgomery, upon Hudsons River, which were stormed by His Majesty's forces under the command of Sir Henry

After Clinton had waited "a favorable Moment" following the start of Campbell's fight, he ordered Vaughan to launch his main attack using the bayonet only across an open area of 400 yards filled with abbatis and covered by the fire of ten cannons. The march overland had prevented the use of artillery, so this attack was made with courage and discipline by the troops and what cannon fire Wallace could bring to bear from his galleys. In the face of a fierce cannonade from the American galleys, frigates, and sloop to the north of the chain and cable, the *Dependence* fired ninety-five twenty-four-pound shot and six four-pounders against these vessels and the forts.

As undermanned and as incomplete as its sister, Fort Clinton fell despite the gallantry of her defenders at about the same time as Robinson completed his work at Montgomery. Captain William Faulkner of the New Windsor militia testified at the Court of Inquiry that cannon fire from the outer redoubt

> continued till they [British] approached within about 40 Rods [220 yards] of the Redoubts—here they divided into two Parties one of which marched to fort Clinton the other to the outer Redoubt the latter party by the means of a hollow Way, came within ten or 12 Rod [66 yards] before they could be a fired upon, then a warm fire ensued between them & the Redoubt—& obliged them to retreat into the hollow where they remained—till fort Clinton was carried—as soon as Fort Clinton was carried, a Party came from thence to attack ye Redoubt, who were at first repulsed; but reinforced, they returnd to the attack, the Redoubt kept up the Fire till the Enemy were within the walls, when every One made his Escape as he could.[52]

Lieutenant Colonel Marvin observed, "The garrison kept up on incessant fire with Artillery & Musquetry," and "General James Clinton did every thing to encourage the Militia to persevere in the Defence of the Fort & that he did not see the least backward movement." He testified "that none of the Garrison left their Posts, untill the Enemy were within their walls & upon their backs, then everyone made his Escape in the best manner he could."[53]

One of the King's soldiers would wound James Clinton with a bayonet as he tried to link up with his brother in Fort Montgomery. They both survived,

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Clinton, K.B., on the 6th of Octr. 1777," London: Wm. Faden, 1784, Library of Congress, http://hdl.loc.gov/loc.gmd/g3804f.ar119600.

52. "Capt Falkner of Col Claughary Reg., No. 3," "Court of Inquiry."

53. "Lt. Col. Marvin, No. 9," "Court of Inquiry."

escaped, and rallied the survivors in an attempt to oppose the British offensive up the Hudson that burned New York's capital, Kingston.

By 8:00 p.m., Sir Henry Clinton knew that he owned the two forts with their supporting redoubts for a price that he reported of some 40 killed and 150 wounded. At 10 p.m. he and Hotham also had the pleasure of observing the blazing *Montgomery*, torched by its crew to prevent it from falling into British hands; the *Shark* and the *Congress* would suffer similar fates near Fort Constitution. The *Camden* would run aground and become a British prize. American casualties numbered 70 killed, 40 wounded, and 237 taken prisoners, more casualties than at the battle of Bemis Heights on 7 October (150). Captain Henry Pawling, 5th New York, "saw the enemy carrying our dead across snaggy poles naked as they were born head and heels hanging down, also saw the enemy walking about the fort with our clothes selling them to each other,—this day passed very tedious."

Brigadier General Samuel Parsons's Brigade of the 2nd (Webb), 3rd (Wyllys), 6th (Return J. Meigs) Connecticut and Henry Sherburne's Additional Continental Regiments had not been able to cross the Hudson in time to alter the outcome of the battle. Some 270 militiamen of Colonel Henry Ludington's 7th Dutchess County Militia Regiment were at Tarrytown and would be joined by about 4,000 militiamen from Connecticut. With the forts reduced, the ships dispersed, and General Putnam and his forces withdrawing northward to protect the pass to Fishkill, over the next few days, General Clinton would complete his control of the Highlands. Sir Henry would boast to General Howe, "There is not a Rebel Gun now left in the Highlands," as he had captured sixty-seven cannons, completing the first half of his mission for the operation.[54]

54. Hotham to Admiral Howe, 9 Oct. 1777, Clinton to General Howe, 9 Oct. 1777, journal of *Dependence*, 6 Oct. 1777, G. Clinton to NYCS, 8 Oct. 1777, Clark et al., *Naval Documents*, 10:42–43, 47, 70, 96, 98–99; Clinton to Howe, 9 Oct. 1777, Sir Henry Clinton Papers on microfilm, USMA Library. Col. Beverley Robinson reported that 18 soldiers under his command were killed, 55 wounded, and 3 missing; he captured "180 odd" of the "Enemy" and ordered his own dead buried, and 42 Americans who died within Fort Montgomery and 2 outside buried as well ("A General Return of the Killed and Missing, att Fort Montgomery, 7th Octr 1777"): 1 Colonel, 3 Lieut. Colonels, 3 Majors, 4 Captains, 9 Lieutenants, 3 Ensigns, 1 A.D.Q.M. Genl., 1 Director Ordnance, 1 Quarter Master, 237 Privates, including Col. William Allison, Lieut. Cols. William Livingston, Jacobus Bruyn, James McClaughry, Majors Samuel Logan, Stephen Lush, and Zachariah DeBois; Joshua Loring, Commissary for Prisoners, "Return of Prisoners taken at Fort Montgomery and received in New York October 12th 1777" (25:4), Sir Henry Clinton Papers, Clements Library. "Capt. Hodge's Evidence, No. 7" "Colo Ludingtons Evidence, No. 8," "Brigadier General Parsons Information, No. 12," "Court of Inquiry"; British and American casualties are based on unpublished studies by Todd Braisted from "Return of Prisoners taken

With Putnam out of the immediate area, Clinton moved to take the remaining fortifications on the east side of the Hudson and at Martelaer's Rock. The next morning (the seventh), Hotham ordered the chain and cable that blocked the river from Popolopen Creek to Anthony's Nose to be cut so that ships could make their way northward; Lieutenant Clark of the *Dependence* "sent the Master to try for a Passage Over the Chain." He reported that on the eighth at 11:00 a.m. "the Artificers cut the Chain," with the help of sailors from the *Mercury*; on that date, Clinton reported that the chain was "broke." On the ninth Hotham reported, "The chain under Fort Montgomery is already separated & in that of Polaple's." On the tenth Clinton wrote General Burgoyne that "preparations [were] made to destroy the chain." Captain Ommanney of the *Tartar* then "sent on Shore with the Commodores Master, our Carpenter, Mids[hipmen] and 20 Men to help get up the Chain and Boom, which the Rebels had Run across the River." The author of the Trumbach regimental journal reported that "they had to clear this huge, long and thick chain out of the road first thing next day." Clinton also sent a flag of truce with a "Summons" for the garrison of Fort Constitution to surrender. American soldiers fired upon the party, prompting Major General Tryon to send on the eighth the *Diligent*, *Spitfire*, and *Crane* with an expedition comprising elements of the Regiment de Trumbach and the 7th Royal Fusiliers in twenty-two flat-boats to capture the now abandoned fort and batteries. This force was supported on land by artillerists, light infantry, and Jägers.

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at Fort Montgomery and received in New-York October 12th 1777," Sir Henry Clinton Papers, Volume 25, item 4, Clements Library. Braisted also researched the number of 5th New York prisoners who enlisted in Loyalist units: "Of the 153 other ranks, 40 enlisted into the Provincial Corps; 3 were deserters from them who were returned to their corps. Of those 43, 1 deserted back to the 5th New York, 1 deserted back to the 5th New York and then returned to the Provincials, and 1 deserted back to the 5th New York, then returned to the Provincials, then back again to the 5th New York; 29 were exchanged and returned to the 5th New York, 3 of whom later deserted and enlisted in the Provincial Corps; 1 escaped and returned to the 5th New York, who had formerly been a Provincial deserter; and 1 escaped but did not return to the 5th New York. The remaining 78 missing were either killed in battle, taken prisoner and never returned, or otherwise unaccounted for." Col. Meigs had arrived at the Fort Montgomery ferry with 140 men by 7:00 p.m. as the fighting was ending; the piecemeal commitment of troops by boats at this late stage would probably have been disastrous. "Journal of Henry Pawling," *Olde Ulster: An Historical and Genealogical Magazine*, 335, https://babel.hathitrust.org/cgi/pt?id=coo.31924106169091&view=1up&seq=354. For the perspective of Loyalists, see "Court Martial of Captain Joshua Barnes, Loyal American Regiment, March 11–15, 1779 (New York)," http://www.loyalamericanregiment.org/docs/Barnes_court_martial-complete.pdf.



Image 6.10: *Burning Ship*, by John H. Mead. (Courtesy of the New York State Office of Parks, Recreation and Historic Preservation.)

> An English Officer was sent on in advance in a small boat to demand the surrender of the Fort, but when he reached the Fort, he perceived that the rebels had burnt everything up, spiked many of the guns and taken to flight, whereupon the officer hoisted the Royal flag on the blockhouse in the Fort, in order to acquaint General Tryon of the fact. All the troops were landed in the Fort, The batteries were constructed of hewn stone and 28 spiked iron guns were found in them. All the guns were broken to pieces and thrown into the water.[55]

Hotham also sent Wallace and his flying squadron up river to check the chevaux-de-frise from Plum's Point to Pollepel Island and to reconnoiter as far north as Poughkeepsie, burning stores and vessels and exchanging fire with American soldiers until 13 October.[56] Tryon played out the final act, the destruction of Continental Village beyond the abandoned Fort Independence, with Emmerich's Chasseurs, fifty Jägers, the Royal Fusiliers, the Regiment de Trumbach, and two three-pounder cannons.[57] With the Highlands now in hand, Clinton could turn his attention to the plight of Burgoyne fixed by General Gates at Saratoga.

After a short trip to King's Bridge to make sure that the command there was in sure hands, Sir Henry Clinton ordered General Vaughan to take a corps of almost 2,000 men from the 7th, 26th, and 63rd Regiments to link up with Burgoyne at Albany, if possible.[58] Hotham allocated Wallace's flying squadron, flat-boats under the command of Captain Stanhope, and thirteen transports for the troops to the expedition. Clinton ordered Fort

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55. Journals of the *Preston*, 8 Oct. 1777, *Dependence*, *Diligent*, and *Mercury*, 8–13 Oct. 1777, journal of the *Tartar*, 10 Oct., Clark et al., *Naval Documents*, 10:68, 69, 97, 100, 109, 118, 128, 143; Clinton to Howe, 9 Oct. 1777, Clinton to Burgoyne, 10 Oct., Clinton, 26 Oct., Sir Henry Clinton Papers, Clements Library. "Journal von Bose," S. 20; named for the commander at the time, Maj. Gen. Karl Levin von Trümbach, followed in 1778 by C. E. J. von Bose, https://reenactingvonbose.weebly.com. Is the chain at the bottom of the Hudson, or did it end up in Gibraltar by way of England? For the latter, see Beatson, *Naval and Military Memoirs of Great Britain*, 4:236.

56. Journals of the *Dependence*, *Diligent*, and *Mercury*, 8–13 Oct. 1777, Clark et al., *Naval Documents*, 10:68, 69, 97, 100, 109, 118, 128, 143.

57. Clinton to Howe, 9 Oct. 1777, "Return of Cannon, Stores, Ammunition, &ca Taken & Destroyed upon the Expedition up the North River October 6th 1777," for the fruits of the expedition, see Clark et al., *Naval Documents*, 10:100, 101; Clinton to Gen. Harvey, 9 Oct. 1777 (24.50), Sir Henry Clinton Papers, Clements Library; Wheater, *Royal Regiment of Fusiliers*, 72.

58. H. Clinton, *American Rebellion*, 79–80; Hotham to Admiral Howe, 21 Oct. 1777, Clark et al., *Naval Documents*, 10:233.

Montgomery (renamed Fort Campbell) destroyed and fortified Fort Clinton, renamed Fort Vaughan, with a garrison of 800 men to act as his base in the Highlands. Hotham likewise secured the line of communications with New York by stationing the *Mercury* at Pollepel Island, the *Tartar* near Fort Vaughan, the recently arrived frigate *Cerberus* (28 guns), at King's Ferry, and the *Preston* "within Signals of either."[59]

On 16 October Vaughan mounted a full-blown naval landing at Rondout Creek. Once ashore, his troops took breastworks manned by militiamen and two batteries on the surrounding heights—one of five guns and the other of nine—that had fired upon the flotilla and then marched to the nearby town of Kingston, the seat of New York's government. Sir James Wallace's naval squadron exchanged fire with the batteries and the 32-pounder cannon of the row galley *Lady Washington*, which after a voyage upriver escaped up the Rondout Creek to be scuttled by its crew. Vaughan argued that since the town was "a Nursery for almost every Villain in the Country," and since Americans fired upon him from the houses, he found it necessary "to reduce the Place to Ashes . . . not leaving a House." After Wallace's ships had provided gunfire support with canister and round shot for the landings, he used the occasion to burn "two Brigs, several large Sloops, and other Craft with all their Apparatus that was in Stores upon the Shore."[60]

With his rear relatively secure, Vaughan proceeded as far north as Livingston Manor, some forty-five miles south of Albany, burning stores, vessels, and houses as he went. That would prove to be the high-water mark of the affair. Having received word that Burgoyne had surrendered his army as well as orders through Clinton from Howe that he needed his regiments in Pennsylvania, Vaughan, now facing some 6,500 troops on both sides of the river under Putnam and Brigadier General Samuel H. Parsons, on 22 October dropped back down the river. By 26 October he had his force back at Fort Vaughan. Pursuant to Howe's orders, Sir Henry Clinton ordered Vaughan to destroy Forts Vaughan and Independence and return to New

59. Hotham to Howe, 15 Oct. 1777, journal of the *Dependence*, 18 Oct. 1777, Clark et al., *Naval Documents*, 10:174; "Journal von Bose," S. 20. For a timeline and Clinton's narratives, see "Copies of Letters and Messages &c which passed between LieutGenl Sir Henry Clinton & LieutGenl. Burgoyne between the 10th of September and the 23rd of October 1777," Sir Henry Clinton Papers, Clements Library.

60. For details of the skirmishes along Rondout Creek, see Pratt, *Account of the British Expedition*, 29–42; Vaughan to Clinton, 17 Oct. 1777, Wallace to Hotham, 17 Oct. 1777, journals of the *Dependence* and the *Diligent*, 16 Oct. 1777, Clark et al., *Naval Documents*, 10:183–84, 192–93.

York, as he had always thought that the Hudson Highlands would require "an Army"—Howe's army—to be "kept" because of the "strong Country." That did not even factor in the Royal Navy ships that would be required to patrol the Hudson. By 10 a.m., the *Tartar* joined the *Mercury* and the last transports and slipped down the river.[61] But for the recriminations, Clinton's Hudson River campaign had come to a close; British forces would not again threaten the Hudson Highlands until the operation on King's Ferry in May–June 1779.

As had been the case in the operations toward the end of the Seven Years' War, the British had proven in the Hudson River Campaign of October 1777 that they were masters of the joint art. With landings in Elizabeth Town, Tarrytown, and Verplanck's Point, Clinton had used operational surprise, deception, and maneuver to outsmart both George Washington and Israel Putnam. These operations and the ones at Stony Point and Rondout Creek had used sophisticated procedures to facilitate rapid landings. Providing lift, gunfire, and support, Hotham's flotilla had executed Clinton's daring plan to perfection. Sir James Wallace had reconnoitered and ranged the river with his flying squadron, upsetting the ability of the Americans to respond. Once ashore, the mixed British forces had had sufficient combat power to overcome the forts and batteries that they had come to seize. Despite these successes, all would ultimately be for naught as Clinton felt the necessity to withdraw his "small Corps" back to Manhattan. At the strategic level, both Clinton and Burgoyne, and even the Howes in the long run, ultimately had failed. They not only had not ended the war, but they had also breathed new life into the Revolution.

For the Americans, only General Horatio Gates had produced victory at Saratoga. Washington had resisted mightily at the Brandywine, but Philadelphia nonetheless had fallen to Howe; he would lose again at Germantown. For George Clinton and Israel Putnam and their soldiers and sailors, the Hudson River Campaign had been an unmitigated disaster. At the operational level, Putnam had played to Clinton's every move. Tactically, bravery had proven inadequate to carry the day at Forts Montgomery and Clinton. Lacking the proper resources, the Americans, despite extensive fortifications, had succumbed to a superior British plan and overwhelming combat power. The cooperation between Hodge's ships and Governor

61. Vaughan to Clinton, 26 Oct. 1777, journal of *Tartar*, 26 Oct. 1777, Clark et al., *Naval Documents*, 10:299, 300; "Conversation intended with S.W.H (Sir William Howe?)" by Clinton, 11, 13 July, "Conversation with G. H., New York," Sir Henry Clinton Papers, Clements Library.

Clinton's forces, while commendable, was rudimentary, a particularly dangerous situation in such an inferior force. George Clinton provided the epitaph for the affair: "I impute all however to a bad Head, no part to a wicked Heart."[62] Had the British Generals Burgoyne and Clinton been more aggressive, this "bad Head" might have cost the Americans the war as the British gained control of the Hudson. Luckily, even as the works and barracks of the Highlands smoldered, the British withdrawal back down the Hudson offered Washington's forces another chance to vindicate the earlier vision to block the Hudson at the West Point.

62. G. Clinton to McDougall, 13 Nov. 1777, USMA Library.

CHAPTER 7

"OLD PUT," COLONEL LA RADIÈRE, AND THE CONTINENTALS ARRIVE AT WEST POINT

Over two years of effort and precious resources in the Hudson Highlands had gone up in smoke or fallen beneath of the tools of British soldiers as Sir Henry Clinton withdrew his forces back down to New York City at the end of October 1777. General Israel Putnam's disastrous defense with far too few soldiers at his command had shown that more than physical barriers were necessary to guard the Hudson River. A competent commander with an adequate force was an ingredient that General Washington could not ignore again at his and the cause's peril. Yet, in his war of posts, for the Highlands Department to work as a post and a pivot upon which he could maneuver the Continental Army, Washington needed a fortress that was defensible or at least appeared to be. The consequences of Bernard Romans's marginal military engineering expertise and the crucial need for the skills exemplified by William Smith and Rufus Putnam emphasized the new nation's need for more trained military engineers.

In late 1777 and early 1778, because Sir Henry Clinton had abandoned the Highlands, the Americans would have another opportunity to succeed in maintaining the upper hand in this seat of war that the British would never completely abandon. Would the west point of the Hudson finally prevail as the primary site upon which a fortress would be built, and could American commanders with the assistance of European engineers plan and build a fortress there? By the summer of 1778, Major General Alexander McDougall and an international team of engineers, including Colonels Louis-Guillaume-Servais des Hayes de la Radière, Rufus Putnam, and Thaddeus Kościuszko, along with Captain-Lieutenant Thomas Machin, would complete the first steps to fulfill the original vision of Christopher Tappen and James Clinton

to transform the natural benefits of Martelaer's Rock and its facing point into a viable bastion.[1]

The need for competent engineers meant that the Continental Congress had to attract Europeans to the American cause. Although numerous soldiers of fortune sought high pay and rapid promotion, qualified engineers even from Europe were not so plentiful. To fill that void, the Continental Congress directed Benjamin Franklin, Minister to France, "to secure skilled engineers, not exceeding four." Not yet openly allied with the United States, France selected Major Louis Le Bègue de Presle Duportail to go to America and serve in the Continental Army. Duportail chose three others to accompany him: Captain La Radière, Captain Jean Baptiste Joseph de Laumoy, and Lieutenant Jean Baptiste de Gouvion. Franklin had agreed that they would enter the Continental Army one grade higher than their current French rank. To make duty in America even more agreeable, the French promoted all four as they departed France.

Two instant promotions solely for going to America no doubt influenced their rather mild reception at Philadelphia in July 1777, but that was not all. Duportail immediately requested another promotion for himself and his comrades. Congress refused, but that did not stop the Frenchmen from constantly lobbying for promotion. Receiving instructions from General George Washington to report immediately for duty in the Highlands Department, La Radière threatened to return to France in January if he was not promoted to colonel. In fact, all four contemplated returning home.[2]

In November, Congress asked Washington for advice. Avoiding the promotion issue, Washington reminded the legislative body that there was a shortage of trained engineers and he expected the Frenchmen, because "they have been regularly bred in this important branch of War [engineering]," with "their talents," to do "essential service."[3] Shortly thereafter La Radière became a full colonel, and his three companions received a promotion of one grade as well. La Radière was already in the Highlands, having arrived about the time that Sir Henry Clinton withdrew. At thirty-three years of age, La Radière had risen through the ranks as an engineer. He had been

1. Cubbison, *Historic Structures Report*.

2. Goldfrank, *French Engineers*; P. Walker, *Engineers of Independence*; Kite, *Duportail*, 2, 19, 31, https://archive.org/details/brigadiergeneral0000eliz/page/2/mode/2up; Kite included the correspondence from Duportail to Benjamin Franklin; Radiere has been changed to La Radière because that is the way he personally signed his letters; see La Radière to Col. William Malcom, n.d. [1778], Mass. HS.

3. Washington to Laurens, 10 Nov. 1777, Washington, *Writings* (ed. Fitzpatrick), 10: 35.

born in Orbec, Normandy, France, on 28 August 1744. He was a student and second lieutenant at the engineering school at Mèzières in 1765 and was commissioned a lieutenant in the regular engineers on 1 January 1766, assigned to the province of Lorraine. He was promoted to captain at Metz on 29 September 1775.[4]

Sir Henry had razed as many of the buildings and works in the Highlands Department as he could as he pulled his forces back to New York City. When American forces reoccupied the area, they faced the task of either rebuilding the old fortifications or beginning anew and avoiding their earlier mistakes. While the latter opinion prevailed among the officials responsible for resecuring the Highlands, it would not be long before they replayed the charades of 1775–1777. Israel Putnam, instructed by Washington to ask New York and Connecticut militia for assistance in repairing Forts Clinton and Montgomery, conducted a reconnaissance with key officers of the ruined Highlands fortifications on 5 November 1777.

Based on the inspection, the consensus of the officers, except for La Radière, was to forget the Twin Forts and fortify West Point "immediately" instead. Colonel Hugh Hughes, who was deputy quartermaster general for the Continental Army, wrote to Major General Horatio Gates from Fishkill on 6 November, "the General [Putnam], Governor [George] Clinton, & General James [Clinton], an Engineer [La Radière], and your Hblst [Humble servant], were at the Forts Yesterday, viewing the River, Bluffs, Points, &c., in order to erect some further Obstructions. . . . The Boom will be near Fort Constitution, & a Work on the West Shore to defend it."[5] Putnam explained the rationale to Washington on 7 November 1777:

> Governor Clinton and myself have been down to View the Forts, and are both of opinion that a Boom thro' across at Fort Constitution, and a Battery on each side the River, would Answer a Much better purpose than at Fort Montgomery, as the Garrison would be Reinforced by Militia, with More expedition and the Ground much more Defencable.[6]

4. Bodinier, *Dictionnaire des officiers généraux*, under "Des Hayes de la Radiere."

5. Hughes to Gates, 6 Nov. 1777, Gates Papers, on microfilm, USMA Library; also in Boynton, *History of West Point*, 48.

6. Putnam to Washington, 7 Nov. 1777, Washington Papers, Ser. 4, Reel 45, 168, USMA Library; also Founders Online, https://founders.archives.gov/documents/Washington/03-12-02-0147; Sparks transcribed the last word as "definable," *Correspondence*, 2:30.

Governor George Clinton was more explicit in a letter sent to General Gates from New Windsor on 24 November in which he mentioned the chevaux-de-frise on the Plum Point–Pollepel Island line in conjunction with West Point:

> I know of no other Method of obstructing the Passage of Hudsons River, but by Cheaveux De Frize, Chains, & Booms, well defended by heavy artillery & strong Works on the shore. The former is impracticable at any Place lower down, than where the present are, near this Place [Plum Point–Pollepel] and even there the River is rather too wide to admit of their being properly defended, They may however when Compleated be a Very considerable obstruction; this with a Chain or Boom at a Part of the River called the West Point where it is quite narrow & the Wind owing to the Crookedness of the River very uncertain, with proper Works on the shore to defend it, and Water Batteries calculated to annoy shipping would in my opinion perfectly obstruct the Navigation.[7]

Clinton's assessment was not to be taken lightly as it was born of practical experience gained in the French and Indian War and over two years of service in the Highlands.

Since La Radière opposed Putnam's decision to fortify West Point, Putnam granted him more time to continue his investigation of possible fortification sites along the river. During early January 1778 La Radière presented Putnam with a detailed staff study that laid out the relative advantages and disadvantages of Fort Clinton and West Point. Based upon his own conclusions, his goal was to refortify the hill where Fort Clinton had been destroyed. La Radière, schooled in the procedures for a "regular Siege," chose Fort Clinton "with the Eye of the Engineer," in Washington's words, as the better site to withstand such a classic attack.[8] To have based his judgment on a British plan to resort to a siege may have made his most important argument the most misleading part of his assessment: to date the British

7. George Clinton to Gates, 24 Nov. 1777, Gates Papers, NYH.

8. La Radière to Putnam and the Council of War, "plan of defence for Hudsons River," 2 Jan. 1778, Library of Congress, www.loc.gov/item/mgw445181/; La Radière to Washington, 13 Jan. 1778, Washington Papers, Ser. 4, Reel 46, USMA Library, also Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0187; for a summary of the main arguments, see, La Radière, 13 Jan., in Kite, *Duportail*, 86–87, 88. Washington to La Radière, 25 Jan. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0302.

had relied upon assaults and maneuver rather than sieges to take Forts Washington, Lee, Ticonderoga, and even Montgomery and Clinton.

As to the actual fortification itself, common sense in construction was as important as mathematical theory in the design. Vauban, as the master to be emulated, had emphasized flexibility and sought to maximize the use of terrain, which he considered an integral part of every fortification. The fortification, in a sense, became an extension of the terrain on which it was built. The general trace was selected after careful study of the ground, and the bastions were located to provide mutual support by fire and depth to the defense. To reach the curtain or main rampart, the attacking force had to pass between the bastions. In his later years, Vauban had tended to deemphasize massive bastions and preferred detached outworks that performed the same function and were still part of the main fortification but created even greater depth to the defense. By placing some works in advance of the fortress's main rampart, the defenders could keep the enemy artillery farther away for a longer period.

While La Radière clearly preferred Fort Clinton to West Point, he indicated in his "Sketch" that he had taken Vauban's principles into consideration as he designed the initial fortifications at West Point. His trace of the fort fit into the northeastern corner of the Plain where he could take advantage of the terrain there and guard the chain that he knew would be key to blocking the river. His fortress would be an extension of the cliff that rose imposingly 161 feet from first the water and then the shelf immediately below. He oriented the bastion toward the most likely avenue of approach by the British from the west-southwest. Finally, he planned water batteries to protect the chain against direct attack and a square redoubt to the north to over-watch what would become the Chain Battery below.[9]

La Radière nonetheless persisted in his support of the old site at Popolopen Creek. He still preferred to make the old Fort Clinton the new works, basing his opinion on the degree of difficulty with which the British would have to conduct their formal siege operation. He argued that the rocky surface and short distance between the ruins at Fort Clinton and the foot of adjacent Bear Mountain would not allow digging of the vital parallel and approach trenches. At West Point, however, any fort built at the first turn in the river would be susceptible to siege operations across the level

9. La Radière, "Sketch of Fort Arnold and Water Batteries at West Point," n.d., in McDougall Papers, Reel 2, NYH. This may be the "Single Sketch of my plan" forwarded with his "plan of defence" in his letter to Congress, 13 Dec. 1777, Papers of the Continental Congress, USMA Library, M247, reel 101:189.

plain that stretched over 600 yards to the southwest. As far as La Radière was concerned, the hill where old Fort Clinton had been located was the only logical place to prepare for the classic siege against a major fortress that he expected.[10]

Israel Putnam, uncertain after receiving the French engineer's report, went to Fishkill for Governor George Clinton's advice. Clinton thought La Radière "deficient in point of practical Knowledge; without which altho possessed of ever so much scientific I need not mention to you sir, how unfit he must be for the present Task, the Chief Direction & Management of which too requires a Man of Business & Authority." The vivid memory of the all-too-recent debacle at the Twin Forts in October must have haunted the Governor. He told Putnam, "I have already given my Opinion in favour of West Point & I have hitherto heard no sufficient Reasons to change my Sentiments."[11]

"Old Put," never a very decisive individual, while supporting the assessment of Governor Clinton and "every Genl Officer," requested a committee of the New York Convention to decide the issue since he considered La Radière "an excellent paper Engineer"; Brigadier General Samuel Parsons, as acting commander, wrote that "Col. La Radiere finding it impossible to compleat the Fort and other Defences intended at this Post in Such Manner as to effectually withstand the Attempts of the Enemy to pass up the River early in the Spring, and not choosing to hazard his Reputation on Works erected on a different Scale, calculated for a Short Duration only, has desird Leave to wait on your Excellency & Congress which I have granted him." He did acknowledge that he was "a Gentleman of Science & Knowledge in his Profession, and dispos'd to render Us every Service he is able to do." At the same time, Putnam recognized that the Frenchman's skills were also delaying the construction of the fortifications: "I have directed the Engineers to Lay out the Fort Immediately—but he seemes greatly disgusted, that every thing does not go as he thinks proper, even if Contrary to the Judgment of every other person."[12] At his request, the New York Provincial Convention

10. La Radière to Putnam, "plan of defence," 2 Jan. 1778, La Radière to Washington, 13 Jan., Washington Papers, LOC.

11. Clinton to Putnam, 7 Jan., Putnam to Clinton, 13 Jan., Clinton to Gates, 5 Feb. 1778, George Clinton, *Papers*, 2:653, 692, 712.

12. Putnam to Washington, 13 Jan. 1778, Washington Papers, Ser. 4, Reel 46, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0190; also in Kite, *Duportail*, 85; Brig. Gen. Samuel Holden Parsons to Washington, 7 March, Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0070.

on 8 January 1778 created a seven-man committee to confer on "the necessary works to be constructed for the defences of the passes in the Highlands." Meeting with Putnam and James Clinton, the committee heard La Radière's argument and then recommended that a commission of five "view the several passes on Hudson River, with the generals and other officers, and advise in fixing the places where such fortifications should be erected."[13]

The final four-man New York Commission—Associate Justice of the Supreme Court of Judicature of New York Jonathan Sloss Hobart; New York State Senator Henry Wisner; Colonel John Hathorn, 4th Regiment, Orange County Militia; and Colonel Zephaniah Platt, Dutchess County Militia—chose West Point over Fort Clinton as the site for the next generation of fortifications and obstacles in the Highlands Department. Their report dated 14 January 1778, while not as methodical as La Radière's had been, considered his major issues and even accepted some. First, the men explained the relative merits of the former site of Fort Clinton and found some fundamental problems that had been borne out by the experience of last October. The location itself remained vulnerable to an enemy attack because if the enemy could use the mountain passes "through which they marched to the attacks of forts Montgomery and Clinton, it would be extremely difficult, if not impossible, for the militia of the country to raise the seige." Nearer to the site itself, "the eminences and broken grounds within a short distance of the fort, would render it impossible for the garrison to resist a general assault for many hours together."[14]

Next, the committee considered the availability of materials to rebuild the fort. Topsoil was thin on the rocky hill south of the Popolopen, reducing the availability of earth for the ramparts; this "would reduce the engineer to the necessity of erecting his works entirely of timber, which must be brought to Pooploop's kill in rafts, and from thence drawn up a steep and difficult road to the top of the hill." Because there was no appreciable bend in the river comparable to the S-shaped curve at West Point, the chain would be vulnerable to being rammed by British men of war, receiving "the whole force of the ships coming with all the strength of tide and wind on a line of three or four miles" from the Dunderberg up the Horse Race by Salisbury

13. Minutes, 8, 9 Jan. 1778, committee report, 14 Jan., 1778 Egleston, *Life of John Paterson*, 185–87; USMA, *Centennial of the United States Military Academy*, 1:152–53; Boynton, *History of West Point*, 52–55. Of the original seven delegates, only Colonel John Hathorn and Mr. Henry Wisner actually contributed to the report, committee report, 14 Jan. 1778, George Clinton, *Papers*, 2:679

14. Committee report, 14 Jan. 1778, George Clinton, *Papers*, 2:679.

(Iona) Island. Since the British had not found such an approach necessary in October, this remained a theory that would never be tested even at West Point. At any rate, batteries on both sides of the river would help to keep enemy ships at bay, minimizing the danger.[15]

For the rest of the report the committee members focused on West Point. As they had done in writing of the site at Popolopen Creek, they first acknowledged the effects of the hills and mountains on works raised on the plain above the river. Unlike at Fort Clinton, passes through the mountains were not an issue because there were "so many passes across the mountains to this place, that it will be almost impossible for the enemy to prevent the militia from coming to the relief of the garrison." As General Putnam had learned to his dismay, the commander at West Point would need "a body of light troops, to consist of at least two thousand effective men, be constantly stationed in the mountains, while the navigation of the river is practicable, to obstruct the enemy in their approach by land." The great depth that such a force added to the defense might have altered the outcome at Forts Montgomery and Clinton had Timp Pass on Dunderberg Mountain been closed to the British. The committee, therefore, concluded that defensive depth was particularly critical at West Point as the area around it had "some high grounds that would command a fort erected at West Point, at the distance of six or seven hundred yards, from which they might carry on their approaches through a light gravelly soil, so that it would be impossible for the fort to stand a long seige."[16]

The committee thought that West Point had more to commend it from an engineering standpoint. They noted that the site had "plenty of earth. The timber may be brought to the spot by good roads from the high grounds at the distance of one to three miles." Additionally, they concluded that the river here was better suited for a chain: "Three hundred feet less of chain will be requisite at this place than at Fort Clinton. It will be laid across in a place where vessels going up the river most usually lose their headway. Water batteries may be built on both sides of the river for protecting the chain and annoying the ships coming up the river, which will be completely commanded from the walls of the fort."[17] At this stage both the engineer and the commission were thinking only about a fortress, water batteries, and a chain as the major components of Fortress West Point.

15. Committee report, 14 Jan. 1778, George Clinton, *Papers*, 2:679.

16. Committee report, 14 Jan. 1778, George Clinton, *Papers*, 2:679.

17. Committee report, 14 Jan. 1778, George Clinton, *Papers*, 2:679.

La Radière, however, did not accept the commission's conclusions lightly. Writing to Congress, to Washington, and to Duportail, he declared the decision a serious mistake.[18] Washington resolved the conflict by writing to La Radière on 25 January 1778, stating, "As the Majority of the Council were for erecting the new works upon West Point, in preference to the place upon which Fort Clinton was built, I desire that they may be carried on with all dispatch."[19] In a letter of the same date, Washington reminded Putnam of the importance attached to the defense and that he should proceed immediately. The matter was officially closed. Unsuccessful, La Radière accepted his fate, traveled to West Point, and prepared plans for the fortifications at the site Washington had set, which would include a chain.

Already three months had elapsed since the British had departed the Highlands and initial construction plans were developed. During that time Washington's desire to use the militia as a labor source proved futile. With the British back in New York City and in Philadelphia, the emergency that had required calling out the militia was over. As winter approached, the farmer-soldiers directed their thoughts and efforts toward home.[20] Even Putnam was more interested in striking back at the British than in building forts in the Highlands. Lieutenant Colonel Alexander Hamilton, an aide to Washington, arrived in New Windsor on 9 November to expedite the movement of reinforcements from the Northern Theater to General Washington at Philadelphia.

Although Putnam had agreed to send some troops, he had given orders to none to move. Hamilton reported, "Governor Clinton has been the only man who has done anything . . . but for want of General Putnam's cooperation has not been able to effect it [sending reinforcements southward]." Since he was already in the area, Hamilton inspected the works at West Point and informed Washington about the lack of progress: "I fear, unless you interpose the works here will go on so feebly for want of men, that they will not be completed in time. . . . Governor Clinton will do every thing in his power.

18. La Radière to Washington, to Mass. Congressman James Lovell(?) in French, the substance of which was intended for the President of Congress, 13 Jan. 1778, Washington Papers, Ser. 4, reel 46, LOC; in his letter to Washington, he mentions writing to Duportail; also see, Kite, *Duportail*, 85, 88.

19. La Radière to Washington, 13 Jan. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0187; Washington to La Radière, 25 Jan. 1778, Washington, *Writings* (ed. Fitzpatrick), 10:348–49; Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0302; Kite, *Duportail*, 81–89.

20. Palmer, *River and the Rock*, 134.

I wish Genera(l) Putnam was recalled from the command of this post, and Governor Clinton would accept it. The blunders and caprices of the form(er) are endless."[21] Most New Yorkers harbored ill feeling toward Putnam. After all, as commander of the Highlands Department, he had failed to determine Henry Clinton's true intentions in October and had not come to the assistance of Forts Clinton and Montgomery in time to avoid their loss.

Congress precluded any action by Washington. Already on 3 November 1777, it had decided that the commander in chief would recall Putnam and expand Major General Horatio Gates's Northern Department to include the Hudson Highlands. Not knowing that the last British vessel had departed the Highlands and returned to New York City on 28 October, Congress showed how critical it judged the New York's main river to be by its determination "to regain the possession of the forts and passes of the North or Hudson's River, and to secure the communication thereof" by changing commanders there from Putnam to Gates. It gave General Gates the authority "to order such a number of gallies, gunboats, fire-rafts, chains, cassoons, and chevaux-de-frise to be provided, and such fortifications to be erected, for obstructing and keeping possession of the North River, as he shall judge necessary."[22] Furthermore, it instructed Gates to "take effectual care that the fortifications . . . be not too extensive, and that each be compleated with a well, magazines, barracks, bomb-casements, &c. sufficient for a determined defence." The Congressional aim, in what really amounted to interference with Washington's command of the army, was "to accomplish the important and salutary purpose of maintaining the communication between the northern and southern states, by keeping possession of the North River."[23] Gates may have defeated Burgoyne at Saratoga, but from the perspective of the delegates to the Continental Congress, the crisis continued as long as the British held the Hudson.

Although directed to move south, Gates remained in Albany, from where he took no immediate action to begin construction in the Highlands. Washington was furious at the lack of activity during November. Writing to Gates and exhorting him to proceed immediately to the Highlands, he

21. Palmer, *River and the Rock*, 134–35; Hamilton to Washington, in Syrett, *Papers of Alexander Hamilton*, 1:347–60.

22. Minutes, 5 Nov. 1777, Ford, *Continental Congress*, 9:864–68, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0302.

23. Minutes, 5 Nov. 1777, Ford, *Continental Congress*, 9:864–68, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0302.

stressed the urgency for beginning construction.[24] On 2 December, he wrote to Putnam, whom he had left in the Highlands until Gates arrived to preserve the autonomy of the Highlands Department; in his letter, Washington first reminded Putnam of the "importance of the North river." He reemphasized the reasons:

> These facts at once appear, when it is considered that it runs thro' a whole State—That it is the only passage by which the Enemy from New York or any part of our coast can ever hope to co operate with an Army that may come from Canada; that the possession of it is indispensibly essential to preserve the communication between the Eastern—Middle and Southern States; and further, that upon it's security in a great measure depend our chief supplies of Flour for the subsistence of such Forces as we may have occasion for, in the course of the War, either in the Eastern or Northern Departments, or in the country lying high up on the West side of it. These facts are familiar to all, they are familiar to you. I therefore request you in the most urgent terms, to turn your most serious and active attention, to this very and infinitely important object.[25]

Having established the centrality of the North River to the American strategy, the commander in chief tasked his departmental commander to put his energy into the defenses in the Highlands; Putnam was to "[s]eize the present opportunity, and employ your whole force and all the means in your power for erecting and compleating, as far as shall be possible, such works and obstructions as may be necessary to defend and secure the river against any future attempts of the Enemy."[26]

"Old Put" could not misread Washington's intentions about making his priority the construction of fortifications and obstacles. His Excellency's further guidance was to call back those forces kept close to the city in expectation of an opportunity to attack the British: "I shall expect that you will exert every Nerve and employ your whole force in future, while and whenever it

24. Washington to Gates, 2 Dec. 1777, Washington, *Writings* (ed. Fitzpatrick), 10:132; Founders Online, https://founders.archives.gov/documents/Washington/03-12-02-0472.

25. Washington to Putnam, 2 Dec. 1777, Washington, *Writings* (ed. Fitzpatrick), 10:129–30, Founders Online, https://founders.archives.gov/documents/Washington/03-12-02-0473.

26. Washington to Putnam, 2 Dec. 1777, Washington, *Writings* (ed. Fitzpatrick), 10:129–30, Founders Online, https://founders.archives.gov/documents/Washington/03-12-02-0473.

is practicable, in constructing and forwarding the proper works and means of defence."[27]

While General Washington had made his priorities clear to the commander of the Highlands Department, he recognized Putnam's limitations. He therefore went a step further and asked Governor George Clinton to supervise the construction itself. Congress gave Washington that opportunity when it selected Horatio Gates to become president of the Board of War. Pleased to see Gates leave, Washington immediately turned to George Clinton as the only man in New York he could trust to raise the defenses in the Highlands Department. He told the general-governor, "[N]othing would be more pleasing to me, and I am convinced more advancive to the Interest of the States, than for you to take the cheif direction and superintendance of this business."[28] Clinton informed Washington that, while his duties as governor of New York would preclude his accepting responsibility for the fortifications, "you may rest assured Sir that every Leisure Hour shall be faithfully devoted to them & my Advice and assistance shall not for any Consideration be withheld from the Person who shall be intrusted with the Chief Direction of them."[29]

After asserting the primacy of his duty as governor, Clinton took advantage of the opportunity to argue for a "strong Fortress" at West Point. The original advocate of the fort that had borne his family name at Popolopen Creek, he now rejected any attempt to revive it, pointing out that West Point was

> the most defensible Ground and because the Navigation of the River there is more difficult & uncertain and the River something narrower than it is at the former place. A new chain should be procured (if possible) & with the Boom which is nearly completed stretched across the River. This with a Floating Battery or two & some Gun Boats I am persuaded would answer the purpose effectually and in this opinion I am confirmed as the Enemy chose to risque every Thing for the Reduction of Fort Montgomery rather than attempt passing it with their shipping while in our Possession.[30]

27. Washington to Putnam, 2 Dec. 1777, Washington, *Writings* (ed. Fitzpatrick), 10:130.

28. Washington to Clinton, 3 Dec. 1777, Washington, *Writings* (ed. Fitzpatrick), 10:136; Founders Online, https://founders.archives.gov/documents/Washington/03-12-02-0482.

29. Clinton to Washington, 20 Dec. 1777, George Clinton, *Papers*, 2:593; Founders Online, https://founders.archives.gov/documents/Washington/03-12-02-058.

30. George Clinton, *Papers*, 2:591; parts of the boom for use at Fort Montgomery survived the capture of Fort Constitution by the British in October 1777. Fort Clinton

Washington left the final decision as to the exact location of the fortifications in the Highlands Department to the local commander, Israel Putnam. Although constantly stressing the need to raise the defenses as quickly as possible, Washington never dictated the site for their construction. Saddled with the defeat on Popolopen Creek, Putnam followed all of the advice he had received and opted for a fresh start at West Point. He was prodded by Washington's directive on 25 January 1778: "I begin to be very apprehensive that the Season will entirely pass away, before any thing material will be done for the defence of Hudsons river—You are well acquainted with the great necessity there is for having the Works there finished as soon as possible, & I most earnestly desire that the strictest attention may be paid to every matter which may contribute to finishing & putting them in a respectable State before the spring." So, on the 27th, he sent Colonel Samuel Blachley Webb's Additional Continental Regiment (Connecticut) of Brigadier General Samuel Holden Parsons Connecticut Brigade from Fishkill across the ice at Fort Constitution; it was commanded by Captain John Palsgrave Wyllys in the absence of his colonel, captured in a raid against British forces in Long Island and on parole for three years. Quartermaster Sergeant Simon Giffin of the regiment described that first day:

> a cold morning but clear marched down to a place that Fort Constitution was bult on theor mad a halt marched over the Rever on the ise marched back a gain for thar was no Place to Loge theor on the West side of the Rever So we had go into the woods and mack fiers and mach ouer Beds on the snow we mad a hut that 15 of us Lay Prity worm considering the wether being so very cold.[31]

For the next several days the troops, reinforced by Colonel Samuel Wyllys's 3rd Connecticut Regiment, crossed the ice to West Point to build

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appears to have been called that only after the battle there. Since George Clinton was the governor, the fort's principal advocate, and the overall commander of the two forts during the battle of 6 Oct., he may have been honored with the name. More likely, James Clinton had a claim, since he helped to build the fort and defended it. In retrospect, the name Clinton gives due honor to the contributions of both men.

31. Washington to Putnam, 25 Jan. 1778, Washington, *Writings* (ed. Fitzpatrick), 10: 348, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0305; 27 Jan. 1778, "Giffin's Diary: The First Fortification of West Point," Sheffield Research Files, USMA Library; Sheffield transcribed and annotated the diary. See https://www.hudsonrivervalley.org/documents/d/guest/giffindiary. Wyllys to Hubbard, 16 Feb. 1778 (filed as 10 Feb.), Jeremiah Wordsworth Correspondence, The Connecticut Museum of Culture and History.

their huts. At night they returned to the eastern side of the river. By Friday, 30 January, the huts were far enough along to shelter the men, and they camped on the western side of the river. Parsons's Brigade, including Colonel Return Jonathan Meigs's 6th Connecticut and Colonel Henry Sherburne's Additional Continental (Connecticut) Regiment, would be the primary organization present to build and to defend West Point. From that day to the present, West Point has always been occupied by the U.S. Army. General Putnam shared the rigors of his troops, on one trip almost falling through the ice with tools to build huts. Drummer-boy Elijah Porter, who accompanied the general, reported,

> When General Putnam was ready to go over on the ice he called me to come to him. He then loaded me with tools for building huts and took a heavy load himself and bade me follow him, so I followed behind him; when we got about half a mile on the ice, he went on some shelly ice, began to slip about, and down he went with his load of tools and made the ice crack so that I thought he would go down, but the ice held him up, and I sprung round and Picked up his tools and loaded him up again. We then went on and arrived safe on the Point.

Putnam "took hold and worked harder than any soldier until they were all hutted."[32]

First Lieutenant Samuel Richards, who as the senior officer present marched the 3rd Connecticut over the ice that first day, recalled years later what West Point was like:

> Coming on to the small plain surrounded by high mountains, we found it covered with a growth of yellow pines ten or fifteen feet high; no house or improvement on it: the snow waist high. We fell to lopping down the tops of the shrub pines and treading down the snow, spread our blankets, and lodged in that condition the first and second nights. Had we not been hardened by two years of previous service, we should have though[t] it difficult to endure this. The pines not being large enough for logs for huts, we were under

32. Personal accounts from 27–30 Jan. 1778 can be found in Giffin, "Diary," and in Nathan Beers, "Deacon Nathan Beers' Journal 1777–1782," #789, Box 1, Folder 1, Archives and Manuscripts, Yale University Library; also in Sheffield Research Files, USMA Library. Units and commanders verified in Heitman, *Historical Register*, 82, 446; and Berg, *Encyclopedia of Continental Army Units*, 136; Elijah Porter, "Journal of a Revolutionary Soldier," Connecticut Museum of Culture and History, 36–37.

> the necessity of making temporary covers of those scanty materials until we could draw logs from the edge of the mountain and procure the luxury of log huts; this we effected but slowly, the winter continuing severe. In two or three weeks we had erected our huts, and a French engineer, by the name of La. Radier[e] arriving, the snow being removed for the site of the present main fort, the works were traced out, and parties sent out every fair day up the river to cut timber and drag it on to the ice, to be ready to float it down to the Point when the river should be clear of ice. This service was rather fatiguing to the men, but as they had a cabin to lodge in at night, and provisions served out with tolerable regularity, they thought themselves comparatively happy, though their work was incessant. Our line of huts was built just below the summit of the upper bank, that they might be partially sheltered from the northwest wind. As spring approached we set ourselves to collect the rough stone, which we found on the surface of the ground, to use in erecting the fortification. Two other regiments coming on, and Brigadier General Parsons arriving, the brigade was formed, and a regular routine of duty was established. The duty of Brigade Major devolving on me, those of us of the staff had a tolerable sized log hut erected near the center of the plain of the point. La. Radier[e], the engineer, was very assiduous in planning and laying out the Fort, and as soon as the frost was out we broke ground under his direction.[33]

Progress on the fortifications was very slow. It was difficult enough for the soldiers to build their living quarters. Conditions were difficult for American soldiers everywhere, as this was the winter famous for the terrible conditions faced by Washington's Main Army at Valley Forge. Even from Pennsylvania, the commander in chief became increasingly anxious about the work in the Highlands. In his letter to Putnam on 25 January, he again stressed the necessity of having the works ready by spring, and to La Radière he cautioned that, if he didn't get on with the work at West Point, "we shall lose the Winter."[34]

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33. Richards, "Personal Narrative of an Officer," *The United Service* 3, no. 4: 235, 361–62; also in *Centennial*, 1:154–56, https://babel.hathitrust.org/cgi/pt?id=hvd.hn4eac&seq=261.

34. Washington to de la Radière, 25 Jan. 1778, Washington, *Writings* (ed. Fitzpatrick), 10:39; also Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0302.

In early 1778, the American plan for guarding the river was uncomplicated. A chain, stretching from Martelaer's Rock to West Point, would block the river. As had been the Secret Committee's intention at Fort Montgomery, a boom placed slightly downriver would buffer the chain. Both chain and boom would lie slightly west of the first bend in the river so that a ship would have little momentum as it struck the obstacles.[35] Gunboats and floating batteries in the river would protect the two water obstacles from enemy shipping and sappers. Shore batteries would perform the same function along the banks of the river. The floating batteries would be barges or bateau with one or two cannons, while the shore batteries would occupy positions that could hold a similar number of guns and offer the crew protection from the direct fire of a British man-of-war. The shore batteries eventually constructed came to be known collectively as "water" batteries, being located close to the level of the river. Their purpose, as well as that of the gunboats and floating batteries, was to annoy any vessel that tried to turn the Point and prevent the enemy from forcing the chain. While workmen in Poughkeepsie built four gunboats, "each mounting a Thirty two Pounder in the Bow," and construction continued on the chevaux-de-frise at Pollepel Island, Putnam and his engineer would focus their initial attention on the chain and the water batteries and fort to "cover them" at West Point.[36]

Putnam faced difficult challenges in trying to make the consensus concept a reality. On 13 February 1778, prior to taking leave to attend to pressing family matters after the death of his wife, Putnam wrote that "my indispensible duty to the Public & justice to my own Character compel me

35. While neither Israel Putnam or La Radière prepared one single document as the blueprint for their concept for defense, the men committed their ideas to detailed sketches and letters to Washington. La Radière actually staked out on the ground his Fort on the Plain and three water batteries and planned for a northern redoubt. Their concept—protecting the chain—becomes clear when one looks at the sketches, memorials, letters, and comments by contemporaries as well as the committee reports mentioned previously. See the following: Clinton to Washington, 20 Dec. 1777, and Clinton to Lt. Col. Udney Hay, 17 Jan. 1778, George Clinton, *Papers*, 2:591, 679; Rufus Putnam, *Memoirs*, 75; La Radière, "Sketch"; for "Captain Champion's Plan of the Highlands—Ca.1778," USMA Library, see Appendix C.

36. I. Putnam to Washington, 13 Feb. 1778, Washington Papers, Ser. 4, reel 47, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0443; Parsons to Clinton, 15 Feb., Washington to Parsons, 7 Mar., in Hall, *Life and Letters of Samuel Holden Parsons*, 142, 143, 156, https://archive.org/details/lifelettersofsamoohall/page/n21/mode/2up; Clinton to Washington, 17 Jan., Gates, Board of War, 5 Mar., George Clinton, *Papers*, 2:679, 847–48; Putnam, *Memoirs*, 75; La Radière, "Sketch." There appears to be no evidence that floating batteries were ever used.

to point out in the most explicit manner some of the embarrassments we now experience & the great difficulties we have reason to fear in carrying on the works, which if not speedily remov'd will render their completion almost impracticable." The first problem was "the want of money in the Quarter Master Department." Without money, he could not procure construction materials in a timely manner, nor could he pay the artificers whose accounts were "nearly seven Months in Arrear." As a result, they were "dayly deserting." Lack of teams of oxen and horses and forage denied his diminishing workforce the means to transport building materials. Finally, not only was the winter hard on the soldiers who lacked "the necessary apparel," it had frozen the river, making "the Passage on & over the River exceeding Difficult." Consequently, large amounts of supplies could not reach the camp by water.[37]

On top of these "embarrassments," Putnam lacked the workforce necessary to complete the plan. The number of troops to man the fortifications and the creation of a mobile force to operate in the mountains were still unresolved issues as of March 1778. As early as 16 December 1777, "Old Put" had reminded Washington, "Works without men will answer but Little purpose." In February, he pressed again for a decision on the 5,000 troops that the commission had recommended for the post. The commander in chief, worried about keeping his army together at Valley Forge, Pennsylvania, and not having any idea where the main enemy force would be in 1778, could only rely on the local militia and the few Continentals already at West Point. Washington replied in response to Putnam's query: "With respect to the number of men, necessary for the defence of the Posts, in your charge, it is to be observed, that it will depend upon circumstances, and be relative to the number the Enemy can bring against them. . . . But it is impossible to say what number of troops, it wi[ll] be in our power actually to station in your department: This must be governed by the general amount of our strength and the strength of the Enemy."[38] The best Putnam could hope for was the brigade under Brigadier Parsons and a large force of militia whenever the British tried to move upriver.

37. Putnam to Washington, 13 Feb. 1778, Washington Papers, Ser. 4, reel 47, LOC; Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0443.

38. Putnam to Washington, 13 Feb. 1778, Washington Papers, Ser. 4, reel 47, LOC; Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0443; Washington to Putnam, 26 Feb., Washington, *Writings* (ed. Fitzpatrick), 10:515–16, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0571.



Image 7.1: "To his Excellency George Clinton Esqr. Governr of the State of New York this Map of Hudsons River through the High Lands is Humbly Dedicated by his Excellencys Most Humble Sarvant," by Thomas Machin, 4 January 1776. (Reproduced by permission of the Division of Rare and Manuscript Collections, Cornell University Library.)

Despite the difficulties, La Radière had "laid out" four water batteries and the fort on the west bank of the river. Conceived as a V-shaped redan, the first battery was just west of the West Point (now Gee's Point, the northeast tip of West Point that is the bend in the river) and faced north to cover the east-west reach. The next three started just south of the Point, faced east, and covered the approach north to the bend in the river. All four batteries could bring fire on almost any ship trying to negotiate the turn at West Point.[39]

La Radière selected the location of the battery (eventually called Chain Battery) just west of the West Point, so that fire from the cannons placed there could protect the chain that would stretch across to Martelaer's Rock. In the best of circumstances, he would have liked to be able to use ricochet fire—today's grazing fire—from that location. Ricochet fire from a weapon skims along the surface of the water or ground, "bounding from one place to another," striking anything in its path.[40] Unfortunately, since he chose a cove that would provide protection for the chain, if he placed his guns at water level to obtain ricochet fire, their fire would be unable to reach the river bend because it would be masked by small points of land between the battery and the West Point. He had to compromise and place the battery high enough to fire at the bend in the river and obtain a crossfire with the battery to the south of Gee's Point. This would still permit the balls from the cannons "to plunge into the ships."[41] The problem with plunging fire was that it had to be accurate in range in addition to deflection (aiming right or left of the target). Artillerymen's preference was for ricochet rather than plunging fire because it helped to overcome the inaccuracy of eighteenth-century artillery.[42] The realities of terrain had forced La Radière to forsake the optimal conditions.

39. La Radière's "Sketch" shows the four batteries' locations throughout the war and where their remains still stand.

40. Muller, *Artillery*, 163.

41. Muller, *Fortification*, 204.

42. The critique of the battery sites is based on a careful personal reconnaissance by the author, following in the footsteps of Donald V. Lockey while assigned to the Department of History, USMA. Map, "West point and its dependancies on the River Hudson. 1778," American Revolution, Box II, Connecticut Museum of Culture and History. Although the map does not have a month, it shows the chain to be in place at the site chosen on 10 Apr. 1778, McDougall's Diary, 10 Apr., and it shows the location of all of the fortifications agreed to by McDougall on 11 Apr. In addition, the configuration of Fort Arnold and the water batteries is extremely accurate, as well as the location of the water batteries, while an ordnance return in May shows all four water batteries with cannons in them indicating they were completed prior to the end of May. McDougall gave no additional

With his compromise, La Radière placed his cannons high enough (twenty-five feet above the level of the river) to cover the northwestern segment of the river bend and engage those ships that sailed close to the island as they turned the Point. Ships that would make their turn close to the Point could be taken under fire after they turned the bend. Moreover, the location that he finally chose did not entirely negate the advantages of ricochet fire because the battery was still low enough to approximate its effect on a target trying to run the chain near the eastern shore. Any ship testing the chain next to West Point would be so close to the battery that even smooth-bore cannon would be likely to hit it.

La Radière's solution to difficult target locations was to have a series of batteries to make up for the individual limitations of any one. He designed his second battery on the tip of the West Point to cover the blind spot that terrain created between there and his first. Located on the high ground directly above the actual Point, the second battery (to be named Lanthorn or Lantern Battery) could cover the southern approach to the bend in the river, the bend itself, and the chain. Any ship attempting to round the Point would be exposed to crossfire as it sailed between Lanthorn and Chain Batteries. In addition, the guns at Lanthorn Battery were located at the terminus of the road that had been cut from the Plain to the river to facilitate resupply. Elevated to about the same height as the battery near the chain, Lanthorn had the same advantages and disadvantages as to ricochet and plunging fire. Finally, the positioning of the battery forced any ship trying to turn the Point to do so as far to the northeast as possible to avoid the guns, which would not be ideal for taking advantage of a southerly wind. Using the wind to get a square-rigged ship through the east-west passage as quickly as possible required passing close to the Point so that the majority of the run would be from an east-southeast to a west-northwest direction. The position of the battery, however, would force a hostile ship to take a new tack or put out longboats for kedging in order to pass Fort Constitution without going dead in the water as it rounded the bend.

To the south of the future Lanthorn Battery, La Radière sited his third water battery (to be called Green or Water Battery) in the best available position near the Fort—the top of the cliff that rises out of the water near today's beacon on Duck Island. Located halfway to the level of the Plain, this battery covered most of the approach from the south, as well as the bend itself. Its

instructions for the construction of Fort Arnold, nor did he alter the plans for the water batteries in his visit of 8–11 Apr. The near completed state of the fortifications and the presence of Fort Putnam and the forts along the Lusk ridge would seem to indicate that this map was drawn in the fall.

fire would be plunging, because there was no place at water level below the eastern face of Fort Arnold for a battery to obtain ricochet fire. The terrain would allow a water-level battery farther to the south where a landing site was already in use, but this was some distance from the fort proper. He therefore designed a fourth battery, the second largest in the "Sketch" (to be Knox Battery), oriented to the east and south, to cover the landing site by fire.

Because of the water batteries' locations below the high ground of the Plain, they were vulnerable to an attack by a small body of men that might gain the heights of the Plain to their rear. To guard against such an eventuality, La Radière planned a fort at the northeast angle of the Plain overlooking the bend in the river and the West Point. It would be the primary task of this fort (named Fort Arnold in May 1778) to cover the water batteries from the rear in the event of an attack or siege. The cannons in its southeastern bastion would also be able to take hostile ships under fire as they approached from the south.[43]

In general, the concept for the defense of the Highlands was sound. There were calculated risks, however, especially considering Washington's inability to provide the 2,000 light troops required to be "constantly stationed in the mountains" and the other 3,000 necessary for the garrison. Without mobile troop units, an alternative tactic to deny the enemy access to an area was to use obstacles or field fortifications. Denied the required number of troops, facing financial problems, and working in the dead of winter, General Putnam and La Radière chose to put their efforts into a fort and batteries of timber and earth that could stand alone should the British choose to attack West Point in the spring. With few resources, they made no effort to fortify the hills west of their planned fort.

La Radière's decision to leave the hills overlooking the Plain free of redoubts or batteries meant that he was taking a calculated risk based on his twenty years of experience as a French officer and at "a military school in France."[44] As General Putnam, his commander, had pointed out to General Washington, he lacked the resources to try to do too much at once. The New York Commission, Governor Clinton, and the engineers had sold, and Putnam had accepted, a defense based on water batteries, a fort, chevaux-de-frise, a chain, a boom, floating batteries, and gunboats. The Frenchman

43. La Radière, "Sketch"; Clinton to Washington, 20 Dec. 1777, Clinton to Hay, 17 Jan. 1778, questions, Putnam to Clinton, Feb. 1778, Gates, Board of War, 5 Mar. 1778, George Clinton, *Papers*, 2:591, 679, 724–29, 847–48.

44. Copy of Samuel Richards to Maria Watkinson, 17 June 1837, Sheffield Research Files, Box 6.

had argued so passionately for Fort Clinton because he thought that a fort there would succeed under the limitations that might lead to failure at West Point. In his "Memorial" to General Putnam and "the Council of War," he had compared Fort Clinton to West Point point by point and given each place its due. While the "navigation is the most uncertain by West Point" and earth and timber were more plentiful, making it easier to build a fort there, he could raise a smaller wooden fort at Fort Clinton, covering a chain, that would require fewer men and cannons to stop a British attack "by Storm" should it come in the spring of 1778.[45]

In La Radière's judgment, a fort at West Point would have to be larger and more substantial because the landing sites along the west bank of the river, the openness of the Plain, and the surrounding hills would give the British an opportunity to use a siege. While he was confident that, with time and the proper resources, he could build a fort capable of resisting a siege and an assault, he feared that a lesser structure could not survive an operation of more than twenty-four days. His original sketch planned for a fort that had a circumference of some 800–900 yards. The clincher to him was that the enemy could safely surround a fort on the Plain and "throw Shells in it from a Hill which will be Higher than the Fort to be constructed & not further than five hundred yards from the Fort." He predicted that the shot would set the barracks and store houses afire and force the garrison to "Capitulate." Once the commanders decided that West Point was to be the site, La Radière felt that only a proper fortress could resist an attack, "[k]eep all the country from here to New York" safe, and "perhaps bar the communication of the navigation of the River between the northern & southern provinces."[46] Generals McDougall, Clinton, and Parsons sustained his judgment after touring Rocky and Crown Hills on 10 April. They "agreed it was inexpedient to make any works on those Hills, and the direction of cannon from them would be very uncertain."[47] For the time being, the fort would have to offset the surrounding high ground.

By not immediately refortifying Fort Constitution, Putnam and La Radière took a second practical risk. Although none of the recent studies had placed compelling emphasis on the river's eastern shore, the New York Commission

45. La Radière's "The Memorial of Luis de la Radière, Col° of Engineers Showing the reasons for Fortifying the Hill which Fort Clinton was in preference to any other place," 2 Jan. 1778, Papers of the Continental Congress, USMA Library (microfilm), 3.

46. La Radière's "The Memorial," 4; La Radière, "Sketch."

47. 10 Apr. 1778, McDougall's Diary, reel 2, USMA Library (microfilm).

had mentioned the need for a water-level battery on the island to cover the chain. From the very beginning, La Radière fully recognized that the defenses at West Point requiring a chain "perhaps cannot by secured by West Point without Building a Fort on the other Side of the River to defend it & the batteries on this Side." From his perspective in January trying to prepare a solid defense by April, he reasoned that "it is not easy to build one which can be defended by few." He, unlike Romans before him, realized that the hills around it would make it vulnerable, "the place where it must be Constructed being Commanded."[48] At the tactical level, the lack of works at Fort Constitution left the British free in the spring to land on the eastern bank of the river north of Peekskill, march overland to the island, and cut the chain, once it was in place, at its eastern anchor point. Putnam's garrison would be able to contest a landing from Mandeville's north or a direct assault on the chain with artillery fire from the water batteries and the Fort on the Plain. While the effectiveness of only cannon fire against a determined body of enemy infantry operating at a range of approximately 500 meters might be minimal, Putnam's disposition of forces throughout the Highlands Department would make the British task of putting forces on the island more difficult.

At the operational level, while winter shielded him from a British expedition, General Putnam could nonetheless call on Continentals and militiamen throughout the Highlands Department and in Connecticut. He maintained some of his own troops at Fishkill where he made his headquarters.[49] Major General Baron Johann De Kalb and his troops of the Maryland Line were there for the time being where Colonel Mordecai Gist of the 3rd Maryland reported that "our next march will be regulated by the movements of the Enemy from N. York." General Gates and his division were in Danbury, and the brigades of Brigadiers William Alexander, Benjamin Lincoln, and Alexander McDougall were at Fredericksburg and Quaker Hill.[50] For early warning, American soldiers were even near the British post at New York where a party of them had launched a raid on New Year's Eve below Fort Independence and captured four noncommissioned officers. Over time the Americans would return to both Peekskill and Continental Village to protect the "gorge" in the Highlands. With the authority of Governor Clinton,

48. La Radière's "The Memorial," 2.

49. Brig. Gen. Mordecai Gist, 26 Jan. 1778, Letterbook, Theodorus Bailey Myers Collection, 1540–1870, New York Public Library.

50. Gist, 26 Jan. 1778, Letterbook, Theodorus Bailey Myers Collection, 1540–1870, New York Public Library.

Putnam could also call out the militia of New York, Massachusetts, and Connecticut.[51] Considering the bigger picture, Putnam and La Radière were doing the best they could with the resources at hand.

The key to La Radière's plan was the field fortification on the Plain capable of withstanding a formal British siege for more than twenty-four days, if possible, in the time available. His sense of the required scale of such a work and the percentage of the ramparts to be made of masonry would soon lead to difficulties with the Americans. Planned for the extreme northeast corner of the Plain at West Point, the fort's western ramparts would be thicker than those on the east to offset the advantage to enemy artillery presented by the ring of hills to the west. To ensure a degree of permanence, La Radière wished to incorporate stones into the curtains, but he was under no illusions about what was possible or desirable for the fortifications at West Point. His ramparts would rest on a foundation of stones with parapets of fascines, timber, and earth.

By itself masonry did not last long in an artillery bombardment, usually splintering and causing greater casualties than those using earth. Consequently, La Radière warned that "none stones must be in the banquette."[52] Ramparts constructed of earth and timber absorbed artillery shot, although they required thicker construction.[53] Given time, La Radière promised: "I will not diminish the thickness of the rampart & breast works so that a cannon ball can go through and this fort will be strong enough to sustain a regular siege."[54] His diagrams show that stone would be used only in the foundations to provide a lasting base and to control erosion and deterioration caused by exposure to the elements. Masonry forts were normally built during times of peace, and they were expected to last until they were needed when war developed with less maintenance than a field work. La Radière seemed to be concerned about the maintenance of a fortress that would be needed indefinitely in a war that was entering its third year.

While La Radière recognized that the British might attack in a matter of months, he nonetheless thought that it was shortsighted to build works "calculated for a short duration only."[55] He was apparently trying to establish a balance between the expedient and the effective as he evaluated the threat.

51. Minutes, Congress, 18 Feb. 1778, Clinton to Gates, n.d., George Clinton, *Papers*, 2:641, 776–77.

52. Champion's Plan, USMA Library.

53. Muller, *Fortification*, 207.

54. La Radière's "The Memorial," 3.

55. Parsons to Washington, 7 Mar. 1778, Hall, *Parsons*, 155.

Since the worst-case scenario that La Radière foresaw was a formal siege, he planned to construct a time-consuming "covered place [way]" and attendant "glacis" that would deny the British entry to the remainder of the Plain. His purpose was to restrict formal siege operations by keeping British sappers off the soft, level soil to the south of his fort.[56]



Image 7.2: Sketch of Fort Arnold, by Louis de la Radière. (Courtesy of the Patricia D. Klingenstein Library, Collection of The New York Historical.)

Considering all the constraints that General Putnam faced, he shared his engineer's fears that the plan was too ambitious to be completed by April with the resources available. In a letter to Washington on 13 February, he described the progress at West Point:

> [T]he State of affairs is now at this Post, you will please to Observe, as follows. The Chain & necessary Anchors, are contracted for, to be compleated by the first of April, and from the Intelligence I have received there is reason to beleive they will be finish'd by that Time.
>
> Parts of the Boom, intended to have been Used at Fort Montgomery, sufficient for this place are remaining, some of the Iron is exceeding bad, this I hope to have replaced with good Iron

56. La Radière's "Sketch" shows a covered way, which, if built, would have enclosed most of the Plain upon which Fort Arnold was to be built; see also Kite, *Duportail*, 81–89; Wisner to Clinton, 19 Feb. 1778, George Clinton, *Papers*, 2:778.

> soon; the *Chevaux de Frize* will be compleated by the time the River will admit sinking them. the Batteries near the Water, & the Fort to cover them, are laid out the latter is within the Walls six hundred Yards around, twenty one feet base fourteen feet high, the Talis two inches to the foot. this I fear is too large to be compleated by the time expected. Govr Clinton, & the Committee have agreed to this plan, and nothing on my Part shall be wanting to compleat it in the best & most expeditious manner.[57]

While Putnam's letter indicated consensus on the plan, it described a post that was as yet devoid of defenses. The day after his report he departed for Connecticut on personal business, leaving Brigadier General Parsons in command without a clear understanding of his responsibilities.

With Major General Israel Putnam's departure from Fishkill on 14 February 1778, his contributions to the defenses in the Hudson Highlands were complete. On 16 March 1778, the commander in chief officially relieved "Old Put" of his command of the Highlands Department:

> Genl Mcdougal is to take the command of the posts in the High lands. My reason for making this change is owing to the prejudices of the people which whether well or ill grounded must be indulged, and I should think myself wanting in justice to the public and candour towards you, were I to continue you in a command after I have been almost in direct terms informed that the people of the State of New York will not render the necessary support and assistance while you remain at the Head of that department.[58]

With the help of politicians, officers, and engineers, Putnam had picked the site for the centerpiece of the fortifications there that would remain long after the British departed their former colonies. Under his supervision, Thomas Machin had designed the chain that would block the Hudson, and Louis de la Radière had developed the plans for the initial works that would protect it. Brigadier General Samuel Holden Parsons, as garrison commander, would now have to make the plans reality.

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57. Putnam to Washington, 13 Feb. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0443; Parsons to Clinton, 15 Feb., Hall, *Parsons*, 142–43; Boynton, *West Point*, 59–60; Putnam's reference to a road to the river is the one depicted on Villefranche's 1780 map leading down to Gee's Point. Today it is the eastern part of Flirtation Walk.

58. Washington to Putnam, 16 Mar. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0169.

CHAPTER 8

BRIGADIER GENERAL PARSONS AND COLONEL LA RADIÈRE BEGIN THE WORK

With Major General Israel Putnam's departure, Brigadier General Samuel Holden Parsons assumed the reins of acting commander. From his headquarters at Beverley Robinson's house across the river from West Point, Parsons tried to bring order to the unsettling situation in the Highlands Department and at West Point for which he now bore responsibility. Did he share Putnam's and Louis de la Radière's vision for the fortification at the West Point? Would he be able to overcome the problems that the three of them had confronted from their arrival on the Plain and get construction started on the key works? Time would prove that Parsons had the ability to meet the challenges, and he would emerge as the rock of determination and continuity as Fortress West Point struggled through its infancy.

At the time Brigadier General Parsons assumed command at West Point, he, a resident of New London, Connecticut, was forty years old. He had graduated from Harvard College in 1756 and joined the Connecticut bar in 1759. He served in the Connecticut General Assembly for twelve years and became a member of Connecticut's Committee of Correspondence. In April 1775, Governor Jonathan Trumbull appointed him the colonel of the 6th Connecticut Regiment of militia, which became the 10th Continental Regiment as of January 1777. He helped Colonel Ethan Allen capture Fort Ticonderoga in May 1775 and was present at the siege of Boston and the battle for New York City. Congress promoted him to brigadier general in the Continental Army in August 1776, and he assumed command of the First Connecticut brigade as of January 1777. His brigade had been the

Continental force in the Highlands Department during the battles of Forts Clinton and Montgomery in October 1777.[1]

The degree of confusion that Parsons faced with the planning and execution of construction was evident in the letter that he wrote to New York Governor George Clinton on 15 February 1778:

> As I am lately come to this Post and not furnished with any account of what is Prepared or where the various works are carrying on; what workmen are employed; what materials are now ready or tools to work with; in short, I came to this command in most disagreeable circumstances, nothing done, everything expected and wished for, and everything in confusion. I have everything to pick from perfect chaos.[2]

To bring order out of this chaos, the new commander needed men and material, but money was scarce. The day before departing for Connecticut, Israel Putnam had noted that one of the regiments available for work was actually unfit for duty, "there not being one blanket in the regiment. Very few have either a shoe or a shirt, and most of them have neither stockings, breeches or overalls. Several hundred men are rendered useless for want of necessary apparel."[3]

Undaunted by the problems he faced, the new commander quickly determined that his first priority was to obtain materials and equipment to build the defenses. Considering the ragged condition of his troops, Parsons decided to request twenty teams of horses or oxen to haul the required items. Instead of assistance, Parsons received a letter from Major Joseph Strang of the Third Militia (Manor of Cortlandt) Regiment of Westchester County explaining that teams were not available and that the local inhabitants were unwilling to help because they had no confidence in General Putnam, who

1. This biographical summary was gleaned from the Ohio History Central (no longer online), a product of the Ohio Historical Society, and Hall, *Parsons*, 1–5. Also see New England Historical Society, "Connecticut General Samuel Parsons—American Hero or British Spy," n.d., https://www.newenglandhistoricalsociety.com/connecticutgeneral-samueparsons-american-hero-or-british-spy. Parsons was later promoted to major general in 1780, resigned his commission in 1782, and drowned in a canoe accident in Nov. 1789 in the Northwest Territory, where he was serving as one of its first judges.

2. Parsons to Clinton, 15 Feb. 1778, Hall, *Parsons*, 143.

3. Putnam to Washington, 13 Feb. 1778, Parsons to Washington, 7 Mar., Hall, *Parsons*, 142, 152–55; Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0443, https://founders.archives.gov/documents/Washington/03-14-02-0070.

still retained official command in the Highlands Department. Strang specified that the New York Committee of Safety did not have the authority to impress teams. Without money to hire local inhabitants to do the hauling, Parsons had to either persuade them to loan their teams or ask Governor Clinton to levy their service. Assuming that the inhabitants were not about to trust another Connecticut general (Parsons and Putnam were both from Connecticut), he requested assistance from Clinton. Clinton replied that Strang did, in fact, have authority to issue a warrant to impress the required teams.[4] Finally, late in the evening of 18 February, Henry Wisner rode into West Point with sixteen of the twenty teams requested. Nothing came easily at West Point, and Parsons's soul was being tried to its limit.[5]

With teams now available to haul timber, rocks, and other "free" construction materials, Parsons turned his attention to the problems of tools and other manufactured items. He intended to contract for some of the necessary materials but found that the required procurement was not vested in the commander of the Highlands Department but in the person assigned that responsibility by Congress. Although this may seem like a small point, it was symptomatic of the confusion in the chain of command and authority that still existed in the Department. The last person vested by Congress with the authority to issue contracts had been General Gates, but he had declined both the authority and the command. Without authority, without effective rapport with the local inhabitants, and with no money, Parsons found his freedom of action greatly restricted.[6]

The confusion over command authority increased. On 18 February, without consulting Washington, Congress requested that Governor Clinton superintend the business of obstructing, fortifying, and securing the passes of the North River. Had he accepted, he would have received the powers previously granted to General Gates, but Clinton still did not want the job.[7] At this point confusion began to compound itself. Washington considered Parsons the acting commander while he looked for a replacement for

4. Parsons to Clinton, Strang to Parsons, 16 Feb. 1778, Clinton to Parsons, 17 Feb., Hall, *Parsons*, 144–45; Letters of Clinton and Strang to Parsons can also be found in George Clinton, *Papers,* 2:763–65; Fernow, *Documents* (Colonial NY), 15:305.

5. Wisner to Clinton, 19 Feb. 1778, George Clinton, *Papers*, 2:778.

6. Parsons to Washington, 7 Mar. 1778, Hall, *Parsons*, 153–55.

7. Minutes, CC, 18 Feb. 1778, George Clinton, *Papers*, 2:776–77.

Putnam, but Congress and Gates and his Board of War chose to bypass the commander in chief and to treat Clinton as the commanding general.[8]

George Clinton found himself increasingly involved in the attempt to build West Point. Parsons, unable to obtain funds through the Continental Army, had begged Clinton for a loan from the state of New York until Congress could adequately finance construction at West Point.[9] Then Clinton attempted to make transportation more responsive by granting Parsons the power to impress teams necessary for the construction program.[10] The governor also became involved in attempting to transport cannons from Fort Ticonderoga to West Point.[11] Finally, by the middle of March, for most construction, financial, labor, and materiel problems, Parsons petitioned Clinton, leaving Clinton to lobby Congress. Parsons dealt with Washington on the tactical and strategic issues. A dual chain of command existed.

To exacerbate matters, the weather turned so bad during his first twenty-one days in command that Parsons's troops were confined to their shelters one-third of the time. Luckily, by 13 February, there were barracks and huts for some 300 men and "barracks for about the same number are covered. A road to the River has been made with great difficulty."[12] As a crowning blow, the artificers struck during the first part of March and refused to work unless they received special allowances. Parsons quickly dealt with the strike by court-martialing the guilty soldiers, but his patience had run out.[13]

On 7 March, vexed by all of his problems and worried about the nebulous chain of command that existed among Congress, Washington, and the commander of the Highlands Department, Parsons sat down at his headquarters at the Beverley Robinson house and vented his spleen to the commander

8. A perusal of the second volume of George Clinton's *Papers* and Hall's *Parsons* for this period indicates that while Clinton cooperated with Parsons and did what he could to assist him, he usually acted only when Parsons requested action and tended to forward all Congressional directives to Parsons with very little action taken on them by himself. Clinton did not formally decline the command, at this point, as he had earlier, yet he never accepted it either. Washington always treated Parsons as the commander.

9. Parsons to Clinton, 20 Feb. 1778, George Clinton, *Papers*, 2:785–86.

10. Clinton to Parsons, 27 Feb. 1778, George Clinton, *Papers*, 2:818.

11. Maj. Ebenezer Stevens to Clinton, 28 Feb. 1778, George Clinton, *Papers*, 2:820; Clinton to Parsons, 26 Mar., Hall, *Parsons*, 161.

12. Parsons to Washington, 7 Mar. 1778, Hall, *Parsons*, 155; Putnam to Washington, 13 Feb. 1778, Hall, *Parsons*, 142, and Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0443.

13. Parsons to Clinton, 5 Mar. 1778, Hall, *Parsons*, 149; Gates, Board of War resolution, CC, 4 Mar. 1778, George Clinton, *Papers,* 2:835.

in chief about "the perplexities" of command in the absence of Putnam, his lack of authority, and the conflicting instructions from Washington and the Congress: "from this State of Facts you Excellency will see the difficult and disagreable Situation I am plunged into: The Country expect the Works to be compleated as early in the Season as possible."

Until Parsons received amplifying instructions from Washington, he chose to husband his small force and use them to "in perfecting the Obstruction[s] in & Defences near the River." Winter was proving an impediment to progress, but he promised to persevere:

> The Weather has been such since the 15th of Feby as has greatly retarded Us in the Works. about Seven Days of the Time has been such that we could do Nothing. I shall exert myself to have them in a State of Defence as early as Possible so far as I can without any Powers whatever, or by the due Exercise of Such Directions as your Excellency shall please to give me.[14]

While Parsons did not receive an immediate answer from Washington, his letter set in motion a train of events that would bring a new commander to the Highlands Department and establish a workable arrangement with his engineer.

Faced with many problems, Parsons did not idly await their resolution; in fact, on 21 February, he reported to Governor Clinton that "Things now look in a more promising Train." He lacked money, tools, and equipment but could still use his troops to cut timber and build fascines. He hoped that "In all next week to have Timber & Fascines upon the Ground which will make a good Figure in our Fort & Batteries." As he concerned himself with affairs throughout the Highlands Department from his headquarters at the Robinson house, during this period he depended upon La Radière to supervise the activities at West Point. By 24 February, "with some order & Spirit," workers had prepared over 1,000 "Sticks" of timber and 1,000 to 1,500 fascines (bundles of sticks or brushwood bound in cylindrical fashion to construct parapets or strengthen the interior of batteries and trenches) for use in the fortifications while the teams of Henry Wisner were busy hauling the materials to West Point.[15] In short, Parsons and La Radière were doing whatever they could to prepare for the construction of the defenses, which meant

14. Parsons to Washington, 7 Mar. 1778, Hall, *Parsons*, 153–55, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0070.

15. Parsons to Clinton, 21 and 24 Feb. 1778, George Clinton, *Papers*, 2:789 and 803.

performing those tasks that did not require funds, skilled labor, or special tools for which he lacked formal authority.

In the meantime, Parsons had to assess the plan for the fortress that he had inherited from Putnam. La Radière's general concept was all right, but his original fortress above the West Point was too extensive for the materials and time available. All the directives from Congress and the commander in chief had stressed the need for the defenses to be in ready by spring to deny the river to the British, but La Radière was still concerned about a classical siege across the grounds of the Plain and was determined to build accordingly. Although by the time of Putnam's last report La Radière had scaled back the perimeter of the fort from about 800 yards around to some 600, he was still proposing a large complex. The size and disagreements about construction materials combined with his original scheme to build a covered way and glacis encompassing most of the present-day Clinton Field was more than time and Congressional finances could allow.[16]

The American leaders tried to convince the Frenchman that the works should fit the time, money, and troops available. La Radière argued that the works had to be capable of meeting the threat. Unable to agree, the impasse was broken when the Board of War (granted authority over the Highlands fortifications by Congress) ruled on 5 March, "That the Plans of the Forts & Batteries to be erected, be left to the Discretion of Governor Clinton . . . expressing however the Apprehensions of the Board, that the Plan is rather extensive for the Time & Number of Troops, & desiring that if possible Timber may be used for reveting the Works if it can be procured without Delay." To ensure there was no misunderstanding, Congress further ordered "That Col. La Radiere accommodate his plans & Mode of constructing the Batteries & Forts, to the Nature of the Country and Materials, Time & Number of Men; in all which he is absolutely to be directed by Governor Clinton or the Commanding Officer of the Army in which he acts who are

16. Putnam to Washington, 13 Feb. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-13-02-0443; La Radière, "Sketch of Fort Arnold and Water Batteries at West Point," n.d., in McDougall Papers, Reel 2, NYH; map, Villefranche, 1780, West Point Museum Collection, USMA; Champion's Plan, USMA Library. The final Fort Arnold conforms almost exactly to La Radière's "Champion Plan." Clinton to Putnam, Feb. 1778, Gates, Board of War to Putnam, 5 Mar., George Clinton, *Papers*, 2:728, 847–48; also in minutes, Board of War, Gates to Putnam, 5 Mar., McDougall Papers, Reel 2, USMA Library; La Radière, "Sketch"; Washington to Putnam, 26 Feb., Washington, *Writings* (ed. Fitzpatrick), 10:515, also https://founders.archives.gov/documents/Washington/03-13-02-0571. La Radière would address these concerns again in his letter.

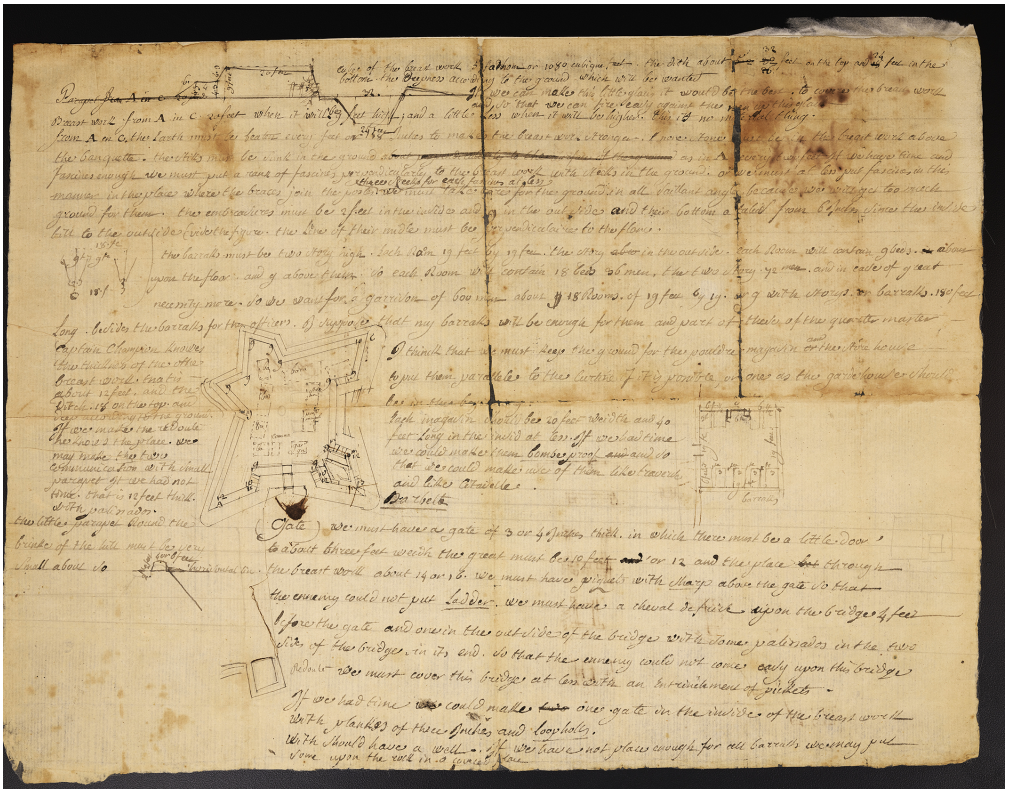

Image 8.1: Captain Henry Champion's plan of a Hudson Highlands fort and water batteries at West Point. See Appendix C for transcript. (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

best acquainted with these circumstances."[17] While the Board had made clear what La Radière was to do, it had muddied the chain of command not only by intervening but also by giving Governor Clinton authority equal to General Putnam's. In Putnam's absence, this complicated Parsons's position even further.

Although La Radière obviously would have preferred to proceed with his original plan laid out in his "Sketch," he apparently took the guidance from the Board of War and Putnam's and Parsons's reservations about the scale to heart. The so-called "Champion Plan" added details to his original "Sketch," described the construction materials, and explained the methodology that he expected the artificers and laborers to follow. (See Appendix C for the transcript.) He described the glacis as "small" and made no mention of a covered way. The plan also made it clear that Captain Henry Champion, 3rd Connecticut, would help him execute it. On 9 March, Parsons's garrison orders reported that "Capt. Savage of Col. Sherburn's Regt. is appointed in conjunction with Cpt. Champion assistants to the Engineer to oversee & direct the building & carrying on the Works at West point and is to be Obey'd as such." As Lieutenant Samuel Richards observed fifty-nine years later, La Radière, "possessing the science—but not conversant with the practical part—he succedes in engaging Mr C [Champion] to execute the plans he had sketched out in his log hut."[18] Colonel La Radière's carefully drafted design would be the blueprint for the fort that Captains Abijah Savage and Henry Champion would raise above the West Point.

Because La Radière was concerned about the effects of a British occupation of the surrounding hills, he gave first priority in construction of the Fort to the south and west walls with their retiring flanks that would be the primary defense against a British land attack. The north and east faces would be constructed on top of the steep banks that led from the river to the Fort.[19]

17. Gates, Board of War to Putnam, 5 Mar. 1778, George Clinton, *Papers,* 2:847–48.

18. Copy of Samuel Richards to Maria Watkinson, 17 June 1837, Sheffield Research Files, Box 6, USMA Library.

19. Champion's Plan, USMA Library. This is the plan for the construction of the soon-to-be named Fort Arnold and had to have been drawn early in 1778 before McDougall's first visit. While the previous authors surmised that the handwriting was Kościuszko's, it appears to be that of La Radière; he wrote his *y* and *g* with a curl at the end of the tail, while Kościuszko placed a curl at the end of his *d*. Work was well underway on the Fort before the Pole arrived at West Point. La Radière, not Kościuszko, put primary emphasis on the Fort on the Plain. Captain Henry Champion was a member of the 3rd Connecticut Regiment of the Continental Line. In Jan. 1778, Champion's regiment moved to West Point "and later began the construction of permanent works there." In the summer of

The east face would be built on ground that was slightly higher and back from the top of a cliff that rises 161 feet out of the water. The north face was not impossible to reach from the water's edge, but it would be extremely difficult to do so with a sufficient body of men to overcome the water batteries and the garrison of the Fort. In other words, because of La Radière's design, nature saved a lot of work on the sides facing the river.

Although La Radière's final plan did not call for a fortress that would be at home in western Europe, the west and south walls facing the hills would be substantial. Averaging nine feet in height, the "Breast Work" was to be twenty feet thick at the top of the parapet and a little less thick at the top of the bastion, the tip of which would be thirteen feet high. The tip of the southwestern bastion, the side most vulnerable to ships supporting a likely attack from the south, would be eighteen feet high. Immediately in front of the walls was a ditch thirty-two feet wide at the top and twenty-four feet at the bottom. The ditch, in turn, was to have a glacis to its front that would allow the defenders to place ricochet fire on attacking infantry attempting to reach the ditch and the fort.

In specifying the type of construction, the engineer made it clear that the walls would comprise earth mainly taken from the ditch, "the deepness [of the ditch] according to the ground which will be wanted." La Radière also issued guidance for building the west and south walls: "the Earth must be beaten every feet or 18 inches to make the breast work stronger. none stone must be in the breast work above the banquette [a gunner's platform extending along the inside of a parapet]. the sticks must be sunk in the ground as in A every two feet. If we have time and fascines enough we must put a rank of

1778, the regiment moved to White Plains. The winter of 1778–79 was spent at Redding, CT, and during 1779 the regiment was under General Heath on the east side of the river; Johnston, *Connecticut Men in the Military*, 168–69. Thus, Champion was at West Point and would have been mentioned in the plan for the period January through June or July 1778. In addition, the plan contains the sentence, "If we make the redoubt he (Champion) knows the place," which clearly refers to Sherburne's Redoubt. Since Sherburne's Redoubt was begun on or about 11 April, during or shortly after McDougall's first visit to West Point, then the date of the plan would have to be prior to 11 Apr. and after 27 Jan. 1778. See McDougall's Diary, 7–12 Apr., in McDougall Papers, and McDougall to Parsons, 11 Apr., McDougall Manuscripts File, No. 7525, USMA Library. La Radière had made this plan to flesh out his earlier sketch used to trace out the Fort on the ground. Troops had been building according to this pattern since their arrival at West Point. La Radière would even convince McDougall to prepare a final plan that he could supervise, 10 Apr., McDougall Diary. Merle Sheffield tenaciously sought in his lifetime to get La Radière and Champion their due; for his tentative argument upon which I have built, see Merle Sheffield's article, "Who Planned Fort Arnold?," adapted by James M. Johnson for *Hudson River Valley Review*, https://www.hudsonrivervalley.org/documents/d/guest/hrvr-30-2-spring-2014.

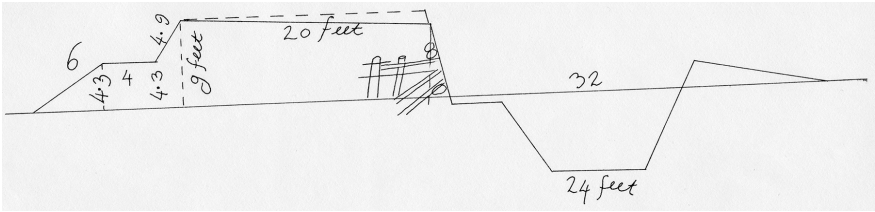

Image 8.2: Profile of Fort Arnold from Captain Henry Champion's plan of a Hudson Highlands fort. (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

fascines perpendicularly to the breast work with sticks in the ground or we must at less put fascines in this manner in the place where the braces join the postes, three sticks for each fascine at less."[20]

La Radière planned embrasures for cannons in certain locations and put the guns *en barbette* in others. (*En barbette* was a term to describe artillery pieces mounted on high platforms or carriages to fire over the parapet instead of through embrasures to allow them to be more quickly oriented to changing threats.) All of the embrasures, however, were cut to defend against an attack from the Plain, not the river. A pair of cannons on each side of the retired flank between the southeastern entrance and the one facing southwest covered this likely point of attack with enfilading fire. Deadly enfilading crossfire parallel to the curtains or walls of the fort and the faces of the bastions would discourage any infantry assault on the Fort. The cannons covering the tip of the vulnerable southwestern bastion were *en barbette*. Four guns, in pairs, protected the gate, located in the western curtain; the designer oriented the embrasures to provide the enfilading fire here against the "forlorn hope" (suicide party) that would surely try to storm the main entrance. The crossfire of the guns would also protect the bridge over the ditch. The embrasures for the guns were to be two feet wide on the inside, nine feet on the outside, and perpendicular to the walls through which they were cut.

The western-facing gate itself, always the most vulnerable part of any fortification, was to be three or four inches thick with a small door three feet wide cut into it. Chevaux-de-frise would be placed on the bridge four feet in front of the gate, and at the far end. In addition to the crossfire of cannons in front of the gate, a trench containing pickets was planned along the front of the bridge to hinder direct assault. A *fraise* (horizontal row of pickets) placed above the gate would prevent placing a ladder there, and when time

20. Champion's Plan, USMA Library.

would permit, a second gate would be built on the inside of the rampart. A detached redoubt to the north connected to the fort by a communications trench provided additional protection.

The remainder of La Radière's Fort was rather simple in design and would require a minimum amount of time to construct. The main function of the north and east walls was to provide a stable gun platform from which the Fort's guns could assist the water batteries in denying the river to the enemy. Other than the possibility of naval gunfire, the north and east faces were not expected to defend against a land attack or artillery bombardment since such contingencies were not considered plausible from there. Moreover, a naval bombardment directed at the Fort 161 feet above the river would be ineffective. Even if the walls were knocked down, the garrison would only have to withdraw a few feet from the edge of the steep terrain and the enemy's shot would pass right over and beyond the Fort. These considerations, coupled with the time remaining to do the job, influenced La Radière to build nothing more than a "little parapet" of two and a half feet in height and four to eight feet in depth around the "brinke of the hill" on the north and east sides, except for the irregular bastion at the northeast corner, which was to be nine feet high.

La Radière also planned a storehouse, a powder magazine, a guardhouse, a commissary building, and a well. His plans called for several barracks two stories high capable of housing the garrison of 600 men, "Each Room 19 feet by 19 feet . . . will contain 9 beds about upon the floor and 9 above them so each Room will contain 18 beds 36 men; the two story, 72 men." Two men would sleep in each bed, three feet wide. The powder magazine and storehouse were to be built adjacent to and parallel with the south curtain to provide maximum protection against high angle fire. Planned to be twenty feet by forty feet, when time permitted, they would be bomb-proofed (constructed so a solid shot could not penetrate, usually partly underground).[21]

The Americans, much more aware of the constraints on resources, were seeking something closer to field fortifications from which the garrison, aided by the local militia, could protect the chain and water batteries. Balancing these circumstances with the likelihood of a British attack or siege in a matter of months, La Radière gave his commander an acceptable plan. His next step, as Parsons reported, was to petition the decision-makers for the resources to complete that plan:

21. Champion's Plan, USMA Library.



Image 8.3: Fort Clinton, c. 1860. (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

> Col. La Radiere finding it impossible to compleat the Fort and other Defences intended at this Post in Such Manner as to effectually withstand the Attempts of the Enemy to pass up the River early in the Spring, and not choosing to hazard his Reputation on Works erected on a different Scale, calculated for a Short Duration only, has desird Leave to wait on your Excellency & Congress which I have granted him. In Justice to Col. La Radiere I ought to say he appears to be a Gentleman of Science & Knowledge in his Profession, and dispos'd to render Us every Service he is able to do.[22]

With Parsons's blessing, having laid out his works, La Radière departed West Point on 11 March to convince Washington and Congress that his plan was sound. Playing Romans's political game, he would fail to change anyone's mind, although upon his return he would for a time have influence with the new commander, Major General Alexander McDougall.[23]

The day that La Radière departed, Parsons decided that the time for talking had passed. Now without an engineer, he first called on Captain-Lieutenant Thomas Machin to come down from New Windsor "to advise about the proper method of fortifying this place."[24] The next day, 12 March 1778, his artificers and soldiers broke ground at La Radière's Fort and its water batteries.[25] Using every available man, militia and Continental alike, Parsons spurred the garrison on. Accepting La Radière's conclusion that the main purpose of the fortress on the Plain was to protect the water batteries and chain from the rear, he made his first priority the construction of the west and south walls and their bastions. By 16 March, Parsons, his spirits

22. Parsons to Washington, 7 Mar. 1778, Hall, *Parsons*, 153–55, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0070.

23. Parsons to Machin, 11 Mar. 1778, Hall, *Parsons*, 157; on 11 Apr., McDougall would direct La Radière "to report a proper plan to finish the works," entry, McDougall's Diary (after 18 Mar. pay document), McDougall Papers, Reel 2, USMA Library.

24. Parsons to Washington, 16 Mar. 1778, Hall, *Parsons*, 157; Clinton to Putnam, Feb., Gates, Board of War to Putnam, 5 Mar., George Clinton, *Papers*, 2:728, 847–48.

25. Parsons stated that ground would be broken in two days in Parsons to Clinton, 10 Mar. 1778, Hall, *Parsons*, 149; on 16 Mar. he told Washington that the works were in progress "this week," which indicates the work started as planned on 12 Mar., Parsons to Washington, 16 Mar., Washington Papers, Ser. 4, Reel 47, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0168; see Sheffield, "Who Planned Fort Arnold?," *Hudson River Valley Review*, https://www.hudsonrivervalley.org/documents/d/guest/hrvr-30-2-spring-2014; La Radière remembered that "the first piece of wood was raised" on the 3rd or 4th of March, La Radière to President of Congress, 23 Apr., Gates Papers, Reel 7, USMA Library.

obviously buoyed by the new activity and the departure of his cantankerous engineer, was able to report to Washington:

> If the Chain is compleated we Shall be ready to Stretch it over the River next Week. a Sufficient Number of Chiveaux de Frize to fill those parts left open last Year are ready to Sink; as soon as the Weather and State of the River will admit it to be done.
>
> I hope to have Two Sides And One Bastion of the Fort in some State of Defence in about a fortnight, the other Sides need very little to Secure them; there's a prospect of having five or Six Cannon Mounted in One of our Batteries this Week. I think the Works are going on as fast as can be expected from our very few Number of Men, total Want of Materials Provided, and of Money to purchase them.[26]

He noted that funds were still a problem, but he thought that at the present pace the fortifications underway could be finished "in Season if the Enemy move with their Usual Caution and Tardiness." On the 20th he exhorted his officers, "by their presence & example . . . to forward the fortifications, the sturdy completion of which is of the utmost importance." He expected all ranks to be "laboring in the trenches . . . to give the highest satisfaction & strongest proof of their zeal in promoting the publick good." He felt that these actions would "be productive of the highest effect in encouraging Others to the Most vigorous prosicution of the necessary works at this Post." He eagerly reported that General Putnam would "Return to this Post by the End of this Week he has Purchas'd Three 18 pounders mounted on traveling Carriages which are on the Road from Boston."[27] For the first time since the British expedition up the river the previous fall, there were again visible signs of progress by mid-March toward defense of the Highlands Department. However, Parsons was still short of manpower, and the finances of the command were on a precarious footing.

One other problem remained unsolved. As Parsons had indicated in his letter to the commander in chief, cannons were still in short supply. Without them the fortifications were virtually useless. The defenders would have

26. Parsons to Washington, 16 Mar. 1778, Washington Papers, Ser. 4, Reel 47, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0168.

27. The use of militia for construction is in Parsons to Clinton, 10 Mar., Hall, *Parsons*, 149–50; Clinton to Maj. Gen. Thomas Conway, 30 Mar. 1778, George Clinton, *Papers*, 3:149; entries, 20, 21 Mar., Parsons's West Point Orderly Book, 1778, #94, Huntington Library.

nothing but their muskets (effective to about fifty yards when fired in volley) to defend the chain. The artillery pieces for West Point were supposed to have come from Fort Ticonderoga, and Governor Clinton had made arrangements in February to have the guns collected at Albany for shipment to the works in the Highlands. During the winter, however, Congress had once again considered the idea of invading Canada. Although a plan for such an expedition never materialized, it had the effect of disrupting the movement of artillery to Albany and West Point.[28] Finally, on 25 March, two field pieces and a howitzer arrived, and that evening the sounds of the first cannon ever fired at West Point resounded through the Highlands.[29] But three guns were not enough. As late as 26 March, Governor Clinton advised Parsons: "A Return of the Artillery at Albany . . . in Point of Size fall extreamly short of what I have had Reason to expect & is imagined by the Board of War. It seems few of the Heavy Pieces [two 24-pounders and one 12-pounder] which alone would have been serviceable for the Defence of the River have been brought forward. They were it seems sent for but too late. The ill contrived intended Northern Expedition occasioned the Delay."[30]

Despite Governor Clinton's limited success in bringing artillery to the Department and General Parsons's initial steps on the fortress, the approach of spring put the brakes on the promising start. The service obligation for the militia began to expire as the planting season drew near. By 30 March Clinton had too few people at West Point to "carry on the Works, much less defend the different Passes shoud they be attempted."[31] When Colonel Rufus Putnam arrived the next day, he found that construction of the fortifications had been abandoned except for "a Battery at this place to anoy the Shiping in case they Should come up & attempt to turn the point & force the Boom."[32]

28. Clinton to Parsons, 26 Mar. 1778, George Clinton, *Papers*, 2:820.

29. Entry, 25 Mar. 1778, Giffin, "Diary," Sheffield Research Files, USMA Library. For problems with artillery, see Washington, *Writings* (ed. Fitzpatrick), 15: 84–85; copy of Congressional resolution, 4 Mar., McDougall and Duportail to Washington, 20 Aug. 1779, McDougall Papers, Reels 2 and 3, USMA Library; Hall, *Parsons*, 161; Stevens to Clinton, 28 Feb. 1778, George Clinton, *Papers,* 2:820.

30. "A Return of Ordnance and Stores in the Park, Labratory, and Ordnance Store in the City of Albany March 20th 1778," Clinton to Parsons, 26 Mar. 1778, George Clinton, *Papers*, 3:69, 84; also Hall, *Parsons*, 161.

31. Clinton to Conway, 30 Mar. 1778, George Clinton, *Papers*, 3:100.

32. Date of arrival of Putnam's Regiment established in McDougall to Washington, 3 Apr. 1778, McDougall Papers, Reel 2, USMA Library, and Beers, 31 Mar., "Journal," Connecticut Museum of Culture and History. The fact that the work on the Fort on the Plain was temporarily halted is found in Putnam, *Memoirs*, 75.

This would prove to be only a temporary pause during a transition of leaders, engineers, and resources.

Suddenly the command picture began to brighten as Major General Alexander McDougall, a New Yorker, and Colonel Thaddeus Kościuszko, a Polish engineer, arrived to take their posts in the Highlands. The Board of War had rejected La Radière's arguments for support of his plan for the fortifications at West Point "as rather extensive," ordering him to "accommodate his Plans & Mode of constructing the Batteries & Forts, to the nature of the Country and Materials, Time & Number of Men." At that time, Major General Horatio Gates, as president, had recommended that his engineer from the Battle of Saratoga, Kościuszko, be sent to West Point to supervise construction. Gates trusted his former engineer and, given the time remaining before the new campaign season, probably felt that the type of field fortifications used to ensure the defeat of General Burgoyne at Saratoga were what were needed to protect the Hudson during the coming year. In addition, Kościuszko had gotten along well with the Americans; La Radière had not. Congress went along with General Gates and, without consulting Washington, had ordered Kościuszko on 5 March "to repair to the Army under General Putnam, to be employed as shall be thought proper in his Capacity of an Engineer." On the same date, Gates had written Governor Clinton: "A member of the Board too has been a witness to the inefficacy of the endeavours of Col. La Radiere & two other French Engineers, to raise the works they had judiciously planned, elsewhere. And the Board are thoroughly convinced that if the actual construction of the works on the North River, be left to Col. la Radiere, they will not be completed till the next campaign is ended, altho' 5000 men should be at his direction."[33] To his mind, help was now on the way—his engineer, Kościuszko. On 26 March, Kościuszko left Poughkeepsie for West Point with a letter of introduction from Governor Clinton in which Clinton described the engineer as "an Ingenous Young Man & disposed to do every Thing in the most agreeable Manner.[34] Half of the team that would set the tone for the future defense of the Highlands Department had arrived.

While Congress appointed a second engineer, General Washington, bombarded by letters from all sides, was searching for a new commander

33. Gates, Board of War to Putnam, 5 Mar. 1778, George Clinton, *Papers*, 2:847–48; Gates to Clinton, 5 Mar., Gilder Lehrman Collection #GLC07128, Gilder Lehrman Institute, https://www.gilderlehrman.org/collection/glc07128.

34. Clinton to Parsons, 26 Mar. 1778, George Clinton, *Papers*, 3:85–86.

to replace the burned-out Israel Putnam. Spurred by Robert R. Livingston's repeated requests that Putnam be replaced, the commander in chief sought a man who would be acceptable to the local inhabitants. At the same time, he searched for "a just pretence for removing an Officer from his command, where his misconduct rather appears to result from want of Capacity, than from any real intention of doing wrong." Since in any revolution the rebels must be careful not to lose the support of the people, Washington seemed concerned that an abrupt dismissal of the hero of the French and Indian War and Bunker Hill might erode some of the Revolution's political support in Connecticut. In a letter to Livingston (a New York political leader and member of Congress), the commander in chief "lamented, that he [Putnam] cannot see his own defects and make an honorable retreat from a Station in which he only exposes his own weakness." He was hopeful that the court of inquiry probing the loss of the twin forts on the Popolopen would "afford just grounds for a removal of Genl P——; but whether it does or not, the prejudices of all Ranks in that quarter against him are so great, that it would be impolitic to suffer him to return."[35]

Then Parsons's letter of 7 March with his assessment of La Radière arrived at Washington's headquarters to act as a catalyst. The situation described by that letter and the importance of the Hudson River were too great to delay action any longer. On 16 March Washington relieved Putnam, but in such a manner as to prevent repercussion. In his letter to Old Put, Washington explained that the change was

> owing to the prejudices of the people which whether well or ill grounded must be indulged, and I should think myself wanting in justice to the public and candour towards you, were I to continue you in a command after I have been almost in direct terms informed that the people of the State of New York will not render the necessary support and assistance while you remain at the Head of that department.[36]

Parsons's letter to Washington had identified the two basic political causes for the lack of progress in constructing the defenses in the Highlands:

35. Washington to Livingston, 12 Mar. 1778, Washington, *Writings* (ed. Fitzpatrick), 11:69–70, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0128.

36. Washington to Putnam, 16 Mar. 1778, Washington, *Writings* (ed. Fitzpatrick), 11:95, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0169.

first, confusion in the command arrangements, and second, the lack of faith by the local inhabitants in Putnam. He had also indicated the need for constant coordination and cooperation between the commander in the Highlands Department and the officials of the State of New York. With these conclusions and recommendations in mind, Washington selected Major General Alexander McDougall—a New Yorker—to succeed Putnam as the commander of the Highlands Department. He, like Putnam before him, would get a second chance to overcome his earlier failure in the Highlands at Peekskill the year before. Hopefully, McDougall would be more successful than his predecessor had been at completing the work at West Point begun over two and one-half years before.

The new commander, once he had an opportunity to inspect the works, could complain that the Hudson was still defenseless, and that time had almost run out. On the other hand, General Parsons could have pointed with justifiable pride to what he had accomplished in six short weeks under the most difficult circumstances of weather and bureaucracy. Although the chain was not in, the fortifications were not completed, and the required cannons had not yet arrived, following La Radière's plan, Parsons had completed the groundwork. Tools were now at hand, work continued on the Fort and water batteries, and the Sterling Iron Works was in the final stages of forging the chain to cross the Hudson River..

McDougall could complain, if he were so inclined, about the lack of physical progress, but he would be unable to report, as Parsons had done, that he had acquired the command with "nothing done, everything expected and wished for, and everything in confusion." With a well-known New Yorker now in charge, McDougall could anticipate the cooperation of the local inhabitants and the militia. A solid foundation had been laid upon which the defenses of the Hudson could be built. Hopefully, McDougall, with Thaddeus Kościuszko at his side, would have a much more optimistic view than General Parsons had described during his most difficult days in late February 1778:

> You ask me where I can be found? This is a puzzling question; the camp is at a place on Hudson's River called West Point, opposite where Fort Constitution once stood. The situation is past description, surrounded with almost inaccessible mountains, and craggy rocks which overtop the highest hills, at present covered with piles of snow; the river in our front affords a beautiful prospect on our right and left to New Windsor on one hand and to Fort Montgomery

> on the other with some little islands interspersed. The surrounding prospect affords as great variety of hills, mountains, rocks, which seem to shut up every avenue to us, and of swamps, meadows, deep valleys which obstruct the passage of the traveler and of small beautiful plains in a good degree of cultivation intermixed, as almost any place I have seen; to a contemplative mind which delights in a lonely retreat from the world to view and admire the stupendous and magnificent works of nature, 'tis as beautiful as Sharon, but affords to a man who loves the society of the world a prospect nearly allied to the shades of death; here I am to be found at present in what situation of mind you will easily imagine. . . . News arrives here by accident only.[37]

Despite the difficulties, Brigadier General Samuel Parsons and Colonel de la Radière had laid the foundations upon which Major General McDougall and Colonel Thaddeus Kościuszko could build.

37. Parsons to Wadsworth, 22 Feb. 1778, Hall, *Parsons*, 161–62.

CHAPTER 9

MAJOR GENERAL McDOUGALL AND COLONEL LA RADIÈRE EXPAND THE PLAN

Major General Alexander McDougall had played on the stage of the Hudson Highlands at various times prior to assuming command of the Department. In March 1777, he had watched Lieutenant Colonel John Bird's joint force burn the supply depot at Peekskill temporarily under his charge. As a New Yorker committed to defending the Hudson River as the key communications link in the Northeast, McDougall arrived at West Point at the critical juncture in its young life. Could he work with the talented engineers assigned to him and design and build a defensive system that would deter the British from trying to control the Highlands before the campaign season of 1778? Would Colonel Louis-Guillaume-Servais des Hayes (de Shaix) de la Radière maintain his influence over the planning process with a new commander? McDougall would prove receptive to La Radière's genius as a "paper engineer" and adopt his ideas for the first tier of fortifications built at West Point in 1778. To his credit, he also gave Captain-Lieutenant Thomas Machin his head and caught the reflected glory of his achievement when he pushed the Great Chain across the Hudson River on 30 April 1778.

Alexander McDougall, a Scot by birth, had arrived in the New World at the age of six. His family had come over to help establish a new settlement south of Lake George, New York. When the settlement failed, the McDougalls moved to New York City where Alexander developed a fondness for the sea. During the French and Indian War, he commanded the privateers *Barrington* and *Tiger*. After the war, having accumulated sufficient capital from his privateering ventures, McDougall became a successful merchant in New York City where he set about educating himself. When Great Britain tried to end its policy of "salutary neglect" by allowing the American

colonies increasing autonomy through loose enforcement of imperial policies, the privateer-turned-merchant became one of the earliest radicals in the colony.

On 8 February 1770, McDougall found himself in "gaol" on a libel charge for having written the anonymous pamphlet *A Son of Liberty to the Betrayed Inhabitants of the City and Colony of New York*, which attacked the General Assembly. Refusing bail, McDougall remained in jail until after his indictment in April. While in jail the visits of his supporters were so "'numerous . . . that he was obliged to appoint visiting hours.'"[1] The Crown dropped the case when the government's witness, the printer, died, but McDougall refused to answer a summons from the General Assembly to answer questions concerning the article. Once again, the Scot found himself in jail, this time for contempt. Finally, in March 1771, the unrepentant rabble-rouser was set free after he had been incarcerated for a year.

Upon his release from jail, McDougall found that he had become one of New York's prominent radical leaders. During the years 1774–1775, he served as a member of the New York Committee of Fifty-One and in the first and second Provincial Congresses. He presided over the mass meeting in the "Fields" on 6 July 1774, and in 1775, the Provincial Congress appointed him colonel of the 1st New York Regiment. On 9 August 1776, the Continental Congress appointed him to the rank of brigadier general in the Continental Army. Because of his performance in the battles of White Plains (28 October 1776) and Germantown (4 October 1777), Congress promoted him to major general on 20 October 1777. Washington in his petition to Congress had noted "his disinterested attachment to the service," even when passed over by younger men on the previous list, and "his abilities, military knowledge and approved bravery."[2] With this record, the commander in chief could find no better man for command of the Highlands Department than Alexander McDougall, a local political leader with previous combat experience who had proven to be a competent general officer. The timing and nature of the assignment were propitious for McDougall as he was in the final stages of recovery from a debilitating fever. Thus, on the same day that he relieved Old Put, Washington appointed him to take command of the Highlands Department.[3]

1. Boatner, *Encyclopedia of the American Revolution*, 691.

2. Washington to President of Congress, 7 Oct. 1777, Founders Online, https://founders.archives.gov/documents/Washington/03-11-02-0440.

3. The biographical information on Alexander McDougall is drawn from the following sources: Champagne, *Alexander McDougall*, 133–43; Boatner, *Encyclopedia of the*

Upon assigning McDougall to the command at Fishkill, Washington related to him "the vast importance" of his new post and the confidence in him that had "determined me to confide it in you." He instructed the new commander that his attention should "be turned as much as possible to the completion of the Works [at West Point] or at least to putting them in such a State that they may be able to resist a sudden attack of the Enemy." From his perspective at least, Washington cleared up the confused chain of command problem by vesting in McDougall the "general contr and direction of all the posts in the Highlands and their dependencies and be answerable for them." He advised him to work with New York Governor George Clinton as he petitioned Congress "to give you every power necessary to promote the objects of your command."[4] Implicit in these orders was the notion that McDougall would answer directly to the commander in chief.

True to his word, Washington asked Congress to make the authority required for effective command in the Highlands Department inherent in the position, instead of pegging it to an individual.[5] In the midst of the so-called Conway Cabal, on 21 March, Congress at long last agreed that there would be only one man responsible for the defense of the Hudson River.[6] As it turned out, the victory was mixed, as Congress, failing to recognize the existence of a Highlands Department, gave the authority to the commander of the Northern Department. Because General Gates had assumed the presidency of the Board of War and Major General Lafayette was focusing his energy on the proposed invasion of Canada, this decision only theoretically threatened McDougall's authority and the autonomy of the Highlands Department for the time being.[7] For all practical purposes, from his headquarters at Fishkill, McDougall served as commander of the Northern Department. While Washington would have to sort out

American Revolution, 690–91; Johnson and Dumas, *Dictionary of American Biography*, under "McDougall, Alexander," by Daniel C. Haskell; Heitman, *Historical Register*, 368; Washington to President of Congress, 7 Oct. 1777, Founders Online, https://founders.archives.gov/documents/Washington/03-11-02-0440; Heitman, *Historical Register*, 368.

4. Washington to McDougall, 16 Mar. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0167.

5. Washington to President of Congress, 17 Mar. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0177.

6. Minutes, 21 Mar. 1778, Ford, *Continental Congress*, 10: 275–76.

7. For details of the Conway Cabal and the proposed invasion of Canada, see Nelson, *General Horatio Gates*, 161–77.

this wrinkle in the command relationship later, he had at least convinced Congress that control should be his rather than the New York governor's.

When Major General McDougall arrived in the Highlands to assume command from Colonel Derick Brinckerhoff's house in Fishkill on 25 March, he found that one of his first orders of business was to decide how to use the two engineers now available to guide the construction at West Point.[8] While Colonel La Radière had impressed Washington with his engineering acumen, he had failed to convince the Board of War and Congress in the dispute over the scale of the fortifications. His aide de camp, Colonel David Humphries, had also been unimpressed: Colonel La Radière, "the Engineer who laid out the works, altogether disproportioned to our circumstances, served only to put us in mind of our poverty, and, as it were, to satirize our resources. His petulant behaviour and unaccommodating disposition added further embarrassments."[9] The commander in chief directed La Radière to resume his duties as engineer in the Department and sent with him his personal recommendation that he was "an Officer who understands his profession, and make no doubt of his giving you satisfaction both in projecting and executing the works required for the defence of the River." Vouched for by Washington, the Frenchman was surprised to find, when he arrived, that, without Washington's knowledge, the Board of War had appointed Colonel Thaddeus Kościuszko as an additional engineer to assist his predecessor.[10] The acting commander of the Highlands Department was getting more help from his distant superiors than he needed.

General Parsons was, therefore, the first to take action as he had been quick to determine that the Pole and the Frenchman could not work together. On the same day that McDougall assumed his new duties on 28 March, Parsons shipped La Radière to the Scot at his headquarters in Fishkill where he was conducting an investigation into the loss of the Highlands in 1777. In his letter explaining his action, Parsons noted that "Col. Kościuszko sent to this Place is particularly agreable to the Gentlemen of this State & all others concerned at this Post." As to his counterpart, Parsons wrote, "You will, Sir, readily find by a little Enquiry that altho' Col. La Radier appears to be a Man of Some Learning & Ingenuity, an attachment to his opinions in his

8. Entry for 25 Mar. 1778, McDougall, "Diary"; Skinner, *Signal Fires*, 30.

9. Col. David Humphries, *Israel Putnam*, 177, https://www.google.com/books/edition/An_Essay_on_the_Life_of_the_Honorable_Ma/-8cEAAAAYAAJ?hl=en&gbpv=1.

10. Gates, Board of War to Putnam, 5 Mar. 1778, George Clinton, *Papers*, 2:847–48; Washington to McDougall, 21 Mar., Washington, *Writings* (ed. Fitzpatrick), 119–20, Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0229.

Profession & Some other matters have renderd him not so suitable as some other Persons to have the Principal Direction at this Post." He concluded with his own personal recommendation: "As we are very desirous of having Col. Kościuszko continue here & both cannot live upon the Point I wish your Honor to adopt such measures as will answer the wishes of the People & Garrison; & best Serve the public Good."[11] Obviously, Kościuszko had made an impression on Parsons and the other Americans around West Point that was as positive as La Radière's was negative.

Informed by Washington that previous command problems had been corrected, McDougall now had two engineers assigned to him, each by a different higher authority, with only one acceptable to the local authorities. McDougall wrote to Washington for instructions, and while he waited, he kept La Radière with him as his personal adviser and left Kościuszko at West Point with Parsons.[12]

Washington was unhappy with this new twist in the arrangements he had so recently worked out for the Department. Initially standing by his earlier decision, on 6 April he summarily ordered Kościuszko to join the Main Army and informed McDougall that La Radière was the engineer assigned to the defense of the North River. Before dispatching the message, however, Washington had second thoughts and, considering the political situation, appears to have decided to reinvestigate the situation before making a final decision. Thus, he added the following postscript to the orders in the main body of the note returning Kościuszko to the Army: "[H]owever desirous I am of having Mr Kosciousko, here, if he is employed in any special Service by order of Congress or the board of War—the above order you will set aside."[13] That equivocation settled nothing.

By the time Washington's mixed message arrived, McDougall had talked to Parsons and Governor Clinton about the engineers. Both agreed that La Radière must go. As early as 5 February in a letter to General Gates, Clinton had been skeptical of La Radière's practical abilities: "I fear the Engineer who has the direction of the works is deficient in point of practical Knowledge; without which altho possessed of ever so much scientific I need not mention

11. Parsons to McDougall, 28 Mar. 1778, McDougall Papers, Reel 2, USMA Library.

12. Entry for 29 Mar., 8–11 Apr. 1778, McDougall, "Diary"; McDougall to Washington, 13 Apr., Washington Papers, Ser. 4, Reel 48, USMA Library.

13. Washington to McDougall, 6 Apr. 1778, Washington, *Writings* (ed. Fitzpatrick), 11:222, Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0393; Washington to McDougall, 6 Apr. 1778, in McDougall Papers, Reel 2, USMA Library. See also Kite, *Duportail*, 92–93.

to you Sir, how unfit he must be for the present Task, the Chief Direction & Management of which too requires a Man of Business & Authority."[14]

On 13 April, in a letter in which McDougall reported the results of his first inspection of West Point, the Scot again asked the commander in chief to settle the problem. He left no doubt as to which of the two engineers he preferred: "Mr. Kosciusko is esteemed by those who have attended the work at West-point, to have more Practice than Col. Delaradieres. And his manner of treating the people more acceptable, than that of the latter; which induced Genl Parsons & Governor Clinton to desire the former may be continued at West-Point." Should Washington choose to disregard the Governor's and the local commander's wishes, McDougall would follow orders and send Kościuszko to him.[15]

Reluctantly, Washington acceded to the requests of his subordinates and allowed Kościuszko to stay in the Highlands Department. In his letter to McDougall on 22 April, he offered his rationale: "As Colo. La Radiere and Colo. Kosiusko will never agree, I think it will be best to order La Radiere to return, especially as you say Kosiusko is better adapted to the genius and temper of the People." On 23 April, La Radière would write his complaints to the President of Congress, Henry Laurens, about the lack of support and the "cabal ranged against" him; he contended that the Fort (Arnold), "the biggest one," was the "the only one appropriate to force the enemy to make a siege en regle [by the rules]."[16]

It was unfortunate that the personalities of La Radière and Kościuszko never meshed; with the latter as the overall engineer in charge, a division of labor might have helped to speed up construction. Since the issue boiled down to who was in charge based on disputed dates of rank, only one of the two engineers could be in charge, and the other was going to have to make a contribution elsewhere. McDougall would assign La Radière the task of planning the fortifications at King's Ferry.[17] With his departure, the

14. Clinton to Gates, 5 Feb. 1778, George Clinton, *Papers*, 2:712.

15. McDougall to Washington, 13 Apr. 1778, Washington Papers, Ser. 4, Reel 48, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0461; more information on this conflict can also be found in Kite, *Duportail*, 91–95, and Hall, *Parsons*, 169.

16. Washington to McDougall, 22 Apr. 1778, Washington, *Writings* (ed. Fitzpatrick), 11:298, Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0537; Kite, *Duportail*, 94–95; La Radière to President of Congress, 23 Apr., Gates Papers, Reel 7, USMA Library.

17. 30 May 1778, McDougall, "Diary."

lingering confusion concerning the superintending engineer and the chain of command at West Point had ended. For the next twenty-eight critical months, Thaddeus Kościuszko would be the engineer in charge of construction at West Point, with the sanction of both General Washington and the Congress. La Radière would remain a presence in the Highlands Department and would continue to advise McDougall and his successor, Horatio Gates.

Confusion over the designation of an engineer had been the result of both poor communications and a vestige of the old system of command responsibilities, rather than a sudden return to the dual command that had plagued Parsons. Kościuszko had been appointed twelve days before Washington selected McDougall to command in the Department, hence Congress had acted before Washington asked that body to solve the command problems. The testiness in Washington's letter of 6 April to McDougall probably resulted from a feeling that the dual command system was being resurrected despite the agreement of Congress. The problem, however, originated when Congress failed to inform the commander in chief of action it had taken. In the future, neither Washington nor Congress acted on matters in the Department without informing the other. In the main, all command decisions were made by or through the commander in chief. The practice of Congress issuing instructions directly to the commander of the Highlands Department was over.

The fracas over who was to direct the construction of the works at West Point was not the only distraction facing the new commander. As an additional duty he was assigned the task of investigating the loss of Forts Clinton and Montgomery to the British. The letter assigning him to the new command had directed that the investigation be conducted on a first priority basis.[18] Due to these distractions, McDougall had been in the Highlands for two weeks before he found time to inspect the most important post in his charge.

During that interval, however, General Parsons was responsible for the work at West Point. McDougall had replaced Israel Putnam, not Parsons, and Parsons remained at West Point as garrison commander.[19] With McDougall

18. Washington to McDougall, 16 Mar. 1778, Washington, *Writings* (ed. Fitzpatrick), 11: 95–96, Founders Online, https://founders.archives.gov/documents/Hamilton/01-01-02-0400.

19. No formal orders assigning Parsons as garrison commander have been found, but the fact that Parsons remained at West Point through McDougall's first stay in the Highlands and the letter of instructions to Parsons on how to conduct the defense of West Point dated 11 Apr. 1778 that is found in Boynton, *West Point*, 63–66, and in the Manuscripts and Special Collections Division, New York State Library, #7525, clearly indicates that Parsons was in fact the commander of the garrison at West Point.

at Fishkill most of the time, Parsons would be the full-time director on the scene for executing the expanding plans for fortifications at West Point. Thomas Machin continued to focus on the chain and chevaux-de-frise, and Henry Champion and Abijah Savage put their energy into the Fort at West Point and its outlying redoubt and water batteries. Threads of continuity now existed between the old and new commanders and engineers.

Parsons, in his role as garrison commander, continued to exhort his command to make West Point defensible. Although Colonel Kościuszko stayed in the background during his first few weeks there, he was available to Parsons during the dispute with La Radière. Work on the fortifications continued, although it almost came to a complete halt at the end of March because of a shortage of troops to perform labor. Alongside Parsons's Brigade, the 5th New York Regiment (266 officers and men) under the command of Colonel Louis DeBois, Colonel Moses Hazen's 2nd Canadian Regiment (271 officers and men), and Colonel Thomas Nixon's 6th Massachusetts Regiment (353 officers and men) were the regulars available for daily duties. There were nine regiments in the Highlands Department at this time, a total of 1,356 soldiers present for duty out of 2,744 soldiers assigned. In addition, Kościuszko commanded 177 artificers—carpenters and masons. Governor Clinton quickly replaced the departed militia with new levies. As a result, by 8 April 1778, the governor was able to write, "The works for the Defence of the River at West Point are now carried on with Spirit. I have large Detachments of Militia daily employed in this Service who with the Continental Troops exert themselves on this Occasion from which I have Reason to presume that were we well provided with Cannon we should soon be in a tolerable State of Defence there." Since the cannons left by the British at Fort Ticonderoga had not yet made their way to West Point, the shortage of artillery showed signs of becoming the true Achilles heel of the Department's fortifications.[20]

As the troops continued to work, and the governor searched for ways to transport cannons to West Point, General McDougall made his first tour of West Point with La Radière on 8 April 1778. In the afternoon they

20. Clinton to Lewis, 8 Apr. 1778, George Clinton, *Papers*, 3:149; "Weekly Return of the Corps under the Command of Major General McDougall," 13 Apr., and "Return of the Artificers at West Point Under the Command of Colonel Thadeous Kościuszko," 27 Apr., McDougall Papers, Reel 2, USMA Library; Nixon's would move to Fishkill in April and occupy the Upper Barracks; COL Moses Hazen's 2nd Canadian Regiment would be "quartered compact as near the Town as the Barnes will permit," McDougall's Orderly Book, No. 9, Huntington Library.

"viewed the Grounds in the rear of west Point."[21] Based on the reconnaissance, the new commander authorized work to begin on the three redoubts that would protect the most likely avenue of approach from the south: the low ridge line that rose abruptly from the Plain and roughly paralleled the Hudson due south toward Buttermilk Falls. These works, soon to be known as Forts Meigs, Wyllys, and Webb, were so placed that two of them (Meigs and Wyllys) could fire on any body of troops trying to approach West Point from the south along the heights adjacent to the river. Between the ridge and the hills to the west was a draw that led to the southwest corner of the Plain. Wyllys and Webb covered that approach. All three fortified positions provided depth to the defense by linking a redoubt on Crown Hill and the Fort on the Plain. As McDougall continued his planning session on the ground the next day, Quartermaster Sergeant Simon Giffin "was the first that layed a stone at the Brestwork" on "ouer redoubt" [Webb's].[22]

Starting out as breastworks and batteries, the works along the ridge between the Plain and Crown Hill followed the pattern of the previous fortifications in the Hudson Highlands. All three were oriented to the south, following the contours of the ridge. With foundations of stone, the ramparts were made primarily of earth, fascines, and timber. The foundations consisted of an exterior stone scarp wall to create a level footing for the parapet of timber and fascines or usually soil held in place by timber or fascines. If necessary, a stone rampart was constructed on top of the scarp wall and natural terrain to elevate the parapet to the height necessary to control the surrounding countryside, to achieve suitable protection, or to increase the fields of direct fire for the artillery. Following the pattern that he would apply to most of the other forts and redoubts, McDougall named the northern-most Webb's Redoubt for the commander of the regiment—Webb's Additional (226 officers and men)—that built it: Samuel Blachley Webb. Mounting a single 4-pounder, it anchored the northernmost tip of the ridge.

The Wyllys Lines, named for Colonel Samuel Wyllys, used the men of his 3rd Connecticut (436 officers and men) to construct a sprawling breastwork with three angles and an open back; in the northern third of the work, an interior curtain oriented to the northeast gave the soldiers a fighting position of last resort. Initially an infantry position with no cannons, Wyllys provided a base from which soldiers could respond to threats against the battery to its south.

21. Entry for 8 Apr. 1778, McDougall, "Diary."

22. Entry for 9 Apr. 1778, Giffin, "Diary."

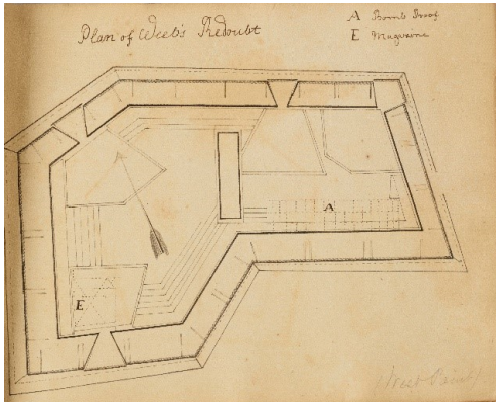

Image 9.1: Winthrop Sargent's "Plan of Weeb's [Webb's] Redoubt." (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

By 1782, Fort Wyllys had evolved from the "Wyllys Lines" into a redoubt and a southern battery. It was a pentagonal structure, although the ruins indicate a short sixth side in the northwest corner, with a perimeter of approximately eighty-six yards. Captain Winthrop Sargent's sketch depicts one embrasure on the south side for a cannon to cover the approach up the ridge and, more importantly, to support the exterior battery that was part of the complex at Fort Wyllys. L'Enfant's sketch shows the redoubt slightly elevated, giving it command of the surrounding terrain and the battery. Sargent's sketch indicates that, as early as 1782, the redoubt contained a bombproof and a magazine.

The battery at Fort Wyllys is one of the most interesting at West Point. The stone scarp and rampart reflect the dry masonry technique. The parapets, 102 feet in length, were typically constructed of earth held by fascines and timber. Four embrasures were cut into the parapets, two in the southwest curtain and two in the southeast. The base of the parapets measures approximately eleven feet in the southeast and sixteen feet in the southwest. A quite novel aspect of the battery was the technique used to support the weight of the gun platform. Rather than laying the wooden platform directly on the earth or using heavy wooden timbers as sleepers, stone sleepers were constructed about two feet high and three feet apart. The airspace between these sleepers, and the excellent drainage, combined to prolong the life of the wooden platform beyond what was normally expected.

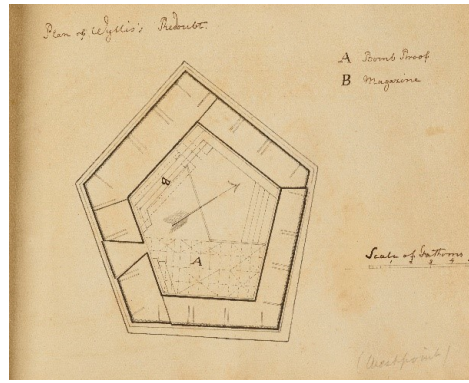

Image 9.2: Winthrop Sargent's "Plan of Wyllis's Redoubt." (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

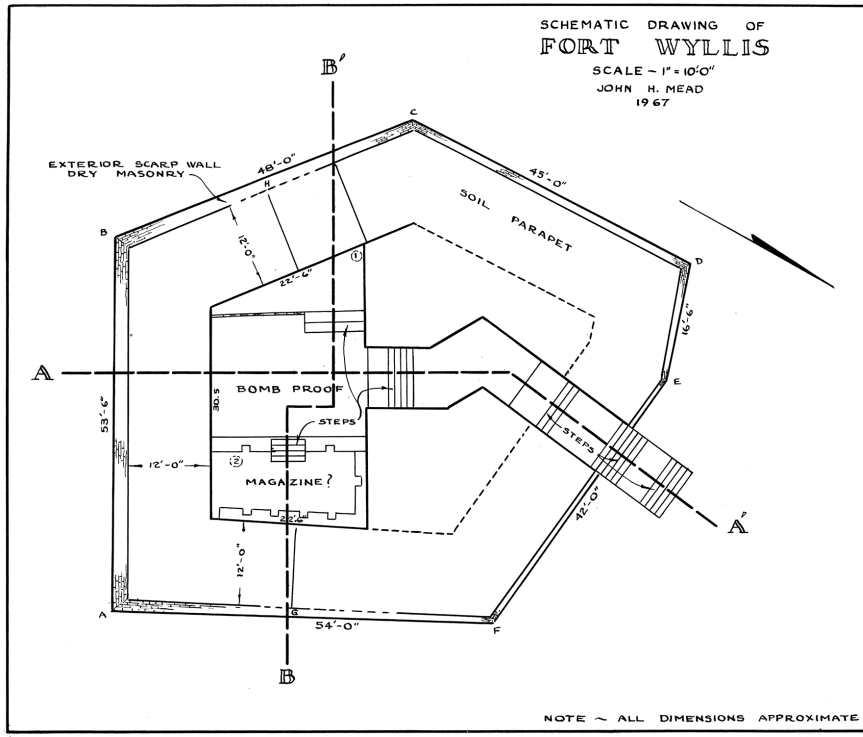

Image 9.3: *Schematic Drawing of Fort Wyllis*, by John H. Mead. (Courtesy of the West Point Museum Collection, U.S. Military Academy.)

Not forgetting the hills to the west, a huge epaulement, a wall to protect the gunners, was built on the western side of the battery. Measuring nineteen feet wide and fifty-five feet long, the surviving stonework is at least thirteen feet high at one point and was probably even higher when capped with fascines and timbers filled with earth.

Armed only with a single 4-pounder, Meigs's Redoubt was 150 meters southeast of Wyllys and sixty feet lower on a short steep-sided spur that sat directly astride the approach to the Fort on the Plain. Cannons in Little Dick's Battery closer to the Hudson could fire on advancing infantry and also at ships on the river, though ineffectually. The two works were constructed like their sisters and were open in back; together they dominated the spurs on which they were located. Colonel Return Jonathan Meigs's 6th Connecticut Regiment (464 offices and men) would absorb the initial attack on West Point should the British choose to attack along the river from the south.[23]

After meetings with Governor Clinton on 9 and 10 April and Captain "Machine" on the second day, McDougall took the governor, his French engineer, and Parsons "to view the Rock & crown Hills in the rear of our works." While works there were deemed "inexpedient" at that time, the group sanctioned those begun on the ridge line closest to the Plain. The next day McDougall charged La Radière "to report a proper plan to finish the works & the probable places the Enemy will Land at on the west Side."[24] McDougall was exploiting the Frenchman's recognized understanding of the science of fortifications before turning the construction over to Colonel Kościuszko, whom he had become convinced had more practical and people skills. McDougall now had a plan for West Point.

Armed with a plan, the next day, 11 April, General McDougall fixed responsibility for the construction of the series of redoubts and batteries on Crown Hill, the Plain itself, and the ridge line between it and the dominating hill. Reversing himself about the possibilities of fortifying the former, he supported Colonel Rufus Putnam's earlier decision to have his 5th Massachusetts Regiment build a redoubt on Crown Hill, which had started as a "larm post" on 4 April. He now considered it "the most commanding

23. Map, "West point and its dependancies on the River Hudson. 1778"; "A Return of Ordinance," 28 June 1778, James Walker File, USMA Library; "Weekly Return of the Corps under the Command of Major General McDougall," 13 Apr. 1778, McDougall Papers, Reel 2, USMA Library. Generations of the Meigs family served in the U.S. Army and the U.S. Navy during the American Revolution, the Civil War, World War II, and the Vietnam War, including members of the West Point classes of 1836, 1863, 1940, and 1967.

24. Entries for 8–11 Apr. 1778, McDougall, "Diary."

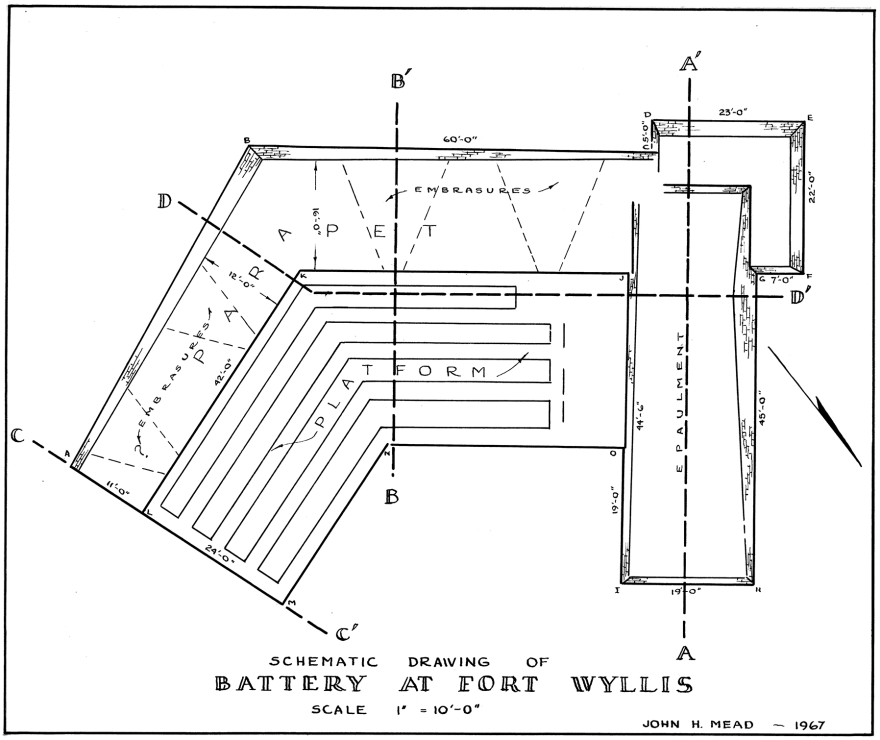

Image 9.4: *Schematic Drawing of Battery at Fort Wyllis*, by John H. Mead. (Courtesy of the West Point Museum Collection, U.S. Military Academy.)

and important of any that we can now attend to." In his "General orders" on that day he confirmed what most of them already knew as he announced his new plan to his soldiers: "[T]he Redout on ye Hill by Col. Putnam's Regt. is to be Cald & known by ye Name of Putnam's Redoubt. The Redoubt on ye Left Wyllys's Redoubt, on the East Side Meigs's Battery in the Rear of Wyllys's Webbs's Battery on ye Eminence near ye Barracks by the Name of Sherburn's Redoubt."[25] With the addition of Meigs's and Wyllys's Redoubts, Webb's

25. "We begun a fort for a larm post [alarm post] for our Regt," wrote Sergeant Major Benjamin Gilbert, Captain Joseph Morse's company, 4 Apr. 1778 (Symmes, *Citizen-Soldier*, 29, https://zlib.pub_a-citizen-soldier-in-the-american-revolution-the-diary-of-benjamin-gilbert-in-massachusetts-and-new-york.pdf). Zebulon Vaughn, private in Captain Joshua Benson's company, Putnam's 5th Massachusetts Regiment, recorded in his diary that, after arriving at West Point by boat, he remained on board through Saturday, April 4th, then was on fatigue duty "Building fort att west pint" on the 5th and, by the following Tuesday (7th), was camped in tents pitched "on the top of ae high hill." He reported being on fatigue duty most of the rest of April (Vaughan, "Journal," *Daughters* 113:107; courtesy of Paul Hudson, Cultural Resources Manager, West Point). Entry for 11 Apr., Savage, Orderly Book, Sherburne's Regiment, Connecticut State Library, and in

Battery, and Putnam's Redoubt, with a contingency plan for the regiments "in Case the Enemy should appear in Force against this Post," McDougall had taken a major step in protecting the works that La Radière had designed on the Plain and along the river: the Fort, Sherburne's Redoubt, and the water batteries. McDougall provided detailed instructions to General Parsons and Colonel Kościuszko so that they could now turn their full attention to making the newly agreed upon plan a reality.

Based upon conversations with La Radière, his principal commanders, including Colonel Rufus Putnam, and his own personal reconnaissance, McDougall had broadened the scope of the defenses from the immediate area of the Hudson to the hills beyond the Plain. The transformation had literally come overnight—the night of 10 April—as the commander acquiesced in Putnam's decision to fortify Crown Hill, which he had just that day classified as an "inexpedient" measure. He wrote to Washington: "Heights near it are such, that the Fort is not tenable, if the enemy possess them. For this Reason we are obliged to make some works on them. It will require 5,000 men effectually to secure the grounds near the Fort, which command it." While he made no mention of Kościuszko's role, it is possible that the Polish engineer made a recommendation. Regardless, McDougall continued to make La Radière a player. In fact, McDougall may have transmitted his engineer's "plan to finish the works" in his own hand, as his instructions to Parsons contained detailed engineering directions.[26]

He first addressed Putnam's Redoubt, the work that he thought would be the key to the defenses protecting the Fort on the Plain as it was in the best position to resist an infantry assault. Standing atop a rock cliff nearly fifty feet high, the west side of the redoubt faced the direction from which the enemy could safely make an approach. This curtain was the most vulnerable to artillery fire from the higher hills to the west, particularly Rocky Hill (a hill 250 meters west of present-day Delafield Pond). The type of cannonade the parapet was to withstand was not specified. However, a cannonade from 18- or 24-pounders was probably what McDougall expected. The parapets of the Fort on the Plain that faced the high ground to the west had been designed to absorb the fire of 24-pounders, and both it and

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Parsons, West Point Orderly Book, Huntington Library, https://hdl.huntington.org/digital/collection/p15150coll7/id/24176. Over time these were called forts.

26. McDougall to Washington, 13 Apr. 1778, Washington Papers, Ser. 4, Reel 48, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0461.

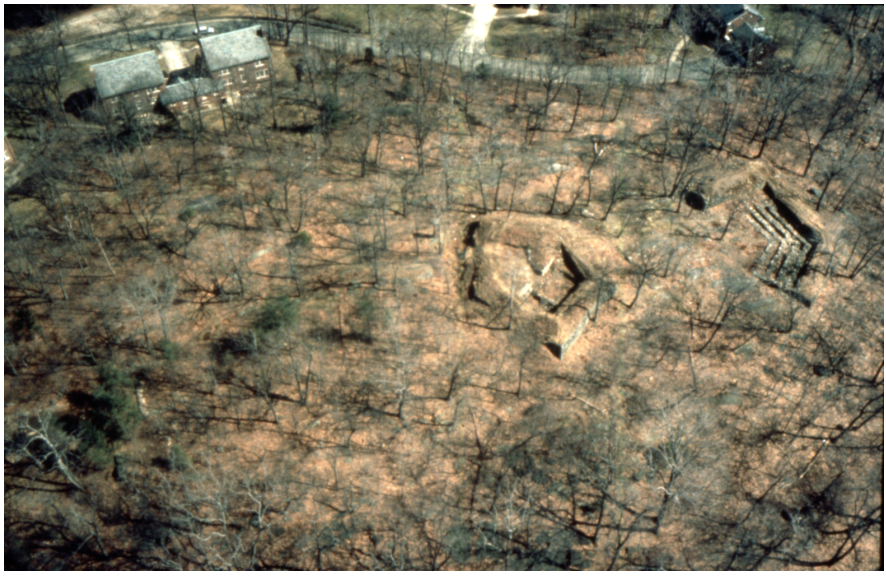

Image 9.5: Fort Wyllys and its battery, c. 1975–1976. (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

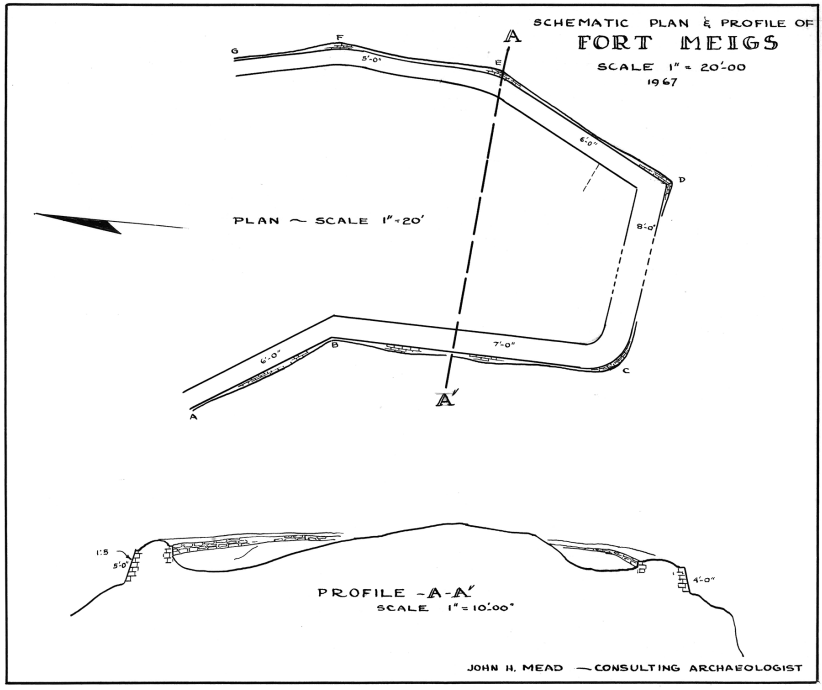

Image 9.6: *Schematic Plan & Profile of Fort Meigs*, by John H. Mead. (Courtesy of the West Point Museum Collection, U.S. Military Academy.)



Image 9.7: Fort Meigs, 2018. (Courtesy of Dry Stone Conservancy Inc.)

Putnam's Redoubt were expected to withstand relatively longer sieges than the other fortifications.[27]

So good was the position on Crown Hill that McDougall was even prepared to counter the risk of the British occupying Rocky Hill as La Radière had earlier with the plan for his Fort on the Plain by building up the western parapet. He summarized his logic: "Altho its secure in the rear, from escalade [use of ladders]; yet as it is Practicable to annoy the Garrison from Rocky Hill, the parapet in the rear, should be made cannon proof against such as may be fired from Rocky Hill, this parapet should be raised as much as possible with Facines and earth to prevent the ill consequences of splinters from the rocks." From his instructions for the rest of the redoubt, McDougall made clear the role that he saw for it: "The Eastermost Faces of this work must so constructed as to Command the Plain on which Col Putnams regiment is now encamped; and annoy the Enemy if he should Force the works now erecting by Col Megs and Col Willys regiments; as well as to command the northermost and Highest part of the Ground Last mentioned, which command the Plain in the rear of the Principal Work at west Point."[28]

On the eastern side, Crown Hill sloped gradually to the Plain. Artillery fire from the Fort on the Plain, Sherburne's Redoubt, and Webb's Battery covered that approach. The most accessible route, from the south, was covered by fire from Wyllys Redoubt and Webb's Battery, and, to a lesser extent, from Meigs's Battery. An attack from the northern side would have encountered terrain about as rugged as from the east, and flanking fire from Sherburne's Redoubt would have added to its toll. Moreover, remembering the British operations at Forts Montgomery and Clinton, surprise would be needed to subdue the fortifications at West Point before the militia could react as they had in opposing Burgoyne. Either the British had to sail upriver through the barriers and land troops north of Putnam's Redoubt to attack from that direction, or they would have to march around the steep hills and ridges west of it to make a northern approach. The latter meant the loss of at least one day, based on the time that the British required for their march on

27. McDougall to Washington, 13 Apr. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0461. For Kościuszko's perspective, see Storozynski, *The Peasant Prince*, 56–57. The type of cannonade that Fort Arnold was expected to withstand can be determined by comparing the thickness of the walls, twenty feet, as shown in "Champion's Plan," with the table in Scott, *Military Dictionary*, 284, which shows the required thickness to withstand various types of cannon balls.

28. McDougall to Parsons, 11 Apr. 1778, New York State Library (NYSL), #7525.

the forts on the Popolopen. More importantly, it meant the loss of surprise, which the British could not afford.

The location of Putnam's Redoubt, in short, would make it one of the two principal works in the West Point complex, and as such, it was to be capable of withstanding at least a ten-day siege conducted with relatively heavy cannons. Its principal purpose was to dominate the Plain upon which La Radière's Fort stood. Additionally, the new fort would help prevent the enemy from seizing the southern ridge line from which Webb, Wyllys, and Meigs were rising. Wyllys and Webb could be supported by cannon fire from Putnam and by mortar fire from Meigs (artillery fire was masked by the ridge between it and the fort). Putnam's Redoubt was not intended to deny the Hudson River to the British; it was to protect the other works that performed that function. In that respect its role was key.

Because the redoubt on Crown Hill was so critical to the ultimate defense of West Point, McDougall entrusted its construction to an experienced military engineer, Colonel Rufus Putnam, commander of the 5th Massachusetts (401 officers and men). Self-taught, Putnam was not handicapped by his lack of formal education. As a young man he had been able to assist in the construction of fortified positions around Lake Champlain during the French and Indian War, following which he built mills, farmed, and worked along the Mississippi River as a surveyor. During the siege of Boston, it was Putnam who had recommended that chandeliers (heavy timber frames in which gabions, fascines, and bales of hay were fitted to create moveable breastworks) be used to erect fortifications on the frozen ground of Dorchester Heights. His suggestion made a significant contribution to American success in March 1776. As a reward for his efforts, Washington and Congress promoted Putnam to the rank of colonel and made him acting chief engineer of the Continental Army. Congress failed to give the new chief a realistic function because it had not yet created the Corps of Engineers. Consequently, Colonel Putnam resigned the appointment and in November took command of the 5th Massachusetts Regiment—a post he would hold for most of the war. In March and April 1778, Putnam was certain that Washington had ordered his regiment of almost 350 officers and men to West Point so that he could "Lay out and Superintend the Fortifications necessary to be constructed there for the defence of that important post."[29]

29. Biographical information taken from Putnam, *Memoirs*, 75, https://archive.org/details/memoirsofrufuspuooputnrich/page/74/mode/2up; Boatner, *Encyclopedia*, 904–5.

Beyond building Putnam's Redoubt, the role that he would actually play would have to be worked out with McDougall and Kościuszko.

With construction underway on the nearby hills, the redoubt La Radière had sketched in his first drawing, now designated Sherburne's Redoubt, was the next fortification that McDougall wanted built. Colonel Henry Sherburne's Additional Continental Regiment from Connecticut, with some 236 officers and men, would be charged with the construction of the redoubt that would bear its commander's name. McDougall and La Radière modified the original plan for a square redoubt for one with a rampart twelve feet thick and a ditch eighteen feet wide, connected to the Fort by a low parapet, also twelve feet thick and topped with palisades; this idea would later be abandoned.[30] In setting the priorities, McDougall assessed the location for the work as the "next principal Ground to be occupied for the safety of the Post." It was about 100 meters northwest of the fort on "the rising ground . . . near the NW corner of the long Barracks." The commanding general wanted the redoubt to be "capable to contain 120 men." Probably with La Radière's help, he specified:

> The west, North and east Faces, should be proof against Battering cannon & the South slightly palisaded to Guard against surprise. The westermost Face flanked by The Fire of Fort, must be ditched, and to mount Two pieces of cannon. The north Face strongly abatied. The parapet of the west face should be raised so high, if practicable as to cover the Garrison from the fire that may be made against it, from the Ground on which Col Putnam is now encamped This redoubt is so important, that it must be finished without delay.[31]

In his postscript McDougall added: "The west Face of the Redoubt to be Built near the long Barrack to be 18 Feet, the North & East Face 14 Feet." Echoing his engineer's earlier caution that "none stones must be in the banquette" of

30. "Champion's Plan." (Appendix C.) The twelve-foot rampart made it proof against 12-pounders, Scott, *Military Dictionary*, 284. A more contemporary manual on field fortifications, Pleydell, *Field Fortifications*, 15–16, called for ramparts slightly less thick for redoubts, saying that to withstand a 12-pounder they should be eight feet. He also wrote, however, that "to resist cannon shot, it ought never be made less than twelve feet." The penetrating ability of a 12-pounder that fired black powder and had a smooth bore was not much changed between Pleydell's and Scott's works, but accurate measurement of such things had been vastly improved by 1861; "Weekly Return of the Corps under the Command of Major General McDougall," 13 Apr. 1778, McDougall Papers, Reel 2, USMA Library.

31. McDougall to Parsons, 11 Apr. 1778, New York State Library (NYSL), #7525.

his fort, he ordered that "The stones to be Kept as much as possible from the upper part of the Parapet of the works."

From McDougall's perspective, the redoubt's great significance accrued from the fact that the chain would be fixed beneath it "in or near the Gap of the Rock, command by the Fire from the East Curtain of the works."[32] Sherburne's Redoubt would thus guard the obstacle and its covering batteries from an attack down the road that entered the camp from Washington's Valley leading to the Moore House should the British attempt a circuitous march like the one that they had made around Bear Mountain the previous fall. It was also insurance should the British run both the water obstacles and cannon fire between West Point and Martelaer's Rock to get to the landing site in the cove near the Moore House. Altogether, it would be difficult for the British to approach the Fort on the Plain over the two most dangerous avenues without a fight.[33]

While McDougall had not specifically named the water batteries, he understood their significance. The fact that "it would be some time before the work could be finishd to cover a Battery where the Capston is now fixed" forced Machin on 10 April to recommend that the chain be "under the cover of the Fire of the Fort."[34] In the original plan La Radière and Putnam had planned and begun work on four water batteries. McDougall directed that the work continue; in fact, he attached high priority to their completion: "The water Batteries now erected on the Point, to be completed as soon as posible; and Two cannon placed in each with the necessary shot and stores, placed near them. If any of the cannon to be placed there requiring to be proved, it must be done before they are brought into the Batteries." He also specified that Parsons build temporary magazines for ammunition in the Fort and "for that of the cannon, on the Batteries on the Point."[35] While the necessity of the water batteries would be challenged at various times, over the course of the spring the new engineer would continue their construction as the chain's first line of defense.

Faithfully following the last plan drawn by La Radière and staked out by him, the new team of Parsons, Kościuszko, and the assistants to the engineer

32. The last sentence of the original is missing; sentence added from Boynton, *West Point*, 64.

33. McDougall to Parsons, 11 Apr. 1778, NYSL; Duportail to Washington, 13 Sept., Washington Papers, Ser. 4, Reel 51, USMA Library.

34. Entry for 10 Apr. 1778, McDougall, "Diary."

35. McDougall to Parsons, 11 Apr. 1778, NYSL; entry for 10 Apr. 1778, McDougall, "Diary."

proceeded with the construction of the major work to protect the water batteries and thus the chain. In his last plan even La Radière had dropped the gigantic covered way that he had originally planned. While some foundations had to be crafted from stones, the soldiers and workmen constructed the ramparts of the Fort from earth, fascines, and timber instead of masonry. By 13 April, McDougall could report that "the Fort is by this Time so enclos'd as to resist a sudden Assault of the Enemy."[36] Carpenters carried out La Radière's plans for barracks and magazines within the walls of the fort that would become the headquarters for West Point by the end of May 1778.[37]

While spades began to turn the soil for the new works, and troops gathered stones, timber, and other construction materials, in his instructions to Parsons, McDougall next addressed logistics and procedures to be used if the British decided to attack the defenses. First, he wanted "a Temporary magazine" to "be built without delay on Col Putnams Hill; and full ten days provisions, of salt meat and biscuit for his regiment, deposited on the Hill as soon as it arrives at West point. This store must not be broke in upon, on any pretence till the Enemy appears in Force; and puts it out of Col Putnams power to procure supplies from West Point." McDougall would work quickly to supply these stores to Putnam, sending 30,000 (of 50,000) cartridges and "Salt Provisions" by the 17th, to be followed as soon as possible by 100 barrels of biscuits.[38] Next, he wanted any supplies on the Plain "to be removed into the Fort on the Enemy's first appearing in Force on the river, and no quantity left out at any time." Finally, he ordered that "Two small Temporary magazines for ammunition to made in the Fort for the present, to guard it against rain." Concerned about the possibility of a British "Expedition up the North river" in this "the most eligible Season," McDougall laid out his plan for defense, making it quite clear to Parsons that he expected the garrison to hold for ten days.[39]

36. McDougall to Washington, 13 Apr. 1778, Washington Papers, Ser. 4, Reel 48, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0461.

37. "Champion's Plan"; the drawing of Fort Arnold by Greenleaf follows the plan exactly. "West point and its dependancies on the River Hudson. 1778" renders the outline almost as faithfully.

38. McDougall to Clinton, 17 Apr. 1778, American Revolution, Box 4, USMA Library; McDougall to Washington, 13 Apr. 1778, Washington Papers, Ser. 4, Reel 48, USMA Library, Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0461.

39. McDougall to Parsons, 2 Apr. 1778, McDougall to Washington, 3 Apr., McDougall Papers, Reel 2.

He wanted Parsons personally to make the decision about "when to fire the Alarm." Once he ordered the signals given, Parsons was to make Crown Hill his command post "as the security of the Fort depends so much on the Heights in the rear, on which the greast force should be placed." With Putnam's Redoubt as the anchor point for the outer defenses, McDougall then prescribed that Parsons's regiments would take up battle positions in the redoubts that they were building; the "other two Companies [of Wyllys's and Meigs's regiments] with the invalids of the post and artificers, to Garrison the Fort under the orders of Major [Lieutenant Colonel Thomas] Grosvenor [3rd Connecticut]." For the next phase, McDougall dictated that, if the British should force the respective regiments of Meigs, Wyllys, and Webb

> from their works, it will be most advancive of the defence of the Hills which command the Fort, that those Corps retire to defend to the last extremity, the avenues leading to Col Putnams redout, and the Ground on which he is now encamped; unless some maneouvre of the Enemy should induce the Commanding officer of the Post to detach some of those corps for the security of Putnams redoubt.[40]

If Parsons had to send a force to counter a landing by an enemy expedition, he could take its members only from the three regiments deployed along the ridge since the loss of these positions "will not be so fatal to the post as his geting possession of the Fort, or Putnams redoubt."[41] McDougall made it quite clear that, in his mind, the key to the defense of West Point was Fort Putnam. If it were lost, the Fort on the Plain might no longer be tenable.

The instructions to dispatch troops to oppose the enemy or to place a body of troops along the avenues of approach indicate that McDougall did not intend for Parsons to sit passively behind his fortifications. On the contrary, the works were not only designed to provide artillery fire to protect the obstruction of the river but could also serve as positions from which a mobile infantry force could maneuver to defeat an attacker or parry his blows while awaiting outside assistance. However, with Washington and the Continental Army outside Philadelphia in April 1778, little or no help could be expected from the Main Army, and the garrison at West Point was too

40. McDougall to Parsons, 11 Apr. 1778, NYSL.

41. McDougall to Parsons, 11 Apr. 1778, NYSL; "Colonel Megs regiment, now at Robertsons [Beverley Robinson's] Farm, on Firing the Alarm, will repair to west point by the safest and securest passage." Entry for 11 Apr., Parsons, West Point Orderly Book, Huntington Library, https://hdl.huntington.org/digital/collection/p15150coll7/id/24176.

small to defend the works adequately in mid-April. Therefore, if a mobile infantry force were needed, it would have to come from the local militia and the Continental regiments already in New York.

If it was true, as claimed by Duportail, that the Continental Army would not be able to continue three months if the British should gain control of the Hudson, and if Washington was correct when he thought American control of the river was essential to survival of the Revolution, then success or failure for the American effort depended to a large extent on the militia of New York, New Hampshire, Connecticut, and Massachusetts. Although the defeat of Burgoyne and the presence of the main British Army in Philadelphia had relieved some of the pressure along the Hudson, a large British army still occupied New York City. The militia, often maligned, would have to continue to shoulder much of the responsibility for defense of the Hudson. As in the campaign against Burgoyne, its fate in 1778 would rest on citizen soldiers to rally around a core of Continentals.

American commanders expected the militia to perform four major functions in the defense of West Point. First, militiamen were to continue to play a significant role in the construction of the fortifications; for example, Colonel William Allison's Goshen Regiment had 114 officers and men doing fatigue duty there during March and April. The garrison commander relieved Colonel John Hathorn's Florida and Warwick Regiment from Orange County of "all Guards and Garrison duty" so they could be "imployed only in forwarding the work of the defence of this post." Hathorn's regiment would join Colonel Roswell Hopkins's 6th Regiment (Charlotte Precinct) from Dutchess County on 22 June cutting wood "Westward of Colo Putnam's Regt." and under Colonel Kościuszko's direction, working "in the Fort."[42] Second, they made up a substantial part of the garrison. Third, the citizen soldiers would provide the bulk of the maneuver units, outposts, and pickets connected with the defense of the post. Finally, they would have to raise any siege that the garrison might have to endure.[43] With so much depending on the performance of the various state militias, particularly with the possibility of a British offensive, McDougall and Governor Clinton tried to organize the units of the surrounding counties early in April.

42. "Returns of a Detachment of Colonel Allison's Regiment of Militia on Fatigue Duty at West Point in March and April 1778," n.d., George Clinton, *Papers*, 3:443; entries, 12, 22 June, Champion's Orderly Book, 3rd CT, Sheffield Research Files, USMA Library.

43. McDougall to George Clinton, 3 Apr. 1778, Clinton to McDougall, 5 Apr., McDougall to Clinton, 5 Apr., Clinton to Lewis, 8 Apr., J. Clinton to G. Clinton, 19 Apr., George Clinton, *Papers*, 3:128–33, 195–96.

McDougall realized that the only way he could hope to man the works under Parsons's control was to ensure that the militia from nearby Ulster and Orange counties, on the western side of the river, established an alarm system that was coordinated with his own headquarters on the eastern side at Fishkill. Such a system had to assure that as soon as the British moved upriver the alarm would spread to all the communities in the surrounding area. Upon hearing the alarm, each member of the militia would grab his musket and accoutrements, assemble at his alarm post, and move with his unit to the designated assembly point as soon as possible.[44] If all went well, enough units would arrive to fill the fortifications, to protect stores, to provide scouts and delaying forces along the routes leading to West Point, Fishkill, and Peekskill, and to constitute for General Parsons a mobile reserve at West Point that could blunt the initial enemy attacks against his works. Naturally such a system required Parsons to keep sentries and scouting parties as close to New York City as possible to provide the early warning that was needed.

Because of the potential threat, early in April, McDougall asked Governor Clinton to see to it that "the best arrangement be made without delay, to get our Militia out, in Case of an Alarm."[45] The governor checked the alarm system for his own state and then took it upon himself to request that Massachusetts and Connecticut prepare 2,500 men to respond when called for the defense of the river.[46] After these arrangements had been made, General McDougall issued instructions to the militia units. He directed that the local militia on the western side of the Hudson move, if necessary, to the "Support of General Parsons at West Point; or to take the enemy in rear, if they should attempt to set down before the works." Colonel Derick Brinckerhoff's 2nd Dutchess County Regiment would mobilize at Fishkill while the militia of Poughkeepsie would protect the Continental Shipyard and the gunboats being built there.[47]

In addition to the militia, McDougall called upon Continental regiments within reach to bolster the militia companies. General Washington had already agreed to relocate three regiments from the Northern to the Highlands Department. Initially, General McDougall planned to use Colonel James Livingston's 1st Canadian, Colonel Moses Hazen's 2nd Canadian, and Colonel Goose Van Schaick's 1st New York when they arrived from Albany

44. McDougall to Clinton, 5 Apr. 1778, George Clinton, *Papers*, 3:131–32.

45. McDougall to Clinton, 3 Apr. 1778, George Clinton, *Papers*, 3:130.

46. Clinton to McDougall, 5 Apr. 1778, George Clinton, *Papers*, 3:130.

47. McDougall to Clinton, 5 Apr. 1778, George Clinton, *Papers*, 3:131–32.

on his side of the river "for the Defence of the Stores and the Country." He would also use Colonel Thomas Nixon's 6th Massachusetts there after it arrived from the Purchase in Westchester County. Parsons himself would be able to call on Colonel Lewis Dubois's 5th New York assembling at New Windsor. Although the immediate threat would dissipate, McDougall would use the additional Continental regiments to help with the construction at West Point. While he was at West Point, Hazen's, Nixon's, and Dubois's regiments had arrived, raising the total number of Continental rank and file fit for duty from 800 to 1,092. By the 18th, with the arrival of Livingston's regiment, the number of military laborers rose to 1,356 and continued to increase to 1,755 added to the construction force by 9 May.[48]

When McDougall issued his instructions for the construction of the fortifications, he had, in effect, solidified the concept that would both deny the river to the enemy and assure the defense of the west bank of the Hudson. In his instructions to Parsons, the Scot had not made any significant changes in the tactics that would block British use of the river. The chain and the four water batteries, each of which was to contain two cannons, were still the primary means for accomplishing that mission, with the Fort on the Plain assisting and also protecting the rear of the batteries. In addition, the Fort was to protect the eastern face of Putnam's Redoubt from infantry assault. The only significant change in the plan for obstructing the river at West Point occurred before McDougall's visit; the floating batteries and gunboats had slipped to a minor role as the construction of the watercraft had fallen considerably behind schedule. Those that were on hand had greater value as transport than as implements of war. Correspondingly, the use of floating artillery lost emphasis in the plan for the defense of the Hudson. By 1781, there would finally be at least two gunboats on duty for the Department.[49]

48. Entries, 8, 11, 14 Apr. 1778, McDougall, "Diary"; "Returns of a Detachment of Colonel Allison's Regiment of Militia on Fatigue Duty at West Point in March and April 1778," n.d., George Clinton, *Papers*, 3:443; "Weekly Return of the Corps under the Command of Major General McDougall," 13, 18, 27 Apr., 3, 9 May, McDougall Papers, Reel 2, USMA Library; McDougall to Washington, 13 Apr., in Washington Papers, Ser. 4, Reel 48, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0461.

49. Wynkoop to Clinton, 2 Apr. 1778, George Clinton, *Papers*, 3:117; Parsons to Washington, 16 Mar., Hall, *Parsons*, 156; Washington to Parsons, 7 Mar., Washington, *Writings* (ed. Fitzpatrick), 11:35. References above point to progress on construction, while reports at end of year do not mention gunboats being available, report, Duportail to Washington, 13 Sept., Washington Papers, Ser. 4, Reel 5, USMA Library; two gunboats were ordered to "the Ferry" on 12 Oct. 1781, COL Hugh Hughes's Letterbook, 9 Oct. 1780-13 Apr. 1782, HM661, Huntington Library.



Image 9.8: *5th New York, 1777*, by Don Troiani, depicting a continental soldier of the 5th New York regiment led by Col. Lewis Dubois. (Courtesy of Don Troiani.)

Immediately after McDougall had given Parsons his instructions and concept for the conduct of the defense at West Point, he terminated his visit and rode back to his headquarters in Fishkill.[50] The planning for the initial tier of works at West Point was complete.

Based on McDougall's and La Radière's plan, the two most important posts in the complex at West Point were Putnam's Redoubt and the Fort on the Plain. Both forts were to withstand an enemy siege until the militia or the rest of the Continental Main Army could arrive. Each was to maintain a ten-day supply of provisions at all times.[51] McDougall and his engineers had designed the other works in the system to deny the enemy the use of the most advantageous avenues of approach to the chain and water batteries, to prevent surprise, to delay the enemy to gain as much time as possible for the arrival of outside assistance, and to cover the infantry approaches to the two anchoring works. Sherburne's Redoubt, Webb's Battery, Wyllys's Redoubt, Meigs's Battery, Little Dick's Battery, and La Radière's Fort would all protect the northern, eastern, and southern approaches to Putnam's Redoubt, while the latter would reciprocate by denying the Plain to the enemy. In other words, the various positions would be mutually supporting and reinforcing by fire, although they were not designed to assist each other with troop reinforcements, with the possible exception of Wyllys's Redoubt.[52]

Meanwhile, the fortifications that the engineers, soldiers, and artificers were building at West Point were following Vauban's ideal pattern and were a part of a trend toward detached works that had begun in Europe when resources allowed and terrain dictated. Like Namur (1692–1695), Landau (1702), Turin (1706), Quesnoy and Bouchain (1712), Freiburg (1713), and Schweidnitz (1747), West Point had become a complex of fortified strong points fitted to the terrain. It was designed to provide the same depth to the defense that Vauban had sought in the latter stages of his career. Each of the strong points was, in a modern sense, mutually reinforcing by fire. Only the

50. Entry for 11 Apr. 1778, McDougall, "Diary"; McDougall to Washington, 13 Apr., Washington Papers, Ser. 4, Reel 48, USMA Library, also Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0461.

51. McDougall's instructions to Parsons made it clear that all the other forts and redoubts were built to protect the Fort on the Plain. At the same time, Putnam's Redoubt was expected to be able to withstand a ten-day siege, and soldiers were to defend the works to the "last extremity," McDougall to Parsons, 11 Apr. 1778, NYSL.

52. Malcom to Washington, 30 July 1778, in Washington Papers, Ser. 4, Reel 51, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0221.

Fort and Putnam's Redoubt were to hold to the end. La Radière had made his Fort the central element and, like Vauban, had designed it to be "larger & stronger" so that it could serve as the post's citadel, capable of withstanding a "Regular Siege" and cannon fire from the western hills.[53] McDougall and La Radière conceived the remainder of the works as positions that would delay, disorganize, and canalize an enemy attack, while the maneuver units of the garrison moved to blunt or halt the enemy assault until forces from outside the area could concentrate and close to repulse the attacker.

Although most of the weaknesses in the defense had been eliminated with the changes incorporated in McDougall's instructions, a few remained. The most glaring deficiency was the failure to provide for the defense of the chain's anchor-point on the eastern side of the river. During the early part of 1778, the eastern side of the Hudson remained as neglected in the plans to defend the river as West Point had been until that year. Other defects in the system were not nearly as important as the oversight relating to Martelaer's Rock, but they were potential sources of danger. For instance, a ring of hills lies to the west and southwest of the high ground upon which Putnam's Redoubt and the other works were being built. Those hills dominated the new positions the Americans were preparing, and British artillery placed upon them could have made those works untenable. While McDougall had directed that the walls at Putnam's Redoubt be raised to protect against cannon fire from the west, the only adequate way to defend the new positions would be to place another ring of supporting fortifications on the high ground that posed the new threat. McDougall and his subordinates at West Point had been so

53. La Radière's "The Memorial," 3. In *The River and the Rock*, 206, Palmer wrote, "As it had evolved, West Point was a fortress far ahead of its time. The urgings and efforts of engineers trained in the European school to create a single massive work had failed; Yankee ingenuity 'abetted admittedly by Continental poverty and a Polish engineer' had devised a system of outlying forts depending upon depth, mutual support, and use of terrain to defeat a besieger. Such a system would not come into vogue in Europe until the nineteenth century, when citadels like Metz and Sedan and Verdun would be constructed. Those vast complexes were on a much larger scale, of course; so, too, however, were the sizes of the armies involved. West Point, the Gibraltar of America, was a prototype, a forerunner of things to come." Palmer may have given West Point too much credit as a prototype since detached works were used in fortresses in Europe and even in colonial America, Waddell and Bomberger, *The French and Indian War*, 42, 44–45, and Duffy, *The Fortress*, 83. In his critique of Palmer's interpretation in that work, 282, Christopher Duffy argued that the works at West Point had been vulnerable to a British siege, as "[t]here was a dangerous plateau of level ground on the west bank [the Plain], . . . the works were perilously scattered, and the parapets of some of the strongpoints were surprisingly low." Also see Duffy, *Fire and Stone*, 67–72; Herman, *Ramparts*, 98–104, 172; and Roberts, *American Forts*, 11–12, 51, 56, 89.

concerned about the western hills that they had climbed Rocky Hill to determine whether that particular feature should be fortified. Perhaps McDougall decided it would be enough of an accomplishment to complete the work currently planned for the garrison in the time remaining during that season. With the design of the ramparts most likely to take the brunt of British fire, he had hedged against the risk. Since redoubts on the distant hills would be out of effective supporting range from the Fort, he obviously thought it best to fortify only the closer hills first, ruling out the more distant as "inexpedient" for the time being. In fact, he wrote Congress: "The Position of the principal work is far from being secure and independant. It is commanded by Heights in Chain for some distance, the nearest not more than half a Mile."[54] To take care of this immediate problem, Putnam's Redoubt would be the westernmost fortification built in 1778; others would follow.

The final defect in the system was beyond the control of anyone in the Highlands Department. Reliance on the militia and the constant turnover of militia and Continental units at West Point had the potential for confusion and lack of familiarity with the garrison's respective posts if the British should suddenly appear without warning. McDougall and Clinton had taken steps to provide early warning against a British attack, but so had the defenders in October 1777. The ability of the British to gain tactical surprise could not be overlooked.

The work of McDougall's subordinates, his approval of their plans, his added instructions, and the arrangements that had been made with the militia all combined to constitute a solid framework for the defense of the Hudson. Having made the basic decisions concerning the work that had to be done, Samuel Parsons, Thaddeus Kościuszko, Rufus Putnam, and Thomas Machin could now continue the work of implementing them.

By 13 April 1778, work at West Point was proceeding so smoothly that Major General McDougall optimistically wrote General George Washington: "I have lately been three Days at West Point, the Fort is by this Time so enclos'd as to resist a sudden Assault of the Enemy. But the Heights near it are such that the Fort is not tenable, if the enemy possess them. For this Reason we are obliged to make some works on them."[55] While the work on the Fort, the water batteries, and the heights to their south and

54. McDougall to Congress, 22 Apr. 1778, McDougall Papers, Reel 2, USMA Library.

55. McDougall to Washington, 13 Apr., Washington Papers, Ser. 4, Reel 48, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0461.

west continued under Colonel Thaddeus Kościuszko and his five companies of carpenters (123 men present for duty) and one of masons (6 present), Captain-Lieutenant Thomas Machin supervised the movement of the chain to West Point from New Windsor.[56]

There were, of course, problems that McDougall as the commander of the Highlands Department and Brigadier General Samuel Parsons as the garrison commander had to face as they began to fortify West Point. In the middle of April when it became obvious that the British had no intentions of moving upriver, Governor Clinton discharged the militia that had been a part of the construction of the Fort. Lack of workers, a shortage of timber, and a fire on 18 April that "consumed" about twelve of the "Hutts on the North East corner of the Fort" and threatened the fascines in the ramparts slowed progress.[57] Brigadier General James Clinton, in charge of the Fort on the Plain, complained on the 19th: "Our Fort is now allmost at a stand since the departure of the Militia. I hope you'll not detain them long; the different Regts. are at the Redoubts."[58] Unfortunately, a lack of forage for the teams of Henry Wisner began to affect the capability of the garrison to haul construction materials and to bring in the requisite ten days' supply of provisions. Putting first things first, Parsons sent the horses for the baggage wagons and the artillery away from the post to reduce the overall consumption on the existing forage and temporarily halted the attempt to build up his supply of provisions.[59]

At best, Parsons's measures were a stopgap, but they did allow work on the fortifications to proceed. The lack of forage in the rocky Highlands was to be a never-ending problem for the remainder of the war and would constantly retard the efforts of various commanders to improve the defenses of the Hudson. Despite these problems work continued, and soon one enthusiastic observer wrote to General Gates that, "if the enemy [will] let us alone two weeks longer, we shall have reason to rejoice at their moving this way."[60] The artificers and Continentals of Parsons's brigade (402 men fit for duty)

56. Kościuszko, "Return of the Artificers at West Point," 27 Apr. 1778, McDougall Papers, Reel 2, USMA Library.

57. J. Clinton to McDougall, 18 Apr., James and George Clinton Papers, MSS 16,794, microfilm, USMA Library.

58. J. Clinton to G. Clinton, 19 Apr., George Clinton, *Papers*, 3:195–96.

59. Taylor to Clinton, 17 Apr., George Clinton, *Papers*, 3:180; Gates to Congress, 23 Apr., McDougall Papers, Reel 2, USMA Library.

60. Troup to Gates, 1778, quoted in Haiman, *Kościuszko*, 48.

struggled to live up to this prediction, and on 4 May work had progressed to the point that Parsons could direct that the work "be henceforward Calld & known by the name of fort arnold" in honor of Major General Benedict Arnold, the hero of the Battle of Bemis Heights (Saratoga). Arnold's nemesis, Major General Horatio Gates, would arrive two weeks later to assume command of the Highlands Department. A "house" within this Fort now became the headquarters for the respective garrison commanders of West Point.[61] In the meantime, Machin had stretched the chain across the river.

As Colonel Thaddeus Kościuszko took up the burdens of the numerous construction projects at West Point, he depended on Captain-Lieutenant Thomas Machin to assemble and to install the chain across the Hudson from the cove beneath the Fort and its protecting battery to Martelaer's Rock. While Machin had been convalescing from the wound he had received in the battle at the Popolopen, he had been supervising the completion of the chain being forged at the Sterling Iron Works and the chevaux-de-frise at Pollepel Island.[62]

Peter Townsend, his foremen, and his workers at the Sterling Iron Works had been working "day and night without interruption" to complete the chain and its accessories in the fifty-nine days required by the contract. Firing the blast furnace, the seven fires for forging, and the ten fires for welding was a continuous task. Workers pushed wheelbarrow-loads of "fist-sized" chunks of iron ore, limestone for flux, and charcoal into the top of the twenty-five-foot-high "truncated pyramid" of stone to charge it for firing. Once ignited, the sandstone- or slate-lined egg-shaped interior, with the assistance of two water-powered wooden bellows, forty-eight feet long and seven feet high, produced enough heat to convert the ore into molten iron. The molten iron then flowed through the tapping hole from the hearth to the "sow"—a channel in the sand of the casting floor—to the casting

61. Entries, 30 Apr., 4 May, Savage, Orderly Book, Sherburne's Regiment, Connecticut State Library, and Robertson, "Orders Issued in Defense," in Robertson, *Archibald Robinson*. Parsons admired Arnold—"he has done more perhaps than any one man to restore their sinking liberties," Parsons to Thomas Munford, 22 Jan. 1778, Hall, *Parsons*, 139; Parsons's Brigade's strength, McDougall to Washington, 3 Apr., Papers of George Washington, Founders Online, http://founders.archives.gov/?q=brigades%2C%201778&s=1111311111&sa=&r=347&sr=.

62. Evidence, "Capt. Machin of Col. Lamb's Artillery," No. 5, 7th Inquiry; from New Windsor, Machin to the Honourable Committee of New Windsor, 22 Feb. 1778, Thomas Machin Papers, Manuscript Department, NYH; Knight, *New York in the Revolution, Supplement*, 49, https://babel.hathitrust.org/cgi/pt?id=coo.31924032737938&view=1up&seq=54; "The United States of America—To Thomas Machin Dr. for Travelling expenses and Money," Boynton, *West Point*, 72–3.

troughs on its sides. Pigs of iron, weighing 60 to 100 pounds each, formed in these troughs would then be reheated and pounded twice by water-driven trip-hammers at the forge to produce bars. From the bars, smiths shaped the two-foot-square links of two and one-quarter inch bar iron, the swivels, and the clevises and, at the anchory, the anchors for the chain and rafts. While the contract allowed an exemption from military service for 60 artificers, Noble and Townsend had stated that the requirement for their full operation was 183 men—55 of whom were wood cutters, 68 for the furnace, 66 for the forge and anchory, and 49 for the steel works and forge. For about $92,000, this work force would produce the Great Chain in accordance with the specifications in time to meet Machin's time schedule.[63]

As iron workers at the Sterling Iron Works were forging the links, clevises, and swivels from iron pigs for the chain, Captain-Lieutenant Machin concerned himself personally with the rafts upon which the chain would float. Although a pattern for the logs has not survived, he appears to have followed his successful design for the fifty-foot rafts used for the chain at Popolopen Creek. By 5 March he had obtained logs for the chain from New Paltz and initiated the process of drying them out that would be continued in April at Jew's (Lattintown) Creek near New Marlborough (Marlboro). Axe men had cut tree trunks of white pine or white wood (tulip), and forty teamsters and workers using yokes of oxen took four days to haul them to New Windsor, where carpenters shaped and sharpened both ends and covered the tips with iron to reduce drag in the river current and changing tide. They also waterproofed them with tar and oakum to extend their usefulness once they were in the river.[64]

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63. This brief summary of the iron making operation summarized from the following: Peter Townsend, "Peter Townsend on the Iron Chain made during the War of the Revolution for the defence of the Hudson at West Point," 10 Mar. 1845, USMA Library; Ransom, *Vanishing Ironworks of the Ramapos*, 7–13, 177–214; Hamburger, "Warwick and the 'Key to the Continent,'" unpublished paper, 1996, 10–12; Pearse, *Iron Manufacture of the American Colonies*, 47–48; Kury, "Sterling, Southfield and Augusta," *OCHS Journal* 24:5, 8–9; also see Dewey, "Fluid Loyalism at the Forge," *Hudson River Valley Review* 36, no. 2: 2–27.

64. Knight, *New York in the Revolution, Supplement*, 49; "The United States of America—To Thomas Machin Dr. for Travelling expenses and Money," Boynton, *West Point*, 72–3; see Sheffield, "The Chain and Boom," https://www.hudsonrivervalley.org/documents/d/guest/chainandboom; based upon the scale of the map, "West point and its dependancies on the River Hudson, 1778," the logs were longer than 30 feet. Based on the length of the logs in the boom, the logs for the chain rafts were sixteen feet in length based on later eyewitness accounts, Ruttenber, *Obstructions*, 136 fn. The best description of the process is in Daniel Carthy to Hugh Hughes, 27 Nov. 1780, Hughes Letterbook, No. 3, NYH. For

New Windsor became the marshaling point for all the chain's materials. The cause for that detour was the Highlands' topography. Sleighs carrying the heavy iron links could follow the valley floor all the way from the Sterling Iron Works northeast to New Windsor, whereas a direct line to West Point, although shorter, meant crossing the snow-covered ridges of the Highlands. For a time, Colonel Hugh Hughes stopped the iron shipments because of exorbitant freight charges by the teamsters, who were demanding £50 per ton of iron transported. The slowdown was even more practical from the standpoint that defenses at West Point were not far enough along to assure that the chain, if collected at New Windsor, would not be lost to a sudden British attack.[65]

Since Sherburne's Redoubt was still under construction and the battery in the cove at the western anchor point was well along, by April Machin had relocated a capstan to move the chain from just east of present-day North Dock to the protection of the guns of the Fort. The chain at the original location of the capstan would have been about four hundred yards west or upriver from the Point and at the narrowest part of the river. The width of the Hudson at that site was equal to the 500 yards of chain initially ordered from the Sterling Iron Works. Machin would now require 200 feet more of chain to bridge the 1,700 feet from the battery to Martelaer's Rock. Although an expedient measure at first, the location became permanent.[66]

By mid-April, the full 1,700 feet of the chain had arrived in New Windsor near the mouth of Murderer's (Moodna) Creek. Here Machin partially assembled it into sections of twelve links and a clevis ("thousand weight"), utilizing Samuel Brewster's forge as necessary, so that he could float it down the river. In the meantime, artificers combined the 16-foot logs by fours into rafts held together by twelve-foot timbers. Machin and his men began floating the rafts, loaded with sections of chain, down to West Point on 16 April and moored them along the bank of the river in front of Moore House across from Martelaer's Rock.[67]

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accounts of teamsters and for carpenters drying the logs, see Simms, *Frontiersmen of New York*, 1:627–28.

65. Hugh Hughes to George Clinton, 11 Mar. 1778, George Clinton, *Papers*, 3:21.

66. Entry for 10 Apr. 1778, McDougall, "Diary"; for a discussion of the varying widths of the river, see Sheffield, "The Chain and Boom," https://www.hudsonrivervalley.org/documents/d/guest/chainandboom.

67. Ruttenber, *Obstructions*, 142–43; Sheffield, "The Chain and Boom," 18–22; Boynton, *West Point*, 72–3; Knight, *New York in the Revolution, Supplement*, 49; the most definitive discussion of Machin's use of Brewster's Forge is in Diamant, *Chaining the Hudson*,

With the chain and rafts under control, Machin had to solve a last-minute crisis involving the forging of anchors to stabilize the obstacle once it was afloat. On 23 April, William Hawxhurst, a New York hardware merchant who was Peter Townsend's father-in-law, wrote that he had just been to the Sterling Iron Works and that "The Chane is going on fast." Unfortunately, the production of the anchors was at a standstill "'Owing (They say) to your Not Sending The wate of Them. I Hope that you will forward your instructions on The Receipt of This, as There Cant be any Thing Don Till you Send the wate of Each pertickeler anchor.'"[68] This urgent request necessitated a personal trip by Machin to the Iron Works on 26 April.

Work had been proceeding at West Point to prepare the site for the installation of the chain once it arrived. Machin had his carpenters construct huge vertical log cribs—mud blocks—filled with rocks and mud, which were anchored to the shore. Joining the capstan on the western shore—to adjust its tension to overcome the effects of river current and changing tide—workers readied midstream anchors to stabilize the chain and its rafts.[69] From 16 to 18 April, impeded by "high Winds," Machin had only been able to sink "one Block on the East side of the River" opposite the cove near the West Point in what he was "very confident" was "the best place."[70] On 20 April Machin reported the status of the project to General McDougall:

155, who did not provide the primary sources in footnotes. Samuel Brewster "established a saw mill at the foot of Forge-hill, now in the village of Moodna, and subsequently a forge and anchorage, which he conducted for several years, and at which he constructed in part the obstructions to the navigations of the Hudson (at Fort Montgomery and at West Point) during the war of the Revolution," "Samuel Brewster (1718–1802)—Find a Grave Memorial," https://www.findagrave.com/memorial/6056379/Samuel-Brewster. New York State erected a historic marker at the site of the forge.

68. Hawxhurst to Machin, 23 Apr. 1778, quoted in Ruttenber, *Obstructions*, 141n; "Expences Getting Down the Chain Logs with 40 Men, 4 Days," £6, Boynton, *West Point*, 72, https://www.google.com/books/edition/History_of_West_Point/3DcWAAAAYAAJ?hl=en&gbpv=1.

69. A sketch of the chain at Fort Montgomery in 1777 shows a system of pulleys, rollers, ropes, blocks, cribs, and anchors that were devised by the Secret Committee. Some have assumed that Machin used the same system at West Point. There is no evidence that this system was used in either place. In *West Point*, opposite 70, Boynton depicts the chain, as well as the log boom emplaced later in the summer, using what appears to be the planned Fort Montgomery system. Boynton mentioned "cribbage-blocks," the remains of which were still visible in 1863 in the cove at Marine Battery. Most likely these were the major anchor points for the chain and possibly the log boom.

70. James Clinton to McDougall, 18 Apr. 1778, Papers of George and James Clinton, Library of Congress, on microfilm, USMA Library.

> Lieut. Woodward, who I told you was at the Sterling iron works inspecting the chain, is now returned, and informs me that seventeen hundred feet of the Great Chain, which is more than equal to the breadth of the river at the place last fixed upon [in the cove beneath the Fort], is now ready for use. The Capson [capstan] and docks are set up in the lower place; the mud blocks are launched, and only wait for good weather to go down. . . . If the weather should be favorable, I am in hopes to take the chain down all fixed in about 6 days.[71]

The engineer was even moving cannons for the batteries that would protect the chain: "four cannon, twelve and nine pounders are at the beach, also waiting for weather to go down: four more will be ready by Saturday [25th]; and if no unforseen accident should appear, I shall be able to send down four cannon next week."[72]

After the chain arrived at the cove near the Moore House, Machin, with the assistance of Lieutenant Peter Woodward, 2nd Continental Artillery, supervised the final task of fixing the chain together with the clevises and moving it to the installation site. He had found Woodward to be "a gentleman well skilled in mechanical powers, and a person of steady application." With Woodward's help, Machin had projected that this work would be done on 26 April, but the completion of the anchors and other business delayed completion for another four days.[73] Almost anticlimactically, based on the reports that have survived, Machin and his workers spent 30 April "Getting the New Chain across" the river and securing it to the two shores. McDougall reported in his diary cryptically: "chain put aCross."[74] Machin would continue work refining the chain's system as "two Artificers drowned near the chain" on 1 May.[75] When Governor George Clinton learned that the chain was in, he wrote to Machin on 3 May and expressed gratitude that

71. Machin to McDougall, 20 Apr. 1778, Machin Papers, NYH, and in Simms, *Schoharie County*, 566.

72. Machin to McDougall, 20 Apr. 1778, Machin Papers, NYH, and in Simms, *Schoharie County*, 566.

73. Machin to McDougall, 20 Apr. 1778, Machin Papers, NYH, and in Simms, *Schoharie County*, 566; "The United States of America—To Thomas Machin Dr. for Travelling expenses and Money paid out in their service from January 1778 to Sept. 20 Agreeable to the Acount here under," Boynton, *West Point*, 73.

74. Ruttenber, *Obstructions*, 143; entry for 30 Apr. 1778, McDougall, "Diary."

75. Entry for 1 May 1778, Beers, "Journal," Connecticut Museum; Giffin, "Diary."

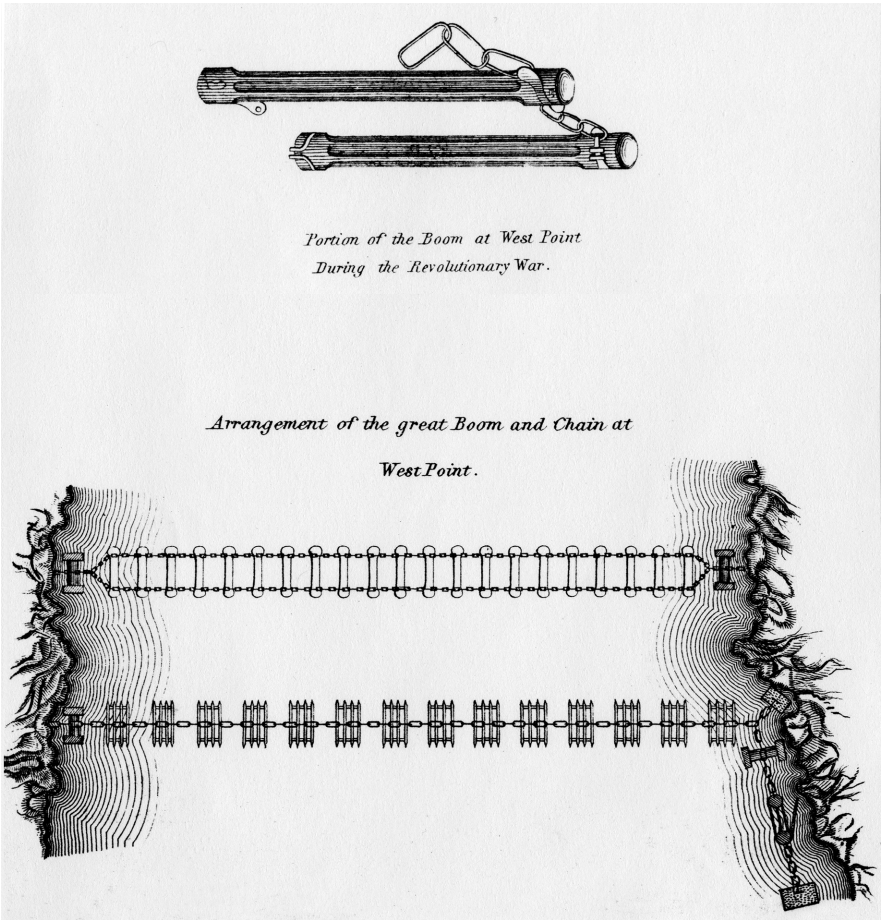

Image 9.9: "Arrangement of the great Boom and Chain at West Point," from *History of West Point*, by Edward C. Boynton. (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)



Image 9.10: The surviving links of the Great Chain at Trophy Point. (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

it had been accomplished "so expeditiously and so much to your satisfaction."[76] Machin thus began an annual ritual for the garrison of West Point of putting the Great Chain in the Hudson in the fall and removing it in the spring, which was done until 1782.

As of 30 April 1778, Captain-Lieutenant Thomas Machin with his chain had finally done what James Clinton and Christopher Tappen had envisioned almost three years before: He had blocked the Hudson River at West Point. From spring until fall for the rest of the Revolution, the Great Chain was now a feature of the scene in the Highlands. Through 1782, soldiers removed the chain each winter and reinstalled it each spring to avoid destruction by the freezing river. Making no mention of a boom, General William Heath described the process as the chain was removed on 14 November 1780:

> This chain was as long as the width of the river between West Point and Constitution Island, where it was fixed to great blocks on each side, and under the fire of batteries on both sides of the river. The links of this chain were probably 12 inches wide, and 18 inches long; the iron about 2 inches square. This heavy chain was buoyed up by very large logs of perhaps 16 or more feet long, a little pointed

76. George Clinton to Thomas Machin, 3 May 1778, New York State Library, 12213.

> at the ends, to lessen their opposition to the force of the water on flood and ebb. The logs were placed at short distances from each other, the chain carried over them, and made fast to each by staples, to prevent their shifting; and there were a number of anchors dropped at distances, with cables made fast to the chain, to give it a greater stability. The short bend of the river at this place was much in favour of the chain's proving effectual; for a vessel, coming up the river with the fairest wind and strongest way, must lose them on changing her course to turn the point; and before she could get under any considerable way again, even if the wind was fair, she would be on the chain, and at the same time under a heavy shower of shot and shells.[77]

As formidable as the chain was, it would not be the only obstacle that British ships would have to face later in 1778 once Kościuszko finished the supporting fortifications.

Major General Horatio Gates and his family arrived in Fishkill on 18 May 1778, and on the 20th he assumed command of the Northern and Highlands Departments from Major General Alexander McDougall. In only two months, with the able assistance of the garrison commander, Brigadier Samuel Parsons, McDougall had harnessed the genius of Machin, La Radière, Rufus Putnam, and Kościuszko to lay a solid foundation upon which the hero of Saratoga could build. For the first time, the west point of the Hudson was prepared to give Sir Henry Clinton a fight should he choose to challenge its defenses. Due to Machin's efforts, the chevaux-de-frise at Pollepel Island and the Great Chain blocked the North River. La Radière's Fort (now Fort Arnold), redoubt (Sherburne's), and four water batteries constituted the first line of defense protecting the chain and later the boom. McDougall's collaboration with La Radière had produced the next tier of works on the ridge dominating the Plain—Webb's and Meigs's Batteries and Wyllys's Redoubt—anchored on Rufus Putnam's Redoubt on Crown Hill. Gates and Kościuszko would now have the opportunity to renew the partnership at West Point that they had forged at Saratoga.

77. Entry for 14 Nov. 1780, Heath, *Memoirs*, 243, https://archive.org/details/memoirsofmajorgeooheatrich/page/242/mode/2up; Hughes expressed his pleasure to Heath that "the Chain is up," 19 Nov., Hughes's Letterbook, Huntington Library, 41.

CHAPTER 10

MASTERS OF THE RIVER: GENERAL DUPORTAIL ADDS TO THE DESIGN

On 19 May 1778, Major General Horatio Gates made his first visit to West Point as the commander of the Northern and Highlands Departments. Would Colonel Thaddeus Kościuszko, a protégé of Gates and one of the heroes of Saratoga, be able to develop McDougall's and La Radière's plan into a complex of works that exploited the potential of the site at West Point? By the summer of 1778, events would prove that Kościuszko had been able to work with a succession of departmental and garrison commanders to establish Fortress West Point as the formidable anchor to the defenses of the Highlands Department. At long last it appeared that the Americans would soon be able to assure control of the Hudson River.

With the departure of Colonel de la Radière for the King's Ferry at Verplanck's Point to plan Fort Lafayette, Colonel Kościuszko was now in charge of the construction project at West Point. Only two years younger than his rival, Kościuszko had both the formal education and recent experience as a military engineer to flesh out and add to La Radière's design for the defenses at West Point. Born in 1746 into an impoverished family of lesser nobility, he had graduated from the Royal Knight School in Warsaw and served on its faculty. In Paris, Kościuszko had entered the Royal Academy of Painting and Sculpture and received tutelage on military matters from instructors at the École Militaire and the engineering academy, the École de Mézières. His training in France came at a time when the French were not only beginning to experiment with the ideas of liberty and freedom, but when their military was debating new ideas on warfare and engaging in theoretical arguments over how they could best reform their army following the disaster at Rossbach, Germany, in 1757 at the hands of Frederick the Great. Many of the new concepts were reactions to the stylized system of warfare that had characterized the eighteenth century with its reliance on

formal sieges.[1] Both Kościuszko and La Radière would have been exposed to the fundamentals of military engineering and the new ideas that were emerging in French doctrine and organization.

Kościuszko, thrilled by the new concept of liberty, decided that the United States was the place to be. Borrowing money to pay his passage to America, he arrived in Philadelphia in August 1776. Upon his arrival, the Pennsylvania Committee of Defense employed him to assist with planning the Delaware River forts. His work on the Delaware earned him a commission from the Continental Congress as a colonel of engineers with a date of rank of 18 October 1776. Accepting the commission, Kościuszko joined General Gates in the Northern Department where he would participate in the turning point campaign against Burgoyne in 1777.

The new engineer, despite his European origins, had no practical combat experience until the British attacked and captured Fort Ticonderoga in July 1777. General Gates had ordered Kościuszko to join Major General Arthur St. Clair at that outpost to assist in its defense. Because St. Clair's command was understrength, he failed to occupy the high ground at Sugar Loaf Hill that towered over Fort Ticonderoga by almost 800 feet. When the British arrived, Brigadier General Simon Fraser placed four 12-pounders on this hill that he renamed Mount Defiance. This made Fort Ticonderoga untenable because it was now enveloped and subject to observation and fire from the commanding high ground.[2] Whether or not Kościuszko had been the first to point out the problem, he certainly witnessed the effects. After Ticonderoga, Kościuszko continued in the Northern Department where he positioned and constructed the field fortifications at Bemis Heights on the

1. La Radière, "A Sketch of a plan of Regulation to be followed in the management of the Works to be erected at King's ferry," 14 May 1778, Gates Papers, Reel 7, microfilm, USMA Library. For a good description of the military concepts that were being worked out in France between Rossbach and the French Revolution, see R. R. Palmer, "Frederick the Great, Guibert, Bulow: From Dynastic to National War," in *Makers of Modern Strategy, Military Thought from Machiavelli to Hitler*, ed. Edward Mead Earle, 49–53, 63–74; and Ropp, *War in the Modern World*, 98–102. For a short but excellent commentary on the impact of these ideas on the armies of the Revolution and Napoleon see Palmer, *Makers of Modern Strategy*, 102–30, and for the impact on Napoleon see David G. Chandler, *The Campaigns of Napoleon*, 136–144. For the most recent biography of Kościuszko, see Storozynski, *Peasant Prince*, 10.

2. COL John A. Williams, "Mount Independence in Time of War, 1776–1783," *Vermont History* 35 (Apr. 1967): 89–108.



Image 10.1 *Thad. Kosciuszko*, by H. B. Hall, ca. 1870. (Photograph. New York: G. P. Putnam & Co. Retrieved from the Library of Congress, https://www.loc.gov/item/2013646000.)

Saratoga battlefield, the site of the American victory that many historians have called the turning point of the war.[3]

From "the tolerable-sized log hut erected near the center of the plain of the point" that Kościuszko shared with Brigadier General Samuel Parsons, Doctor Timothy Dwight (future President of Yale University), and Major Samuel Richards, he had plenty of work to oversee as April and May progressed.[4] While Thomas Machin and his engineers could be proud of their remarkable month-old achievement of putting their chain across the river, the chain's eastern end was anchored on the remains of Fort Constitution. The island lay just as the British had left it the previous October. Although some military units camped on the island or nearby, nothing had been done toward refortification. It was ironic that nearly three years before, the island had been the mainstay of the Highlands' defense, but in 1778 it had been eclipsed by the commanding ground at West Point. General McDougall's instructions to Parsons on 11 April did not even mention the eastern side of the river.[5] No one could argue that the island was more important than West Point; the latter was clearly the dominant terrain. However, as the eastern anchor point for the Great Chain, the island was key terrain, and something had to be done to assure that it remained in friendly hands. Progress toward that end would occur, but it would not be swift.

General Parsons began the process of refortifying Fort Constitution on 30 May with a battery at Gravel Hill. In his orders that day, he directed that "Colonel Gratins [Greaton's 3rd Massachusetts] Regt is to Begin the Batteries on Graten's [Constitution] Island tomorrow morning Such Number as Can be Spared from other Regimental Duty are to be Dayly Employd on those works till further order."[6] Using earth held in place by timber or fascines

3. Information for the biographical sketch of Kościuszko is drawn from the following: Haiman, *Kościuszko*, 1–42; Boatner, *Encyclopedia*, 589–90, 1103–08; Ward, *War of the Revolution*, 1:405–31, 2:477–542; Frank Monaghan, "Kościuszko, Tadeusz Andrezej Bonawenture," in Johnson and Malone, *Dictionary of American Biography*, 10:497–98; Storozynski, *Peasant Prince*.

4. Richards, "Personal Narrative," 3:278.

5. McDougall to Parsons, 11 Apr. 1778, McDougall Papers, NYSL, #7525.

6. Colonel Greaton's Regiment had been ordered to West Point from Albany and arrived sometime in May 1778. The regiment was stationed on Constitution Island until its departure in July 1778; McDougall to Washington, 6 May 1778, Washington Papers, Ser. 4, Reel 49, Founders Online, https://founders.archives.gov/documents/Washington/03-15-02-0056; entries, 30 June and 20 July 1778, Glover, Orderly Book, USMA Library; entry, 30 May 1778, Savage, Orderly Book, Connecticut State Library; letter and accompanying map, Kościuszko to McDougall, 25 Apr. 1779, McDougall

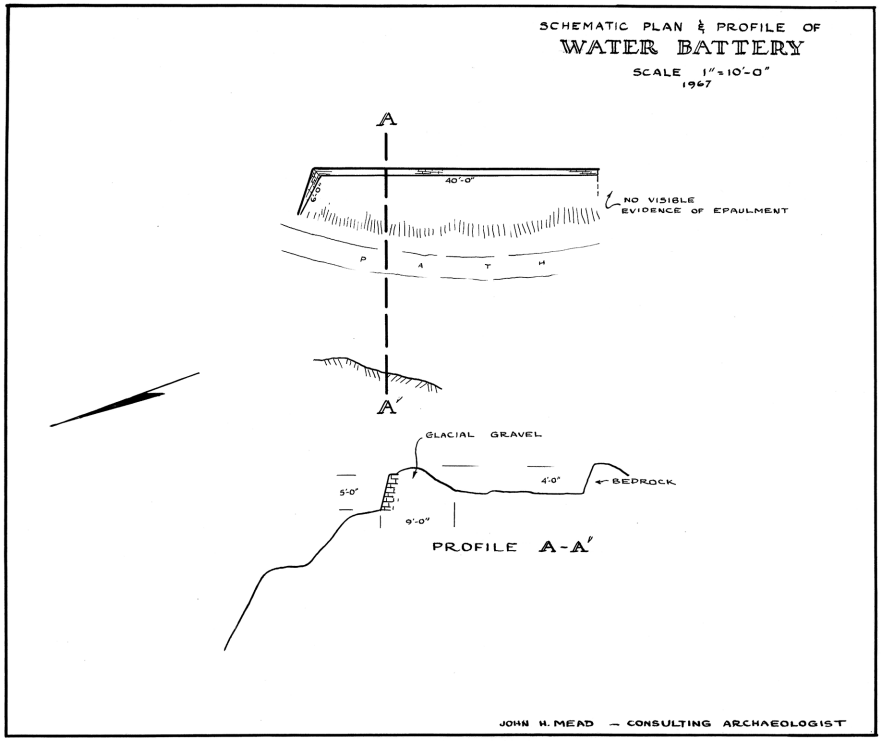

Image 10.2: *Schematic Plan & Profile of Water Battery*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

much as had been done with its predecessor, Colonel John Greaton's men of the 3rd Massachusetts completed the battery rapidly. By the end of June 1778, five 6-pounders and one 9-pounder occupied the work and covered the river to the south; unfortunately, because of their small caliber, none of these cannons was a real threat to British ships.[7] When Duportail inspected the island in September, he found only one battery, Greaton's.[8]

The water batteries were also far enough along to have cannons in them by 28 June 1778. With teeth now in the defenses, British ships would have first been taken under fire by the three 18-pounders in South Battery. Its

Papers, Reel 3, USMA Library; Sheffield, *The Fort That Never Was*, 20–21. Greaton's battery basically conformed to the battery shown on Villefranche's 1780 map.

7. Walker, "A Return of Ordinance," 28 June 1778, USMA Library; Malcom to Washington, 30 July 1778, Washington Papers, Ser. 4, Reel 51, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0221.

8. Report, Duportail to Washington, 13 Sept. 1778 (improperly filed under 13 Aug. 1778); Kite, *Duportail*, 96–101.



Image 10.3: The Water Battery, 2024. (Courtesy of Eric S. Bartelt, U.S. Military Academy Public Affairs Specialist.)

matrosses could fire with one of its cannons on ships attempting to land troops at the first landing site south of the bend in the river and of covering the river to the east with two cannons. Positioned high above the river on a cliff, the new battery's three 18-pounders were only capable of delivering plunging fire. Because the British could rapidly approach the bend in the river if they had a favorable wind and tide, South Battery could only annoy enemy ships determined to run the works. However, its timely cannonade and those of the cannons of Little Dick's Battery might dissuade a British expedition from coming ashore within its field of fire, particularly in view of the steep climb from the landing site that it covered to the level of the Plain.[9] So important did this site prove to be that Knox Battery, as it would be called later, would remain here until the early twentieth century.

Directly to the north of South Battery, Green (Water) Battery housed one 18-pounder and one 12-pounder, both oriented to the east. There was an epaulement at each end. The parapet, estimated from 3.5 to 4 feet thick, consisted of glacial gravel supported by timber or fascines on top of a stone

9. Walker, "A Return of Ordinance," 28 June 1778, USMA Library.

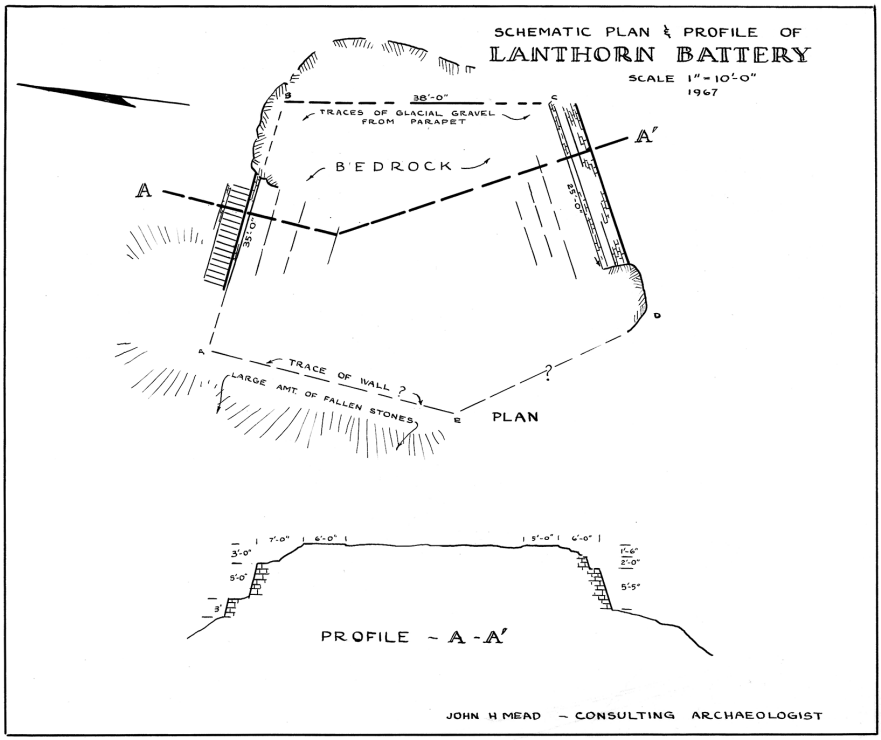

Image 10.4: *Schematic Plan & Profile of Lanthorn Battery*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

scarp.[10] To its north, Lanthorn Battery, on the Point, contained three guns: one 18-pounder, one 12-pounder, and one 9-pounder. The foundation was probably representative, comprising well-laid stone, and the parapet, most likely constructed with a wood or fascines lining filled with gravel, was apparently six to seven feet wide, not very thick considering the short range involved in the employment of the battery. From his very first "Sketch," La Radière had designed this battery as a horseshoe so that it could fire on both sides of the Point.[11]

10. Walker, "A Return of Ordinance," 28 June 1778, USMA Library. Mead, "Archaeological Survey of Fort Putnam," 74–75; evidence of an epaulement at the northern end only exists in the ruins today. Maj. Pierre L'Enfant's 1780 sketch of West Point shows only two embrasures in the battery, but they are not evident in the ruins, which consist only of the stone foundation, copy in Special Collections, USMA Library. Green Battery may have been named, and misspelled, for Maj. Gen. Nathanael Greene.

11. Map, "West point and its dependancies on the River Hudson. 1778," American Revolution, Box II, Connecticut Museum of Culture and History. The map shows the chain to be in place at the site chosen on 10 Apr. 1778, McDougall, "Diary," and it shows



Image 10.5: Lanthorn Battery, 2024. (Courtesy of Eric S. Bartelt, U.S. Military Academy Public Affairs Specialist.)

Like its sisters, Chain Battery had a stone foundation constructed of glacial stone built higher than the gun platform. The matrosses fired the three 12-pounders through embrasures in the parapet of glacial gravel and earth lined with timber or fascines.[12] Surprisingly, it was only about four feet thick, making it vulnerable to a ship's broadside. An epaulement at the western

the location of all the fortifications agreed to by McDougall on 11 Apr. 1778. In addition, the configuration of Fort Arnold and the water batteries is extremely accurate, as well as the location of the water batteries, while an ordnance return in May shows all four water batteries with cannons in them, indicating that they were completed prior to the end of May. McDougall gave no additional instructions for the construction of Fort Arnold, nor did he alter the plans for the water batteries in his visit of 8–11 Apr. 1778. The near-completed state of the fortifications and the presence of Fort Putnam and the forts along the Lusk Ridge would seem to indicate that this map was drawn in the fall of 1778.. Mead, "Archaeological Survey of Fort Putnam," 71–72; Walker, "A Return of Ordinance," 28 June 1778, USMA Library; Moses Greenleaf, *A Plan of West Point. 1779*.

12. Sheffield, *The Fort that Never Was*, 27; Greenleaf, "Plan"; this last source appears to have been overlooked by the original authors, but it clearly depicts three embrasures at Chain Battery; this is further supported by artillery returns from 1778 and 1780 showing three 12-pounders at this battery, Walker, "A Return of Ordinance," 28 June 1778, USMA Library. The only other known sketch of Chain Battery shows at least four embrasures in 1783.

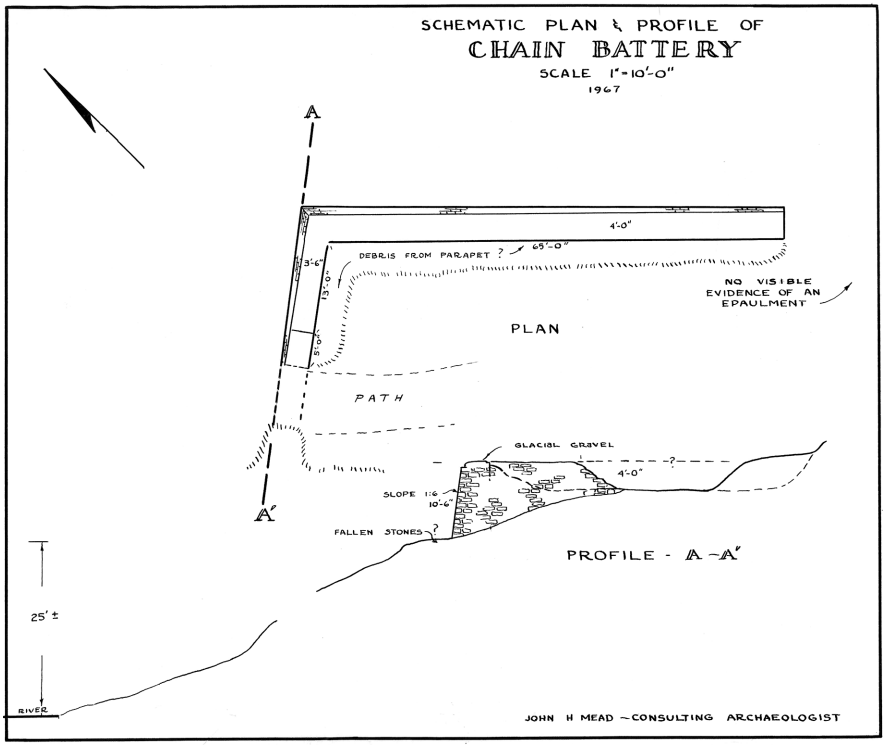

Image 10.6: *Schematic Plan & Profile of Chain Battery*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

end three feet six inches wide protected the cannoneers from enemy small arms fire.[13]

Over-watching the water batteries, Fort Arnold continued to take shape under the hammers of Colonel Kościuszko's artificers and the supervision of Brigadier General James Clinton and Captain Henry Champion. Its garrison would take a break on 16 May from the routines of construction "to be Paraded under armes on the Plain near the fort at one Clock to celebrate the Ratification of the treaty between the united States of america & the Kingdom of France." The matrosses fired "14 cannon" from Fort Arnold, joined by volleys of "three Runen firs" with blanks by the infantrymen there. After drawing a gill of rum apiece, the soldiers "marched up on the fort walls and gave three Cheears and marched of[f] Every Regt to his Quaters and

13. A 1780 map of West Point prepared by Maj. Jean Louis Ambroise de Genton Villefranche, senior engineer at West Point from Aug. 1780 to the end of the war, shows an epaulement at each end; copy in West Point Museum Collections, USMA.



Image 10.7: Work on the Chain Battery by stonemasons, Dry Stone Conservancy Inc., 2024. (Courtesy of Eric S. Bartelt, U.S. Military Academy Public Affairs Specialist.)

was Dismissed."[14] On 28 May, Gates was honored as the new departmental commander with "a Grand Salute" of 21–25 cannons, depending on the source, and three musket volleys. By June, nine cannons would constitute its armament: two 18-pounders, two 12-pounders, two 9-pounders, two 6-pounders, and one long 4-pounder on a "Travelling Carriage."[15]

With an occasional diversion and the possibility of a rapid movement to counter the British, during the months of May and June 1778, garrison life settled into a fairly predictable routine for the Continentals and militiamen of the garrison. From the Long Barracks near Sherburne's Redoubt, huts, and tents, each day able-bodied soldiers would fall out for guard or fatigue duty or to man "their Alarm Posts." On 1 May, for example, Colonel Samuel

14. Entry, 15 May 1778, Savage, Orderly Book; entry, 16 May, Giffin, "Diary"; Vaughan, "Journal," 103.

15. Walker, "A Return of Ordinance," 28 June 1778, USMA Library; entry, 28 May, 5 June, Giffin, "Diary"; Gilbert, *Diary*, 32; and Vaughan, "Journal," 108.

Wyllys's 3rd Connecticut, Colonel Samuel B. Webb's Additional Continental, and Colonel Henry Sherburne's Additional Continental regiments of Parsons' Connecticut Brigade supplied one subaltern, two sergeant, three corporals, and thirty-six privates for guard and one subaltern, four sergeants, four corporals, and eighty rank and file for fatigue duty on their respective redoubts or batteries. When not doing one of these duties, the soldiers were expected to learn "the Exercise"—tactical drill—so that they became "Expert in the use of armes & to Place them as the—Respectable footing & Points of Discipline." The Chevalier Noirmont de la Neuville, Inspector of Infantry for the Northern Department, first brought the Baron Frederick Wilhelm von Steuben's "Prussian" drill—"the New way"—to West Point. He selected 200 men "to pass through the exercises as a model." Major Samuel Richards, chosen as the commander for the battalion, found this to be "a pleasant part of duty" two days each week over the course of the spring. Simon Giffin and his comrades in Webb's Additional Regiment learned the new drill on 5 June.[16]

General Gates's use of the Robinson House on the east side of the Hudson necessitated that a sergeant's guard of one sergeant, a corporal, and twelve rank and file protect the commander and the Flying Hospital established there on 17 June. Doctor Malachi Treat of New York practiced his art on the sick from the Highlands in general and West Point specifically in the house, "the outhouse," and the "tents from Genl Burgoyne's Flying Hospital." A separate hospital for smallpox patients was located "behind" the New Hampshire huts to the northeast so that they "would have no communication with the rest of the Army."[17]

A larger force of four subalterns, four sergeants, and thirty privates extended the lines of the Americans to the vital King's Ferry below Peekskill, where Gates made his headquarters after 19 June. Occasionally morning roll call would feature the execution of a punishment decreed by a court-martial sitting at West Point or Fishkill; for example, on 30 May the soldiers of Sherburne's regiment witnessed Robert McKnight "Receive One Hundrd Lashes on his Naked Body."[18] On 5 June, General Gates ordered a "detachment of men" to sail to Fort Montgomery "to bury Such of that Brave

16. Richards, "Personal Narrative," 3:279; Garrison Orders, 1 May 1778, Parsons' Orderly Book, LOC; entries, 12, 18, 29 May 1778, Savage, Orderly Book, CSL; 5 June 1778, Giffin, "Diary."

17. Entries, 29 May, 17 June 1778, Gates, Orderly Book, microfilm, Roll 18, USMA Library; entry, 21 June 1778, Savage, Orderly Book, Connecticut State Library.

18. Entry, 29 May 1778, Gates, Orderly Book, microfilm, USMA Library.



Image 10.8: *6th Connecticut Regiment, 1780*, by Don Troiani. (Courtesy of Don Troiani.)

unfortunate Garrison who yet Remain unintered and to collect the Shot and Military Stores that Remain in & about the works." Major Richards and Doctor Dwight had visited the "bloody pond" in April and had found that "The water had receded leaving a number of the bodies entirely out of the water, while others lay covered at different depths. I saw many fine setts of teeth bare and skeleton like, by the destruction of the skin and flesh around. Mournfull and impressive reflexsions arose in my mind."[19]

Because the commanders considered Putnam's Redoubt the key to the defense of West Point, it had been getting special attention as well. On 9 and 10 May, Colonel Rufus Putnam's men of the 5th Massachusetts had moved two 4-pounder and one 12-pounder brass cannons to "Putnams hill."[20] Between 23 May and 22 June, General Parsons gave Putnam's Redoubt the priority for an additional fatigue party of 50 men on two workdays to bolster the 5th Massachusetts' full commitment of its 295 men present for duty. He exempted Putnam's soldiers from guard and other fatigue duties, so determined was he to "compleat the works on Putnams hill." On 22 June, he even added "one half of the Recruits" from Putnam's and Colonel Thomas Nixon's 6th Massachusetts regiments to the work force.[21] Armaments would continue to arrive, and by 28 June there would be three additional guns: two 6-pounders and one 4-pounder.[22] The pace picked up as the British began to evacuate Philadelphia. Parsons exhorted the soldiers to contribute to the "Speedy Completion of the works of this Post." On the 29th his orders reflected his imperative "that the works Should be Completed with the greatest Dispatch the Genl therefore Desires officers of Every Rank Both by their Example & authority to Expediate their works with Greatest Possible Dispatch."[23]

As Clinton's army moved through Pennsylvania and the Jerseys, Generals Washington and Gates positioned their forces in the Highlands Department to exploit opportunities. Brigadier General James Clinton's

19. Entry, 5 June 1778, Savage, Orderly Book, CSL; *Diary of Samuel Richards*, 56, https://tile.loc.gov/storage-services/public/gdcmassbookdig/diaryofsamuelricoorich/diaryofsamuelricoorich.pdf.

20. Entry, 9 May 1778, Savage, Orderly Book, CSL; 9–10 May, Vaughan "Journal," 107.

21. Entries, 12, 23, 24 May, 22 June 1778, Savage, Orderly Book, CSL; British HQ learned of this work on 28 May 1779, "Ft Putnam they are now fortifying that Spot," MAJ John André's "Intelligence," Clinton Papers, Clements Library.

22. Walker, "A Return of Ordinance," 28 June 1778, USMA Library.

23. "Weekly Return of the Corps under the Command of Major General McDougall," 16 May 1778, McDougall Papers, Reel 2, USMA Library; entry, 23, 29 May 1778, Savage, Orderly Book, CSL; 28 June 1778, West Point Orderly Book, vol. 5, Robertson, "Orders."

Brigade of Hazen's, Livingston's, DuBois's, and Nixon's regiments assumed responsibility for the east side of the river. Colonel Lewis Dubois's 5th New York occupied the barracks at Fishkill on 26 May, relieving the guards there to "join their respective Corps." Colonel James Livingston's 1st Canadian and Colonel Moses Hazen's 2nd Canadian Regiments made up the garrison at Continental Village. Colonel Thomas Nixon's 6th Massachusetts, bolstered by soldiers from Colonel Return Jonathan Meigs's 6th Connecticut (Parsons's Brigade), was spread all the way to the "Saw Pitts" in Westchester County. Dubois's regiment marched to join it near Peekskill on 18 June at the same time that Colonel John Greaton's 3rd Massachusetts escorted Lieutenant Colonel Ebenezer Stevens's "Corps of artillery," which had recently arrived by sloops from Albany, from Constitution Island to Continental Village. As the Continental regiments marched to White Plains to join the Main Army, militia replaced the infantry, and Captain Jonathan Brown's company of the 2nd Continental Artillery took over the duties on Constitution Island under the overall command of Captain Robert Walker.[24] While the primary attention of General Washington and his Main Army had shifted to New York City, West Point now constituted a post substantial enough—"properly attended to and secured"—to serve as a pivot for future maneuvers as the active seat of war returned to the Hudson River.[25]

The summer of 1778 had arrived hot and humid. Drummer Elijah Porter, for example, reported that 28 June on the battlefield at Monmouth "was the hottest I ever felt."[26] Washington wrote on 29 June of "the intense heat." Both morale and construction suffered. The consumption of rum in excess of the normal daily ration resulted in "the disorderly & unsoldierlike behaviour of some of the troops" on the 29th of June, which led to West Point's being placed off-limits to local liquor peddlers.[27] By that time the command in the Highlands Department had also changed. As early as 15 April 1778, Congress had decided to place Major General Horatio Gates, the victor of the battles of Saratoga, in command of the Northern and the Highlands Departments,

24. Entries, 11, 13, 17, 24 June 1778, West Point Orderly Book, vol. 5, Robertson, "Orders."

25. Washington to Gates, 29 June 1778, Washington to Heath, 28 Aug. 1778, Washington, *Writings* (ed. Fitzpatrick), 12:129, 365, Founders Online, https://founders.archives.gov/documents/Washington/03-15-02-0636, https://founders.archives.gov/documents/Washington/03-16-02-0441.

26. Porter, "Journal," 39, Connecticut Museum of Culture and History; Surgeon James Thacher made a similar assessment, entry, 4 July 1778, Thacher, *Journal*, 138; Lamb to Malcom, 4 July 1778, quoted in Leake, *Memoir*, 201.

27. Glover, Orderly Books, 3:369–70, 372, USMA Library.



Image 10.9: *General Louis Lebègue Duportail,* probably from life, c. 1781–1784, by Charles Willson Peale. (Reproduced by permission of Independence National Historical Park.)

which did not upset Alexander McDougall, whom Washington had already promised duty in the field with his division. Gates finally arrived at Fishkill on 18 May and relieved McDougall of the command on the 20th.[28]

Faced now with a world war against France, King George III recalled Sir William Howe in early 1778, replacing him with Sir Henry Clinton, and planned a new strategy that Lord George Germain, the colonial secretary, conveyed to him in a letter of 8 March 1778. If Sir Henry could not "bring

28. Washington to McDougall, 22 Apr. 1778, Washington, *Writings* (ed. Fitzpatrick), 11:298, and Founders Online, https://founders.archives.gov/documents/Washington/03-14-02-0537; Laurens to Washington, 17 Apr. 1778, https://founders.archives.gov/documents/Washington/03-14-02-0495; entries, 18, 20 May, McDougall, "Diary," USMA Library.

Mr Washington to a general and decisive Action early in the Campaign," he was "to relinquish the Idea of carrying on offensive Operations against the Rebels within Land" and revert to a war of posts designed "to provide for the Security of all Our American Possessions." Once he had provided for "the Defence of the Posts you may think necessary to maintain," he was to adopt a raiding strategy by using a joint expeditionary force "to attack the Ports on the Coast from New York to Nova Scotia, and to seize or destroy every Ship or Vessel in the different Creeks or Harbours" and their supporting "Wharfs and Stores, and Materials for Ship-building." In the formal orders of 21 March, the King ordered his new commander to abandon Philadelphia, where Howe had positioned himself the previous October while Burgoyne was fighting for survival at Saratoga, and withdraw to New York City, returning to the original seat of war.[29]

General Washington followed, fought the Battle of Monmouth Court House against Clinton's rear guard, and afterward moved the Continental Army to the Hudson. The steadfast performance of the American troops under such difficult conditions and against a determined British counterattack was a testament to the training that they had received under the hand of Inspector General Friedrich von Steuben the preceding winter at Valley Forge. Washington personally intervened in the battle, relieved Major General Charles Lee of command, and stabilized the front. After a battle that effectively ended in a draw, Sir Henry Clinton broke contact that night and by July 5th was back in New York City by July 5th. Washington would follow Clinton to New York from Paramus, New Jersey, moving the Main Army in two wings along the existing roads in northern New Jersey to Orangetown and Tappan and then to Haverstraw and King's Ferry at Stony Point. The immediate destination was White Plains. The Main Army was organized into five divisions: Major General Lord Stirling's (five brigades), General De Kalb's (two brigades), Major General Israel Putnam's (three brigades), Major General Horatio Gates's (three brigades), and Major General Alexander McDougall's (two brigades). The light infantry and the cavalry commanded by Brigadier General Charles Scott, Brigadier General Henry Knox's Park of Artillery, and the baggage train were integrated into the order of march as well.[30]

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29. Germain to Sir Henry Clinton, 8 Mar. 1778, George III to Clinton, 21 Mar. 1778, Sir Henry Clinton Papers, Clements Library; Gruber, *Howe Brothers*, 294, 299.

30. Samuel Frost, Orderly Book, 6th Massachusetts Regiment, 19 Sept. 1778, USMA Library; notes, General Orders, 15 Sept. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-17-02-0001.

From Peekskill, Colonel William Malcom, the deputy adjutant general of the Northern Department, would write to New York Governor George Clinton on 29 June, "In a few hours we shall move on to our old ground at W't plains—but our force is not such as to raise your expectations very high—its in your power to make us sufficiently formidable, to disturb the grand nest [by calling out the militia]." General Washington followed Malcom and established his headquarters at White Plains on 20 July, where he would command 18,138 soldiers fit for duty out of a grand total of 27,536 in the Highlands Department oriented on "York Island," on which there were 11,319 ("for Duty") out of 14,457 ("Total Effective") British, German, and provincial rank and file.[31] Both major armies had now returned to roughly the same positions they had held during late 1776, thus altering the situation at West Point. *Petit guerre*—partisan warfare—would dominate warfare in the Middle Atlantic Department for the remainder of the war with the battles of Stony Point and Minisink and the Sullivan-Clinton Expedition against the Iroquois as the highlights. The Hudson River was once again the focus for future operations.

With the Continental Army at White Plains interposed between West Point and the British in New York as Washington sought a way to cooperate with his new French allies against the city, security at the post relaxed, and so did the construction effort. When Washington ordered Parsons and his brigade of Wyllys's 3rd Connecticut, Putnam's 5th Massachusetts, Webb's Additional Continental, and Sherburne's Additional Continental regiments to join him at White Plains, he appointed Brigadier General John Glover to replace him as garrison commander in July 1778.

Born in Salem, Massachusetts, in 1732, Glover had risen to the rank of colonel of the Marblehead Militia Regiment in 1775 as a merchant and ship owner in his town. His ship *Hannah* became one of the first privateers in the nascent Continental Navy. He would command the integrated Fourteenth Continental Regiment, which included sailors, Blacks, Jews, Natives, and Spaniards, in Washington's words "bred from the sea." He was promoted to brigadier general in 1777 and commanded a brigade of four regiments of Massachusetts Continentals that would slow the advance of the British in the White Plains campaign at Pell's Point in October 1776. His troops would ferry Washington's army over the East River after the Battle of Brooklyn

31. Malcom to Clinton, 29 June 1778, George Clinton, *Papers*, 3:501; return, July 1778, Lesser, *Sinews*, 76–77; "State of the Rank & File of British, German, & Provincial Troops," 13 July 1778, Sir Henry Clinton Papers, Clements Library.

in August 1776 and the Delaware River leading to the Battle of Trenton in December. Washington would refuse his resignation in January 1778 because he had "too high an opinion of your value, as an Officer to do any thing, that may contribute to your relinquishing that Character. My earnest wish is, that you may continue" in his command.[32] Glover, ever the soldier, would acquiesce and report to the West Point as ordered.

By withdrawing the Continentals from West Point on 26 June in preparation for an attack on New York, the commander in chief left General Glover at West Point with a garrison, as he reported on 2 July, "consisting wholly of Militia, & not more than half of them Arm'd; the Artillery in a very bad Condition, very little Fixed Ammunition on the ground." To make matters worse, General Glover soon became very ill, probably from malaria. With the work already slowed by the summer heat, the new shortage of manpower and an ailing commander only added to construction difficulties. Nevertheless, Gates instructed Glover on 2 July "to give your whole attention to the Compleating of first, the Out Works at West Point, & then the Body of the Place. Col. Kuscuiusco cannot be too Vigilant in this important Service." On the same date, Glover reported that West Point was "by no means in a Defenceable Condition, the Works not near finished—Fort Putnam, on which the Strength of the Post depends is far from being Compleat, the Boom is not yet come down."[33]

While Washington did not record his reaction, all of the planned works were by this point under construction with cannons in all but Wyllys' Redoubt when he visited on 16 July. Forty "fine cannon & 1 Morter & a fine Parsell of shells and Cannon Shott" from Burgoyne's artillery train provided the core of this ordnance. Thirteen of them would fire a salute in

32. Entry, 25 June 1778, Savage, Orderly Book, CSL; Robertson, "Orders"; Washington to Glover, 18 July 1778, Washington, *Writings* (ed. Fitzpatrick), 12:167, Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0109. Biography of Brig. Gen. John Glover summarized from Billias, *General John Glover*, and "John Glover," National Park Service, https://www.nps.gov/articles/000/john-glover-sailor-soldier-patriot.htm.

33. Washington to Glover, 18 July 1778, Washington, *Writings* (ed. Fitzpatrick), 12:167, Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0109. Gates to George Clinton, 27 June 1778, George Clinton, *Papers*, 3:496; Washington to Gates, 29 June, 11 July 1778, and Washington to Glover, 18 July 1778, Washington, *Writings* (ed. Fitzpatrick), 12:129, 167, 195, and Founders Online, https://founders.archives.gov/documents/Washington/03-15-02-0636, https://founders.archives.gov/documents/Washington/03-16-02-0061, https://founders.archives.gov/documents/Washington/03-16-02-01091; Gates to Glover, 2 July, Glover to Gates, 2 July, Gates Papers, Reel 7, NYH; entry, 16 July 1778, Thacher, *Journal*, 139.

honor of him and the states.[34] Chain (three 12-pounders), Lanthorn (one 18-pounder, one 12-pounder, and one 9-pounder), Green (one 18-pounder and one 12-pounder), and South (three 18-pounders) Batteries contained a total of eleven cannons. Greaton's Battery at Fort Constitution had six guns (one 9-pounder and five 6-pounders), Fort Arnold contained nine (two 18-pounders, two 12-pounders, two 9-pounders, two 6-pounders, and one 4-pounder), and Sherburne's Redoubt had five (three 9-pounders and two 6-pounders). To the southwest, Putnam's Redoubt boasted six artillery pieces (one 12-pounder, two 6-pounders, and three 4-pounders) and overlooked Webb's (one 4-pounder) and Meigs' (one 9-pounder, one 6-pounder, and one 4-pounder) Redoubts with their total of four guns. With fifteen smaller pieces in the Artillery Park (four 6-pounders, three 4-pounders, and eight 3-pounders), West Point's total artillery came to fifty-six guns.[35] Washington changed nothing in the fortifications, but he did replace Glover. On 21 July, he directed Colonel William Malcom to "immediately to repair to Fort Arnold at West Point and take upon you the command of that post. You are to use your utmost diligince in carrying on and compleating the necessary Works."[36]

Colonel Malcom's Additional Continental Regiment (New York) arrived at West Point on 23 July. Malcom himself followed a few days later with his wife. Born in Scotland, Malcom had moved to New York in 1763 and had become a wealthy man as an import/export merchant. He had risen through the ranks in the New York militia and later had served as deputy adjutant general of the Northern Department under General Gates.[37] General Washington requested Governor Clinton to mobilize 500–1,000 New York militiamen and directed four New England militia regiments—Colonel Thomas Poor's Massachusetts and Colonels Increase Moseley's, Roger Enos's, and Samuel McLellan's Connecticut militia—to West Point to replace the "new Levies" for Nixon's, Putnam's, and Greaton's Massachusetts regiments who had stood in while he had focused on the British in New York. Washington sent General Glover and his Massachusetts brigade to

34. Entry, 25 May 1778, Giffin, "Diary"; Richards, "Personal Narrative," 4:363.

35. Walker, "A Return of Ordinance," 28 June 1778, USMA Library.

36. Washington to Malcom, 21 July 1778, Washington, *Writings* (ed. Fitzpatrick), 12:196, and Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0134; see Cubbison, *Historic Structures Report*, 19.

37. Baxter, *A Godchild of Washington*, 440–48, https://archive.org/details/godchildofwashinoobaxtuoft/godchildofwashinoobaxtuoft/page/n449/mode/2up?q=440. New York, *Documents of the Assembly*, 33:697.

Providence, Rhode Island, replacing the Continentals with Colonel John Patton's Additional Regiment (Pennsylvania) commanded by Lieutenant Colonel Aaron Burr, Malcom's second in command. The commander in chief also ordered Lieutenant Colonel Charles Armand Tuffin, the Marquis de la Rouërie, to take his German Regiment, which included German deserters and former prisoners of war, to West Point from Fishkill, where Malcom planned to use them to relieve the last detachments of Greaton's regiment on Constitution Island. The total of these troops present for duty was 1,615, of which only 179 were Continentals. Three artillery companies of Colonel John Lamb's 2nd Continental Artillery manned the guns: Captain Jonathan Brown's at Greaton's Battery and Captains Walker's and Isaiah Wool's at Fort Arnold.[38]

After inspecting the fortifications, Colonel Malcom wrote Colonel Lamb that the works were "in just as bad order, as even your imagination can conceive. . . . If the enemy do come, I shall fight them in the field, which is my only chance. The works are not worth a farthing; but I flatter myself they will never more pass Dobb's Ferry."[39] One of the problems that he highlighted to Washington on 30 July was that "The Out works are so many distinct Forts—they may support each other but in case of an attack—cannot reinforce—I remark this that your Excellency may callculate the Garrison Accordingly." Because he felt that even Putnam's Redoubt was vulnerable, he replaced the brass 12-pounder there with an iron 12-pounder.[40] On the 26th he had summarized his assessment in a report to His Excellency:

> It may be that this post is in good order—but not in my opinion—I can find but very few that know what they are here for. . . .

38. General Orders, 22 July 1778, Washington to Glover, 23 July, Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0154; Washington to Clinton, 28 Aug. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0154; Glover, Orderly Books, 3:384, USMA Library; Malcom to Washington, 26 July, 30 July 1778, Washington to Malcom, 27 July, Washington Papers, Ser. 4, Reel 51, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0189, https://founders.archives.gov/documents/Washington/03-16-02-0221, https://founders.archives.gov/documents/Washington/03-16-02-0201; Berg, *Encyclopedia*, 9–10; Crimshire to Lamb, 30 July 1778, John Lamb Papers, NYH, on microfilm, Reel 1, USMA Library; August returns, Lesser, *Sinews*, 81.

39. Malcom to Lamb, 2 Aug. 1778, quoted in Leake, *Memoir*, 207; entry, 27 July, Thacher, *Journal*, 140; Glover, Orderly Books, 3:384, USMA Library.

40. Malcom to Washington, 30 July 1778, Washington Papers, Ser. 4, Reel 51, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0221.

I am posting the Militia Regts on the Out Works and assigning particular duty to each—Mr Kosiesko tells me that—

300	men will finish Putnams Redt in 3 weeks	
200	Webbs	3
300	wyllys, Meigs & shereburns	2
300	Chain battery	3
1100		

But I beg leave to remark, That The Fort is in a very unfinish'd State—a Vast deal of work to do on the aproaches—not a little Occassional fatigue & Also the Garrison duty, which requires 80 men dayly—There is also a Block house proposed to be built on a Hill West of Putnams Redt which, commands the whole. . . .

The Two Small Continental Regts [Patton's and Malcom's Additional Continental Regiments] are absolutely in Rags—no Shirts—Shoes or Overhalls—There are some of those articles in store at Fishkill—I pray your Excellency will indulge me with an order for about 320 pair of each, & some blankitts.[41]

On 3 August, he sent a letter to General Parsons, his old brigade commander, in which he expressed his feelings even more candidly: "Here I am holding committee among spades and shovels. Why was I banished? However, I begin to be reconciled. . . . We are driving on downwards; the more we do, the more we find we have to do. Why did you not begin to move the mountain, rather than add to its magnitude. Send me news and newspapers, anything to keep us alive; this is actually t'other end of the world."[42]

As General Glover's and Colonel Malcom's critical reports reveal, Colonel Thaddeus Kościuszko, like La Radière before him, was finding it difficult in his first months to satisfy his respective commanders. Their assessments of the poor state of the fortifications could be construed as attacks on his efforts and even abilities. General McDougall had been even more direct as he awaited the arrival of General Gates: "I am far from being pleased with Mr.

41. Malcom to Washington, 26 July 1778, Washington Papers, Ser. 4, Reel 51, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0189.

42. Malcom to Parsons, 3 Aug. 1778, quoted in Hall, *Parsons*, 185.

Korsuaso's constructing the Batteries, and Carrying on the works, and I fear they will not answer the expectation of the Country."[43] General Washington would personally take action to investigate the growing problems.

Amid the concerns about the fortifications sometime during the summer, Captain-Lieutenant Thomas Machin's plan for a boom to protect the chain apparently never reached fruition. The Secret Committee had actually constructed the boom for use at Fort Montgomery but had never completed it before that fortress fell to the British. Work continued on it into the summer of 1778. Since the boom was already at West Point, it is unclear what General Glover meant when he reported on 2 July that "the Boom is not yet come down." The logs were about eighteen feet in length and fifteen inches in diameter with iron clips held in place by staples joining the logs at both ends. Fifty-foot chains of 1½-inch bar iron held together five logs in each of the twenty rafts required to cross the river. Links of 2-inch iron bar formed chains fifty feet in length with an iron swivel in the center to connect the rafts. Robert Erskine's Ringwood Furnace and the Sterling Iron Works had provided clips, 1½- and 2-inch bar iron, and bolts to supplement the ironwork done by the Livingston Furnace and the Continental Ship Yard.[44] It was to have been placed downstream from the chain, anchored in coves on both sides of the river, to buffer the impact of any northbound ship attempting to penetrate the chain. The boom may have been lost as artificers were attempting to float it in the summer of 1778, although no one noted the event.

As the campaigning season and British threat slipped away, the need for a boom may have diminished as well. The high maintenance costs of trying to keep the numerous logs afloat in both it and the raft for the chain probably doomed it. No maps (not even Machin's) show, or observers' accounts mention a boom actually in the river in or after 1778.[45] The commanders

43. McDougall to Clinton, 11 May 1778, George Clinton, *Papers*, 3:294.

44. Boynton, *West Point*, 78–79. Specifications for logs were both fourteen and fifty feet, minutes, 19 July, 1 Aug. 1776, Secret Committee to Gentln., 21 July, bill, Robert Van Rennselaer, 5 Aug., 26 Nov., minutes, Albany Committee of Safety, 6 Aug., Visscher to Yates, and note about Gilbert Livingston to Albany Committee of Safety for 120 logs, 14 Sept., G. Livingston to R. R. Livingston, 16 Sept., committee (Rensselaer and Wendell) to Beeckman, 18 Sept., papers of the Secret Committee, Washington's Headquarters; Clinton had reported on "Another Boom which we destroyed near Fort Constitution," enclosure 6 to Sir Henry Clinton to Howe (No. 69), 21 Oct. 1777, Dutchess County, *Year Book*, 21:111.

45. For a detailed discussion of the boom upon which this interpretation relies, see Sheffield, "What is Become of the Boom?," in the Sheffield Research Files, USMA Library, and at https://www.hudsonrivervalley.org/documents/d/guest/whatisbecome

also contributed to the present-day confusion by apparently referring to the combination of the rafts for the chain as the boom. Brigadier General John Paterson reported on 22 December 1778 that he could not "but be anxious for ye Fate of ye chain and the Boom." In his reply to Paterson's chronicle two days later of the attempts to pull the chain to shore at the Red (Moore) House, General McDougall asked: "[W]hat is become of the Boom?" Paterson assured him on the 25th, "The Boom lies at present where it was when you were here. Maj. Dobbs thinks it best to pay our attention to getting up the Chain Tho, he thinks that out of danger." He did not mention the rafts for the chain as such, but Kościuszko was clear on the 28th about them when he mentioned the amount of tar—"fifty Barrels"—needed for "the Logs of the Chain Boom and Bumproves [bomb-proofs]."[46] Although the boom was never used as intended, the possibility that it might have been placed in the river in an emergency may have contributed to the aura of invulnerability that Fortress West Point would acquire over the years.

With the battle of Monmouth now a distant memory, in September 1778, Washington turned his attention from New York City to the northeast. Beginning the march at 7:00 a.m. on 16 September and pausing at West Point and Fishkill, he moved his headquarters from White Plains to the village of Fredericksburgh (Patterson) and posted troops of the Main or Grand Army from there to Quaker Hill (Pawling) to West Point to Danbury, Connecticut. He planned to accomplish "two capital objects: 1st. the maintaining a communication with the divisions between you [Major General Horatio Gates at Danbury] and the North [Hudson] River, for mutual support and the

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oftheboom, figures 8–10; see also "The Chain and Boom," 7–8, Sheffield Research Files, USMA Library, and online at https://www.hudsonrivervalley.org/documents/d/guest/chainandboom. Also see Sheffield's article "Who Planned Fort Arnold?," *Hudson River Valley Review*. For more than 20 tons of iron in various forms and "Carting," see Messrs. Thomas Machin & John Nicoll to Robert Erskine, 21 Aug.–1 Nov. 1777, £5,000 11s.10½d., and about 32 tons of iron parts and shipping to Noble and Townsend, 6 Aug. 1777–28 Jan. 1778, £5,945 3s. 1d., Secret Committee and Boynton, *History of West Point*, 71. See Fig. 8.1, Thomas Machin, "To his Excellency George Clinton Esqr. Governr of the State of New York this Map of Hudsons River thorough the High Lands," Jan. 1778, Olin Library, Cornell University. A section of the Great Chain with thirteen links, a clevis, and a swivel is preserved at Trophy Point on the U.S. Military Academy's grounds. In 1855, Bishop's derrick dredged up near Constitution Island two logs, twelve feet in length and twelve inches in diameter joined by two links of chain that are likely from the boom; see Ruttenber, *Obstructions*, 139. They are now located at Washington's Headquarters, Newburgh, NY.

46. Paterson to McDougall, 21, 22, 24, 25 Dec. 1778, Kościuszko to McDougall, 28 Dec., and McDougall to Paterson, 24 Dec., McDougall Papers, Reel 2, USMA Library.

security of the Posts in the highlands. 2dly. The facility of moving farther eastward, to be in measure for opposing the enemy, in case they should direct their operations that way." First from the Reed Ferris and then the John Kane houses near present-day Pawling, Washington positioned his forces in an arc to respond to British operations in Rhode Island, Connecticut, and New York. The commander in chief articulated his strategy in a letter to Major General John Sullivan on September 12th: "I intend to place the whole [army] in such a position in a day or two, that they may either march to the Eastward, or be within supporting distance of the posts on the North River, as appearances may require." The potential "march to the Eastward" might have been necessary to aid Admiral D'Estaing's French naval squadron now in Boston or to support General Sullivan's force in Providence after their unsuccessful attack against Major General John Pigot's British garrison on August 29th. Washington would remain in the Fredericksburgh encampment until November trying to divine British intentions in a situation that he described to Richard Henry Lee of Virginia as the "designs of the Enemy, to me, are misterious—indeed totally incomprehensible—that they are preparing for some grand manœuvre, " until moving his army to winter quarters in Middlebrook [present-day Bound Brook], New Jersey.[47]

On 27 August 1778, Washington had ordered his chief engineer, Brigadier General Louis Le Bègue Duportail, to submit a report on the state of the works at West Point along with recommendations for improvements. Washington had received several pessimistic letters from Colonel Malcom with veiled concerns about Kościuszko's competence: "an *Engineer* is necessary" and "I coud wish your Excellency would be pleased to order proper Engineers and Mr. Erskine, to View their [artificers] work & report to your Excellency." Although he assured Malcom that he had always understood Kościuszko to be "fully competent to the Business," Washington nonetheless decided that a thorough inspection by a trusted and competent subordinate was necessary.[48]

47. Quoted in Jim Johnson, "Remembering the Revolution," Hudson Valley, 109, https://www.hudsonrivervalley.org/documents/401021/1055071/rrseptember2003.pdf/fe777130-f3ad-4a22-9dba-6eae808bf3db; Washington to Gates, 15 Sept. 1778, Washington to Sullivan, 12 Sept. 1778, and Washington to Richard Henry Lee, 23 Sept. 1778, George Washington Papers, LOC, http://memory.loc.gov/ammem/gwhtml/gwhome.html and FoundersOnline,https://founders.archives.gov/documents/Washington/03-17-02-0004, https://founders.archives.gov/documents/Washington/03-16-02-0634, https://founders.archives.gov/documents/Washington/03-17-02-0095.

48. Malcom to Washington, 26, 30 July 1778, Washington to Malcom, 27 July 1778, and Washington to Duportail, 27 Aug. 1778, Washington Papers, Ser. 4, Reel 51; Washington, *Writings* (ed. Fitzpatrick), 12:363 and Founders Online, https://

When Duportail reached the post on 9 September, he was not able to confer directly with Kościuszko as he had already departed for White Plains in response to a summons to appear at the court-martial of Major General Arthur St. Clair. While in Westchester County, Kościuszko also served as Major General Horatio Gates's second in his second duel with James Wilkinson at Harrison.[49] Duportail found a great deal to include in his report and thus summarized the state of the defenses in September 1778.[50] First, he generally concurred with the overall vision for the fortifications: "The works which are in hand at West Point and some inconsiderable ones, which it is necessary to add to them, will, with the help of the chain, perfectly fulfill the object which is proposed, that of hindering the enemy's remounting the North River." He was particularly pleased with the prospects for Putnam's Redoubt, now called "Fort Putnam, which is, as it were, the key of all the others may be rendered almost impregnable." While Rocky Hill "commands it, a redoubt there would make it very difficult for an enemy, even when master of it to bring heavy cannon there. Besides it would be too far to make a breach." He advocated bomb-proofs that would hold 150 of the 200-man garrison—about double what he was told that Kościuszko had proposed—to offset the possibility that the British might gain control of the high ground. To prevent an "escalade" or ground assault, he proposed raising the parapet higher on the sides facing the river and Fort Arnold, and "besides the palisades and chevaux-de-frise, abatis must be made in front."[51]

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founders.archives.gov/documents/Washington/03-16-02-0189, https://founders.archives.gov/documents/Washington/03-16-02-0221, https://founders.archives.gov/documents/Washington/03-16-02-0201. Col. Malcom belonged to General Parsons's brigade and was ordered to command at West Point in place of Brig. Gen. John Glover; see Malcom to Parsons, 3 Aug., Hall, *Samuel Parsons*, 185.

49. Washington to Gates, 11 Sept. 1778, Washington, *Writings* (ed. Fitzpatrick), 12:419–20; Washington to Malcom, 7 Sept. 1778, and Malcom to Washington, 10 Sept. 1778, Gates to Washington, 11 Sept. 1778, Washington Papers, Ser. 4, Reel 51, USMA Library and Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0618, https://founders.archives.gov/documents/Washington/03-16-02-0577, https://founders.archives.gov/documents/Washington/03-16-02-0605, https://founders.archives.gov/documents/Washington/03-16-02-0617. Washington had rejected Kościuszko's plea to allow him to be Maj. Gen. Gates's engineer, Nelson, *Gates*, 196.

50. Duportail to Washington, "Memoire on the works made in the Highlands," 13 Sept. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0637. This document was written in French, and the contemporary translation was dated simply "13th 1778." The document has been improperly filed under 13 Aug. 1778 in the Washington Papers. The document was also published in Kite, *Duportail*, 96–102.

51. Duportail to Washington, "Memoire on the works made in the Highlands," 13 Sept. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0637.

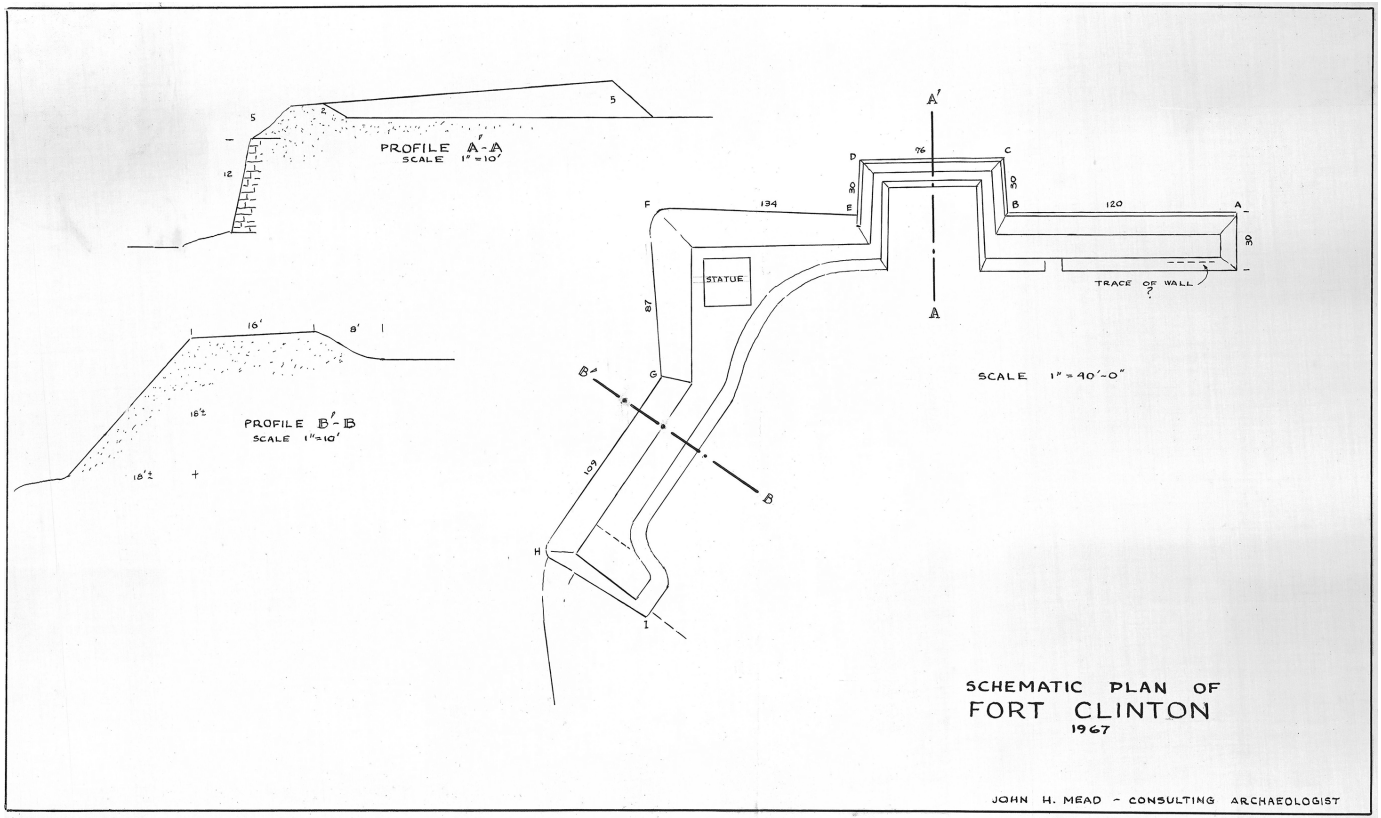

Image 10.10: *Schematic Plan of Fort Clinton*, by John H. Mead. (Courtesy of the West Point Museum Collection, U.S. Military Academy.)

While Duportail was, on the whole, satisfied that modifications could improve Fort Putnam, he made no mention of Webb's Battery and was critical of the redoubt on the ridge to its south, what he called "Fort Wyllis." He complained that it "does not appear to me well traced. . . . It ought to be put entirely upon the declivity which looks towards the River, the face next Fort Putnam following the ridge of the eminence." The sprawling, angled curtain at the time faced to the southwest, hardly a redoubt at all. As such, he also found, "In its present position it is too large its parapet makes too great a circuit." While he preferred that it be rebuilt, as a short-term fix, he thought that Kościuszko should "prolong the eminence which is in the middle of the work, and improve it into a Traverse to extend the whole length of the work." The solution would be an *epaulement* of earth and stones to protect the gunners and soldiers from musket and artillery fire should Fort Putnam fall. To the south of Fort Wyllys, General Duportail would have reduced the scale of the two works of Meigs's "Redans," fearing that they required too many men—400–500. For the future, in their place, he proposed "a small inclosed work to secure the possession of the eminence and protect the batteries in front—but for the present, matters may be left as they are."[52]

In Duportail's report of 13 September, he next turned to Fort Arnold and made suggestions to improve it. While he found the works "pretty well situated and traced," he thought that the parapets facing the Hudson "are exceedingly liable to an escalcade—it is proper to elevate them, and even to make a small covert way without, having good palisades in front, to secure the body of the place against all surprise." Although he was not happy that Colonel Kościuszko was using earth instead of bricks or masonry in the bomb-proofs that Washington had ordered, he felt that they were so far along, that the only thing that would help at this stage was to sink the work "more in order to furnish a greater thickness of earth for the roof."[53]

From Fort Arnold, Duportail next turned his attention to Chain Battery. While he thought that its location was "extremely well placed for battering the Vessels which should approach the Chain," he feared that "its situation

52. Duportail to Washington, "Memoire on the works made in the Highlands," 13 Sept. 1778.

53. Washington to Malcom, 9 Aug. 1778, Washington, *Writings* (ed. Fitzpatrick), 12:302, Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0294. Duportail to Washington, "Memoire on the works made in the Highlands," 13 Sept. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0637. Meigs's Redoubt and Little Dick's Battery are shown most clearly in Kościuszko's "Ruff Map" of 25 Apr. 1779.



Image 10.11: "West point and its dependances on the River Hudson. 1778." (Reproduced by permission of the Connecticut Museum of Culture and History.)

likewise exposes it to the fire of the Ships—at least as it is much advanced, the fire of the tops would injure the Gunners, and the more, as by the form of the battery they are collected within a very small Space." As a consequence, he advised Kościuszko "to raise the parapet of this battery several feet—and to cover the embrasure from the top of one Merlon to another—so as not to interfere with the working of the Guns." [54]

While Duportail applauded the fact that Greaton's Battery was on Constitution Island, he was concerned that "there is no enclosed work on this side to hinder the enemy from debarking a sufficient number of men to get possession of the ground and cut the Chain." He therefore recommended the addition of "three small works"—redoubts—to protect the chain. Reflecting the temper of the times, he confused the name of Fort Independence with the original Fort Constitution on Constitution Island and planned "the *first* [work] to be place[d] where the block house of fort independence [Constitution] stood—it is sufficient for it to contain abou[t]

54. Duportail to Washington, "Memoire on the works made in the Highlands," 13 Sept. 1778.

sixty men—its end is to afford an immedia[te] defence to the Chain and its extremity—against a hardy enterprise." He recommended that "the parapets ought to be of wood in order to take less room—and sufficiently elevated to cover the area." [The future Redoubt #6 would protect the rear of Marine Battery from the overlooking hill.] He proposed "the *second* Redout should be placed on a steep eminence which commands all the other rising ground in the island." [The future Redoubt #7.] The "*third* on an eminence in the rear of the newly constructed battery [Greaton's]—these two Redouts ought to be made for 150 men or 200 at most." [The future Redoubt #5.] He also proposed the reconstruction of Marine Battery to serve as the sister to Chain Battery, since it "was perfectly well placed for battering the enemys Ships—it ought to be rebuilt, with a strong parapet of earth." He thought that when "this battery as well as that which is just finished, will be interlocked by the three Redouts—and be in perfect safety—With these works we shall be completely masters of the Island."[55]

Finally, Duportail offered a novel idea for the chain. Differing with Machin's approach, he wrote that "I would not have it floating on the Surface of the Water—which exposes it to be laid hold of by machines prepared for the purpose, on board the Vessels which may approach—but the greatest danger arising from this would be the breaking it by Cannon Shot." He would, in fact, "suspend the Chain three feet below the surface of the water" and place "the floats above instead of below the Chain." He warned that "There are so many accidents by which an iron Chain may be broken, that it would be prudent to have a stout cable in reserve, to supply its place, in part, for a time."[56]

Duportail concluded that his fortifications could be completed soon and manned by a force fewer than the 5,000 men earlier proposed. In fact, he opined that "1800 men will render us completely masters of the River, and put us out of reach of the enemys enterprises—At least, the Resistance that may be made will allow ample time for the arrival of Succours, however remote the Army may be." He proposed to distribute those 1,800 troops as follows: 700 at Fort Arnold; 200 at Fort Wyllys, 400 at Fort Putnam, 100 at Redoubt #4, and 400 at Fort Constitution. After inspecting the chevaux-de-frise across the Hudson at New Windsor, he recommended that no further effort be invested in it as the river was so wide there that "I can with difficulty persuade myself, that a Ship would be much embarrassed by them."

55. Duportail to Washington, "Memoire on the works made in the Highlands," 13 Sept. 1778.

56. Duportail to Washington, "Memoire on the works made in the Highlands," 13 Sept. 1778.

From his perspective, then, the top priorities were Fort Putnam, "which is the most important—the Redouts on the island on the left-hand shore—are likewise objects of the first attention." He felt "that a little time would be sufficient for completing Fort Putnam."[57]

Returning to West Point, Kościuszko read Duportail's report, which he felt portrayed him as the "worst of Ingeniers." In reaction, he asked Horatio Gates to intervene and request that Washington release him to accompany Gates to New England. Washington replied: "Colo. Kosciusko has had the chief direction and superintendence of the Works at West point, and it is my desire that he should remain to carry them on. New plans & alterations at this time, would be attended with many inconveniences, and protract the defences of the River.[58] To mollify his two engineers, Washington wrote to Duportail that he "highly" approved of his report, and he was satisfied with Kościuszko's "progress in the construction of" the works and of his "abilities." He then ordered Duportail "to point out to Col Kosciousko that the[y] may be carried into execution." With that short letter Washington was able on the surface to satisfy both men, each believing he had been vindicated. Privately, Kościuszko confided to Gates his frustration:

> I see planly that was the veu to show me that I have superior and abow me and indeed did I descover in Conversation that this Gentelman [Duportail] wanted Little practise because he believe there is the Same thing upon the paper as upon the Ground we most always have the works according to the Ground and Circumstance but not as the paper is Level and make the works accordingly.[59]

With Duportail's plan and Washington's blessings, Kościuszko could now apply this sensible philosophy that related construction to terrain.

Earlier, in late summer, Kościuszko began the partial reconstruction of Marine Battery on Constitution Island.[60] While the redoubt proposed for the site of Romans's blockhouse was never built, in 1779 three of these

57. Duportail, "Memoire on the works made in the Highlands," 13 Sept. 1778; Duportail apparently discounted the efficacy of the boom by proposing the use of a cable.

58. Washington to Gates, 11 Sept. 1778, Washington, *Writings* (ed. Fitzpatrick), 12:419-20, Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0618; Washington ordered Gates to review Kościuszko's plans for Constitution Island.

59. Kościuszko to Gates, 6 Oct. 1778, Gates Papers, NYH.

60. Washington to Duportail, 19 Sept. 1778, Washington, *Writings* (ed. Fitzpatrick), 12:469, Founders Online, https://founders.archives.gov/documents/Washington/03-17-02-0043; letter and map, Kościuszko to McDougall, 25 Apr. 1779, McDougall Papers, Reel 3, USMA

works—Redoubts #5–7—would occupy key hills on the island and protect the northern side of Marne Battery and the Great Chain.[61] Work on all the projects proceeded slowly. In a letter to John Hay in May 1779, arguing that Fort West Point was "the Key of the North River," Duportail condemned the lack of progress on the fortifications at West Point, claiming that he had heard that "almost nothing had been done, and all is nearly in the same Condition as when I left it in September." Furthermore, although he had requested monthly accounts of "the Condition of the Works," Kościuszko had failed to submit them because neither Congress nor General Washington had ordered him to do so "in writing," "so that Officer is not in any manner to be blamed." Duportail believed that he was powerless to order Kościuszko to do anything because the Corps of Engineers, although approved, had not yet been created, thus denying Duportail a measure of authority over all subordinate engineers. Duportail made it clear that he could not accept any responsibility under those circumstances for a future disaster in the Highlands Department.[62] To be sure, the works on Constitution Island were not finished as Duportail wrote to President John Hay, but the blame was not entirely Kościuszko's. Colonel Malcom reported to Washington in November 1778 that he would have to cease work on the fortifications and "prepare for winter" because too few troops were available at West Point to do both simultaneously.[63]

On 24 November 1778, Washington ordered Major General Alexander McDougall to resume command of the Highlands Department once again. General Gates assumed command of the Eastern Department in New England. At the same time, to Colonel Malcom's chagrin, the commander in chief relieved him of the command of the garrison, and McDougall appointed Brigadier General John Paterson to the position.[64]

Library. Kościuszko labeled Marine Battery "R" and referred to it as "Chain Battery begun last summer."

61. Greenleaf, "Plan."

62. John Hay was the President of the Continental Congress at that time. Duportail to John Hay, 11 May 1779, Papers of the Continental Congress, M247, Item 164, reel 181, USMA Library.

63. Malcom to Washington, 12 Nov. 1778, Washington Papers, Ser. 4, Reel 54, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-18-02-0115.

64. Washington to Malcom, 30 Nov. 1778, Washington to McDougall, 7 Dec., Washington to Malcom, 7 Dec., Washington to McDougall, 16 Dec., Washington, *Writings* (ed. Fitzpatrick), 13:358, 372, 375–76, 399–400, and Founders Online, https://founder.archives.gov/documents/Hamilton/01-01-02-0671, https://founders.archives.gov/documents/

Born in New Britain, Connecticut, Paterson had graduated from Yale and commanded the militia regiment of Berkshire County when it joined the siege of Boston in 1775. A veteran of the battle of Bunker (Breed's) Hill, he would serve as a Continental officer in many of the key campaigns of the war from Canada to Trenton and Princeton to Saratoga to Monmouth Court House.[65] McDougall's rank and the three brigades that he commanded showed the priority that Washington attached to the fortifications of the Highlands Department. He also left no doubt about their importance in the detailed orders that he provided to the new commander of the Highlands:

> You will forthwith proceed to the Highlands and take the command there—All the Posts in the North River from Poughkeepsie, inclusively, downwards, will be comprehended within the limits of your command. The Troops under you will consist of three Massachusetts Brigades, Nixons, Pattersons, & Learneds & the Garrison at West Point.
>
> I need not observe to you that West Point is to be considered as the first and principal object of your attention—I am persuaded you will neglect nothing conducive to its security, and will have the works directed for its defence prosecuted with all the vigour and expedition in your power. You are fully sensible of their importance and how much their completion will ease and disembarrass our future general operations.

The increased number of troops assigned to West Point warranted a brigade commander as commandant. That is why McDougall ordered General Paterson to West Point with his brigade: the 10th Massachusetts Regiment (Colonel Thomas Marshall), 11th Massachusetts Regiment (Colonel Benjamin Tupper), 12th Massachusetts Regiment (Colonel Samuel Brewer), and 14th Massachusetts Regiment (Colonel Gamaliel Bradford), comprising 54 officers and 1,488 noncommissioned officers and rank and file of infantry.[66] At that point Lieutenant Colonel Jean Baptiste de Gouvion, the most junior of Franklin's four original French engineers, arrived with McDougall,

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Washington/03-18-02-0425, https://founders.archives.gov/documents/Washington/03-18-02-0491.

65. Lenox History, "Revolutionary War Heroes: Major General John Paterson," Aug. 27, 2014, https://lenoxhistory.org/lenoxhistorypeopleandplaces/lenoxhistorypeople/revolutionary-war-heroes-major-general-john-paterson/.

66. Washington to McDougall, 24 Nov. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-18-02-0294; McDougall to Washington, 9 Dec. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-18-02-0441;

detailed as Kościuszko's assistant. McDougall liked Gouvion, finding him "to be a modest worthy Young Gentleman." After more time together, he would offer even greater praise, writing the commander in chief: "He is a Sober indefatigable Officer, of good Manners, free from petulance and an Acquisition to this Country. I beg he may be permitted to return, to this Post; I cannot well do without him." Of great importance, the two engineers seemed able to work well together.[67]

McDougall was not happy with his reappointment, but he did not have time to bemoan that fact. News of a British fleet of "29 saile" on the river arrived at West Point on 5 December 1778. On that date, some 1,500 men had landed at King's Ferry in search of provisions. Having just arrived at his post, McDougall tried to bring order out of the chaotic excitement generated by the crisis. At the same time, as he tried to discern the intent of the enemy, he discovered that Sir Henry Clinton's "expedition as you [Washington] conjectured was founded on false information. He secured a litle Broken Fish." After failing to find 1,500 barrels of provisions at King's Ferry, and upon being threatened by Colonel Thomas Nixon's Massachusetts Brigade, the British vessels withdrew "with precipitation." The crisis was over, but McDougall realized that the fortifications were not yet completed.[68] To make matters worse, another crisis developed; the chain and its rafts were almost lost to ice in the river.

On 8 November, Washington had already advised Malcom to remove "the Chain and Boom" as soon as an attack could be discounted. After the short panic ended, General Paterson, commanding at West Point, set 21 December as the removal date, allowing for the arrival of two extra sloops that would assist in the operation. However, the vessels did not arrive on time, and as luck would have it, the river started to freeze. The only recourse was to disconnect the obstacle from Constitution Island and swing both the chain and its rafts in a wide arc toward the western shore where they were secured to the rocky bank. Later the chain could be hauled out of the

"Return of the Garrison of Fort Arnold," 22 Jan. 1779, Sheffield Research Files, USMA Library.

67. McDougall to Washington, 9 Dec. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-18-02-0441; McDougall to Washington, 15 Apr. 1778, https://founders.archives.gov/documents/Washington/03-20-02-0075.

68. Washington to Malcom, 8 Nov. 1778, Washington, *Writings* (ed. Fitzpatrick), 15:217; McDougall to George Clinton, 6 Dec. 1778, George Clinton, *Papers*, 4:355; McDougall to Washington, 9 Dec. 1778, Founders Online, https://founders.archives.gov/documents/Washington/03-18-02-0441.

water for winter storage by Moore House. It had snapped in a few places when the ice had formed and had shifted with the current and tide, but once the river was solid the chain was safe. Kościuszko planned to take it out in pieces as soon as the next thaw allowed such activity. On 29 December the cold abated, and he was able to begin that task: "We have taken up and got on Shore three Hundred links of the chain with about one hundred of the small one where it was fastened to the Mud block."[69] On 2 January 1779, he reported to McDougall: "I find many of the Logs at the Chain that are rotten, should think it best to send up the River to Cut white Pines to replace them, which are much better for that purpose, but shall want more Carpenters to prosecute the Plan."[70]

The garrison commander updated McDougall on 5 January. With the assistance of the crews of at least three vessels, including an armed sloop, "We continue working at the Chain & take up about Seventy or eighty links a day but it is a heavy Piece of Business in Time we shall conquer." He also reported that by 6 February, Kościuszko had done a more detailed assessment and found that "it is certain that not more than half the Logs will be fit for service again next Summer and we cannot get those that are good Short of Corymans, if you should think this advisable it ought to be begun immediately as the season approaches fast."[71] Little wonder that the luxury of the additional log boom was dropped after encountering the maintenance costs involved in keeping the chain afloat. As the main obstacle, the chain would have to be sufficient by itself.

As 1778 gave way to 1779, Fortress West Point had truly taken shape. General Duportail and Colonel Kościuszko had added details to Colonel La Radière's vision. Five water batteries, Sherburne's Redoubt, and Forts Arnold, Putnam, Wyllys, Webb, and Meigs with seventy-one cannons, howitzers, and mortars protected the western end of the chain. They also were working to secure the eastern end on Constitution Island with Greaton's and Chain (Marine) Battery backed by three redoubts. Major General McDougall's return to the Highlands Department with three brigades of Continentals signaled that West Point would continue to serve, in Duportail's words, as "the Key of the North River." Kościuszko's genius would emerge in the New Year.

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69. Paterson to McDougall, 21, 22, 24, 25, 29 Dec. 1778, 5 Jan. 1779, Kościuszko to McDougall, 28 Dec., McDougall Papers, Reel 2, USMA Library.

70. Kościuszko to McDougall, 2 Jan. 1779, McDougall Papers, Reel 2, USMA Library.

71. Paterson to McDougall, 5 Jan. 1779, and Kościuszko to McDougall, 6 Feb. 1779, McDougall Papers, Reel 2, USMA Library.

CHAPTER 11

THREAT AND EXPANSION: 1779

The late winter of 1778–79 and the spring of 1779 were relatively uneventful. Construction on the fortifications slowed from want of materials and manpower. The Continental Main Army remained in winter quarters at Middlebrook, New Jersey. The fortifications begun in 1778 and not yet completed were already beginning to deteriorate, requiring substantial maintenance that decreased the rate of new construction. Nonetheless, Major General Alexander McDougall, the commander of the Highlands Department, assured Washington that "Such however is the State of the Works, that I am confident, the Enemy will not make his Attack on the West Side." He then reported the major problem with the existing works: "The Fachine Works there, had so little Slope, and were so decayed, that We were obliged to Errect them a new: There are a considerable part yet to be done. I have ordered Stone and Lime, to be got ready, for the principal Works. But this will be a Work of time."[1] Obviously few or no stones had been used previously in the fortifications except for the dry masonry in the stone scarps and in the rampart and parapet foundations. If the works were to last for an indefinite period, they had to be given some permanence by using stone. As the war dragged on, La Radière's argument for facing the works with stone gained merit.

Working with stone and lime required masons, but they were hard to find. Kościuszko complained about the lack of cooperation on the part of the Main Army for sending only two masons to West Point. He expressed his annoyance to Washington, stating that he had "applyed to the Detachements here who had a number of them, wrote to the Officers in the most pressing terms shewing the necessity of it but got nonce."[2] A more serious shortage,

1. McDougall to Washington, 15 Apr. 1779, McDougall Papers, Reel 2, USMA Library; and Founders Online, https://founders.archives.gov/documents/Washington/03-20-02-0075.

2. Kościuszko to Washington, July 1779, George Washington Papers, 784, and Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0606.

however, for fortifications that were constructed of earth and timber, was the lack of trained carpenters, particularly for such work as framing bombproofs.

From headquarters in Peekskill, General McDougall had responsibilities in the Highlands Department beyond Fortress West Point, and the manpower assigned elsewhere decreased the fatigue parties able to work there. McDougall rotated regiments from the Fishkill Supply Depot to "the Lines" along the Croton River to Continental Village to King's Ferry. In February he ordered Colonels Rufus Putnam's 5th and Thomas Nixon's 6th Massachusetts Regiments to build (or perhaps rebuild) Pine's Bridge over the Croton River. Colonel Bailey marched his 2nd Massachusetts Regiment from Fishkill to the new barracks at Continental Village. Colonel John Greaton's 3rd Massachusetts Regiment supported the operations from south of Crompond. By 1 April McDougall faced the prospects of losing 847 of the nine-month levies from Paterson's, Brigadier General Ebenezer Learned's, commanded by Colonel Michael Jackson (8th Massachusetts Regiment), and Nixon's brigades. He would then be left with 1,653 men present for duty.[3] Loyalist Colonel Beverley Robinson forwarded an intelligence report on 13 April from John Lawson that provided an accurate assessment of McDougall's dispositions: 700 men at Peekskill, the 5th Massachusetts at Pine's Bridge, and 500 men at West Point with "provisions there very bad."[4]

Notwithstanding the construction problems, at least the British had refrained from making any advance out of New York City, and the Great Chain was again stretched across the river on 20 April.[5] McDougall felt that this chain, defended directly by a row galley with some twenty-two sailors, combined with the existing fortifications, even in their current state, would prevent a British attack against the west side of the Hudson. He rather feared the effects of a cannonade from British "heavy" batteries erected at Nelson's

3. McDougall to Washington, 4 Feb., 4 Mar. 1779, George Washington Papers; from original in the Huntington Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-19-02-0125, https://founders.archives.gov/documents/Washington/03-19-02-0373. McDougall's headquarters was likely at the Daniel Birdsall House, which Washington also used.

4. Col. Beverley Robinson to Clinton, 13 Apr. 1779, Sir Henry Clinton Papers, Clements Library.

5. "The chain is extended," reported to Washington by McDougall, 24 Apr. 1779, Huntington Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-20-02-0176; "This day the chain was extended across the River; tis secured at each end by large pieres—size is enormous," Enos Hitchcock, "Diary," *Rhode Island Historical Society* 7:165, https://archive.org/details/diaryofenoshitchoohitc/page/184/mode/2up; entry, 15 Apr. 1779, Torrey, Orderly Book, USMA Library.

Point directly opposite "the principal Work." As of 23 January, Fort Arnold had a total of eleven cannons, none larger than the two 18-pounders; more American heavy cannons from Boston would allow the fort to be superior "in the Weight of Fire to the Enemy" and would not allow the British cannons to destroy the fortification's "Eastermost face and break the Chain."[6]

Although it had been a relatively mild winter, the over 1,000 Massachusetts Continentals living in tents, huts, and the "New Barracks" around Fort Arnold in Brigadier John Paterson's command were glad to see the days lengthen even if it meant the beginning of a new campaign and a possible British advance.[7] The advent of spring also brought the beginning of at least one new project to West Point: Colonel Thaddeus Kościuszko was able to regenerate his proposal for a redoubt on Rocky Hill. Included in a letter he sent to McDougall on 6 February was a "Plan of the Redoubt proposed with two Profiles of her with the Situation of the Ground round about." The Redoubt was to be located between Crown or "Putnams Hill" to the east and "the other Hill that Commands this [a] half mile distant [to the west]." He described his plan for the ramparts: "As it is very difficult to procure good Fascienes near the Place, I think that the Parapet can easily be done with Timber up to the Frise E: and the rest with Fascienes."[8] Probably because of the frozen ground and the poor winter weather, he could only take a first step toward what would become Redoubt #4 by constructing a "Block House with Bumprove [bombproof] for fivety men."[9]

With the advent of spring, McDougall gave new directions to enlarge the first concept:

> The Block House on Rock Hill should be made Bomb Proof; as large as the Timber will admit, not to exceed Quarters for an Hundred men. If its practicable to make a Cellar under neath to hold Provision and water to subsist the Garrison for one month, I wish it to be

6. McDougall to Washington, 15 Apr. 1779, George Washington Papers, 718–19, and FoundersOnline,https://founders.archives.gov/documents/Washington/03-20-02-0075; untitled return, n.d., Sheffield Research Files, USMA Library. Greenleaf, "Plan." "Instructions to Kusicosko," 17 Apr. 1779, Manuscript Department, NYH.

7. "Return of the Garrison of Fort Arnold," and "Distribution of the Ordnance," 23 Jan. 1779, McDougall Papers, Reel 2, USMA Library; entry, 13 Feb. 1779, Lt. John Francis's Orderly Book, 11th MA Regiment, USMA Library, original at Essex Institute, Salem, Massachusetts.

8. Kościuszko to McDougall, 6 Feb. 1779, McDougall Papers, USMA Library.

9. Kościuszko to McDougall, with "ruff map," 25 Apr. 1779, McDougall Papers, Reel 3, USMA Library.

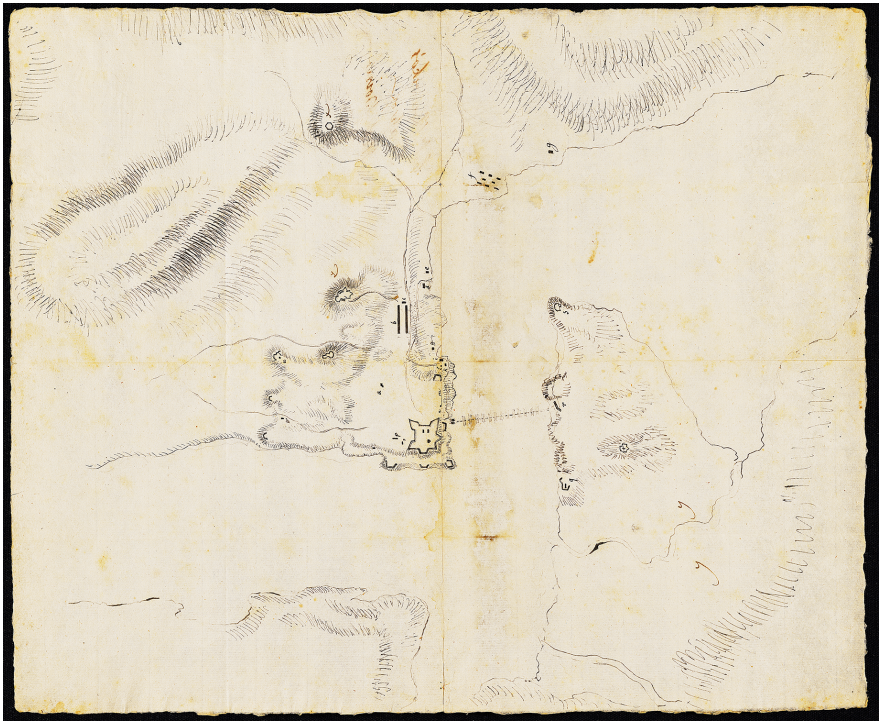
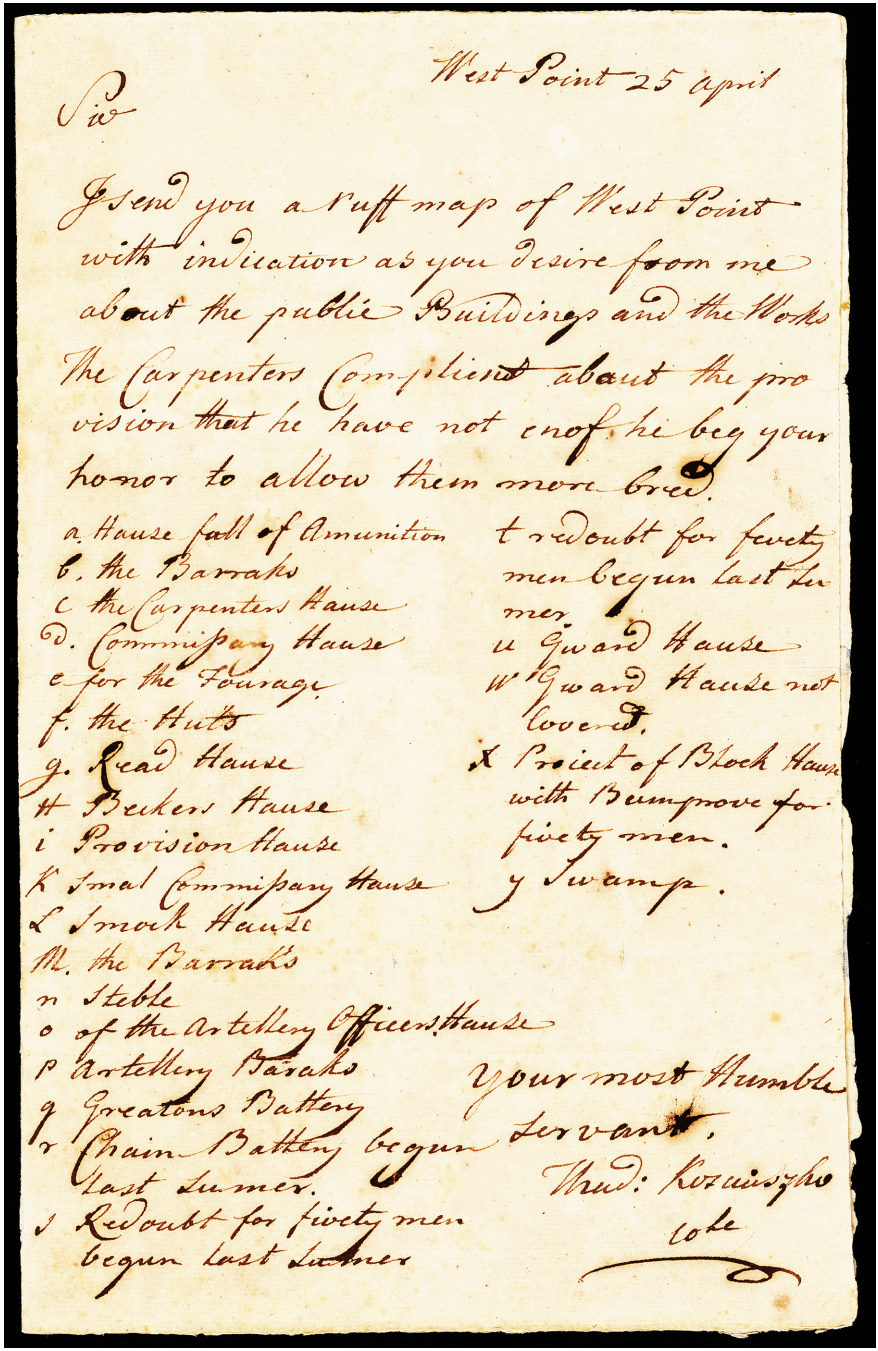


Image 11.1: Kościuszko's "ruff map of West Point." For a facsimile, see Image 12.3. (Courtesy of the Patricia D. Klingenstein Memorial Library, The New York Historical.)

> done. The Block House is to be inclosed in a Redoubt, the Parapet of which should be capable of resisting any shot on its faces, exposed to the Enemy, especially, that which may be opposite to the reverse Hill [to the west].[10]

McDougall's desire to cover potential avenues of approach would compel new construction of batteries and redoubts to the rear or west of Fort Putnam and to the rear or toward the center of Constitution Island. He was particularly concerned about "heavy Batteries on Nelson's point" firing on the "East face of Fort Arnold." Kościuszko would show key works, barracks, and logistical "houses" on his "ruff map" of 25 April. He and Captain Greenleaf depicted the following fortifications: at West Point, Forts Arnold (10 cannons), Putnam (7), Meigs (2), Wyllys (1), Webb (3), Sherburne's Redoubt (5), and five water batteries (11), and, on Constitution Island, Redoubts #6 and #7 and Marine and Greaton's batteries (6). Key buildings included the Long,

10. "Instructions to Kusicosko," 17 Apr. 1779, NYH.



West Point 25 April

Sir

I send you a ruff map of West Point with indication as you Desire from me about the public Buildings and the Works The Carpenters Compliens about the provision that he have not enof. he beg your honor to allow them more bred.

a. Hause full of Amunition
b. the Barraks
c the Carpenters Hause
d. Commipany Hause
e for the Fourage
f. the Huts
g. Read Hause
H Beakers Hause
i Provision Hause
k Smal Commipany Hause
l Smock Hause
M. the Barraks
n Steble
o of the Artellery Officers Hause
p Artellery Barraks
q Greatons Battery
r Chain Battery begun Last Summer.
s Redoubt for fivety men begun last Summer
t redoubt for fivety men begun last Summer.
u Gward Hause
W Gward Hause not Covered.
x Projiect of Block Hause with Bemgrove for fivety men.
y Swamp.

your most Humble Servant.
Thad: Kosciuszko
Cole

Image 11.2: Letter accompanying Kościuszko's "ruff map of West Point." (Courtesy of the Patricia D. Klingenstein Memorial Library, The New York Historical.)

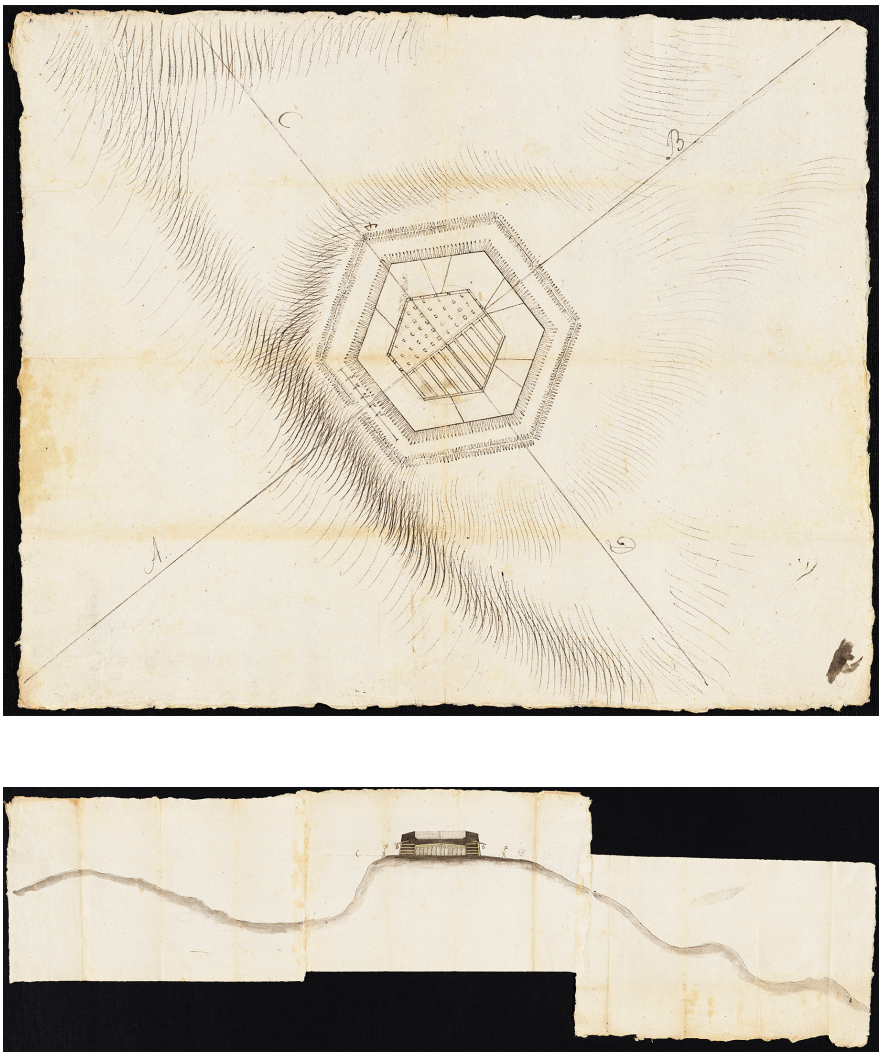


Image 11.3: Two of Kościuszko's sketches of Redoubt No. 4. (Courtesy of the Patricia D. Klingenstein Memorial Library, The New York Historical.)

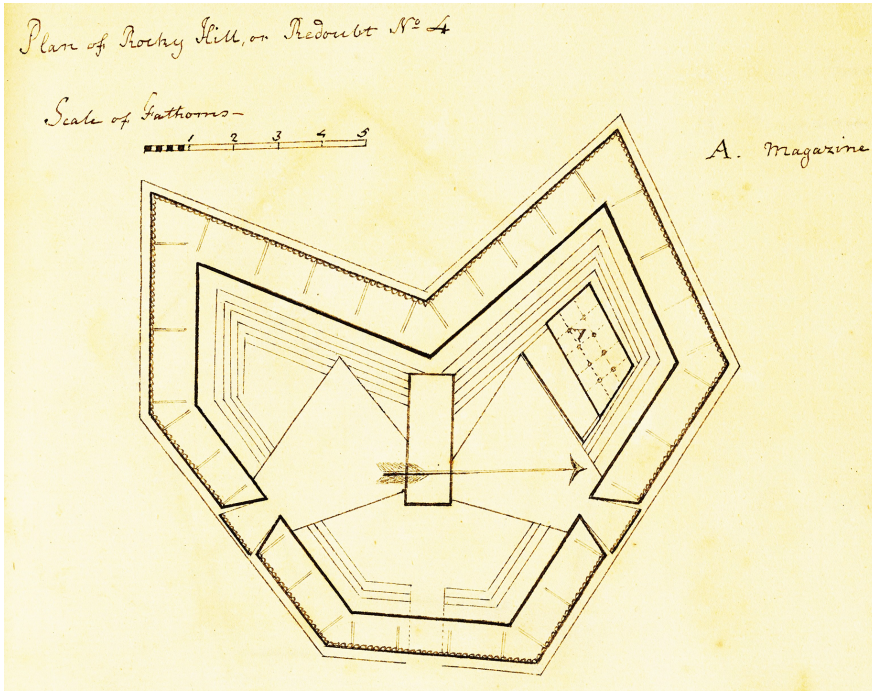


Image 11.4: Captain Winthrop Sargent's "Plan of Rocky Hill Redoubt Nº. 4." (Courtesy of the Archives and Special Collections, United States Military Academy Library.)

New, and artillery barracks, carpenters', commissary, bakers', forage, provision, smoke, Red, and artillery officers' houses.[11]

Kościuszko and his workers would complete Redoubt #4 by 25 June. The final trace of the work differed from the original sketched by the Polish engineer. Rather than the planned hexagon, the heptagonal redoubt had parapets "seven or ten foot high," a ditch, and a large reentrant angle at the rear or western side as its dominant feature that gave the gunners with one 6-pounder cannon and soldiers with their muskets the ability to use combined enfilading or crossfire against the most likely enemy avenue of approach. The matrosses would, however, have had to fire their cannon *en barbette* from the single gun platform facing due west at the apex of the angle, as Kościuszko had planned no embrasures facing to the west but rather had "pointed them on the other works." In both the original and final plans, the gun platform was substantially elevated, as were the two with their embrasures facing to the northeast and southeast designed to cover

11. Kościuszko to McDougall, with "ruff map," 25 Apr. 1779, McDougall Papers, Reel 3, USMA Library; Greenleaf, "Plan."

the northwestern and southwestern approaches to Fort Putnam below. One embrasure is visible today in the northeast wall. The executive engineer had placed a premium on optimizing the effects of infantry firepower to hold off an attack in kind from the most likely quadrant. Major General Benedict Arnold's assessment for Major John André was that Redoubt #4 was "wretchedly executed" so that it could be "taken by assault by a handful of men," and then heavy cannons could be brought up using "a good road" to fire on Fort Putnam, which he considered to be "strong."[12]

Redoubt #4 in its final form had a formal ditch, which is clearly visible today on the north and west sides. The scarp walls were dry masonry, relatively low on the outside (about two to three feet high), although the remains of the parapet (soil) are fairly high, around eight feet measured from the bottom of the ditch. On the northeast side there was a double exterior wall, the upper portion of which was nine feet in width (the base of the deteriorated parapet). The base of the western parapets indicates a thickness of eighteen feet and also greater height. This is unusually large and may have been part of a double exterior wall that is no longer evident. In fact, Kościuszko had planned for the parapets to be made of timber up to the fraises, horizontal storm-poles projecting outward about halfway up the walls. He proposed fascines for the finishing materials. Soil would have filled the space between the timber or log walls making up the rampart. The workers dug a magazine for powder on the northern side of the works as well as a light bombproof to protect the troops. Captain Winthrop Sargent's sketch indicates that the entrance was on the eastern face of the redoubt opening toward Fort Putnam, a logical location.[13]

While McDougall had first focused Kościuszko's energy on the construction of Redoubt #4, he also gave new instructions concerning Fort Arnold and some of the other works. Because of his concern about British batteries threatening Fort Arnold from Nelson's Point, he directed that Kościuszko raise the east parapet. This would require the use of fascines with timber and earth to make the parapet "sixteen feet thick with a good slope. . . . An

12. Crozier, "Revolutionary War Fortifications . . . Redoubt #4" (paper), 63–71; Arnold to André, 16 June 1780, Sir Henry Clinton Papers, Clements Library. Mead, "Archaeological Survey of Fort Putnam," 58–60.

13. Mead, "Archaeological Survey of Fort Putnam," 58–60; Crozier, "Revolutionary War Fortifications . . . Redoubt #4" (paper), 63–71. Paul Hudson, West Point Cultural Resources Officer, definitively identifies Captain Winthrop Sargent, aide-de-camp to Maj. Gen. Robert Howe when the two were at West Point in 1780, as the author of the drawings of the various works in the unpublished, "Winthrop Sargent Notes," n.d.

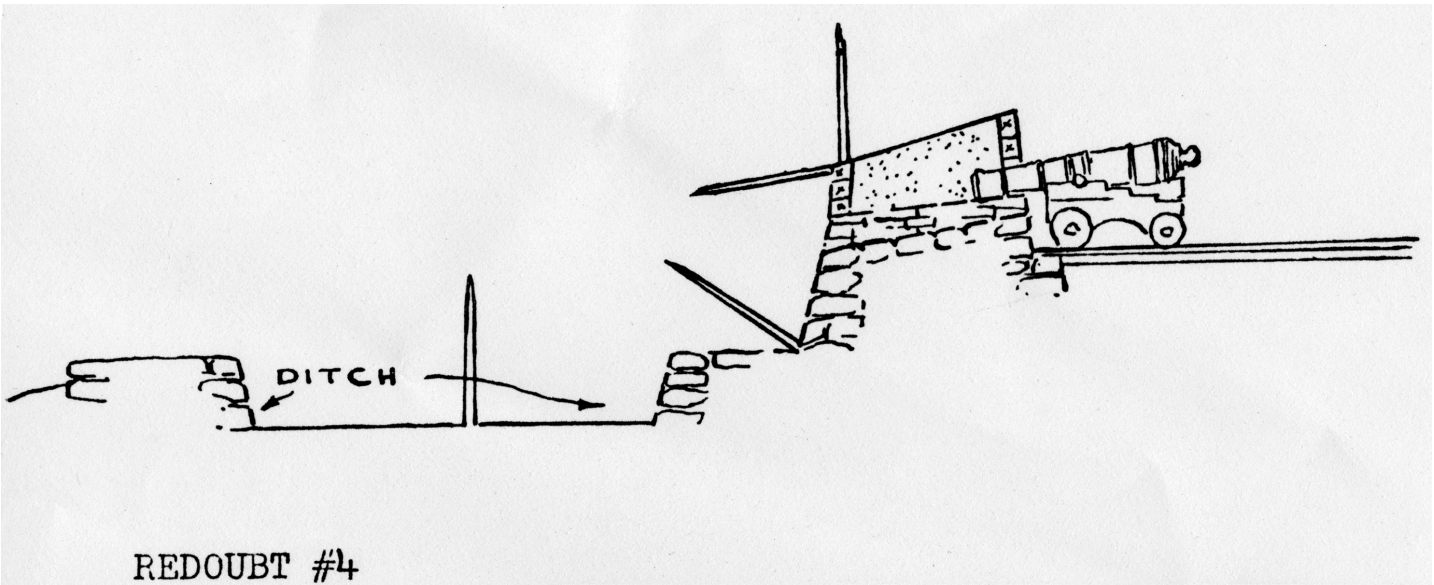


Image 11.5: Conjectural sketch of *Redoubt #4*, by John H. Mead. (Courtesy of the West Point Museum Collection, U.S. Military Academy.)

epaulment in the rear of each embrasure to cover the garrison from any shot which may enter them."[14]

Already by 19 April a large bombproof was nearing completion in Fort Arnold, and on the 2nd work had begun on thickening the parapet in the eastern bastion that faced the river. As for the other fortifications, McDougall suggested that Greaton's Battery, Sherburne's Redoubt, and the water batteries "be pallisaded in the Rear otherwise the Enemy will enter them and Spike up the Cannon at night." On 27 May, General Paterson issued his contingency plan in case of "an alarm": Learned's Brigade would "take post" in Forts Meigs, Wyllys, and Webb; Brewer's regiment would occupy Fort Putnam; Marshall's regiment would "Secure the Avenues to the Garrison from the country," sending a company to Fort Constitution; and Bradford's and Tupper's regiments would man Fort Arnold and Sherburne's Redoubt.[15] The plan proved very timely as the British would soon be on the move northward.

It would not be long before the British made their move. Washington knew that General Sir Henry Clinton had set some scheme in motion, but he was unsure of the objective. The commander in chief had always been apprehensive about West Point. Concerned about the low level of reserve supplies and lack of wagons at the post, he wrote to McDougall again on 30 May 1779 to reiterate his operational plan for West Point. The garrison, which Brigadier General Samuel Parsons estimated would require 3,000 Continentals, should have enough supplies to defend against a British attack or siege for fourteen days until he could "collect the army, [in] time enough to relieve from any investiture."[16]

While work had continued at West Point, General Sir Henry Clinton in New York began to look north. His attack was not long in coming, even though it would be limited in its execution. Sir Henry planned to force Washington into a "general action on disadvantageous ground to him"—by threatening West Point—"even to the attacking the works at West Point," but the scheme depended on reinforcements from Europe that Sir Henry expected to arrive about the time he would be securing Stony Point and Verplanck's Point, the two ends of the King's Ferry crossing on the Hudson.[17]

14. "Instructions to Kusicosko," 17 Apr. 1779, NYH.

15. Hitchcock, "Diary," 165; entry, 27 May in Torrey, Orderly Book, USMA Library.

16. Washington to McDougall, 30 May 1779, Washington, *Writings* (ed. Fitzpatrick), 15:185–186, and Founders Online, https://founders.archives.gov/documents/Washington/03-20-02-0638; Parsons to McDougall, 5 June 1779, McDougall Papers, NYH.

17. H. Clinton, *American Rebellion*, 122; Clinton to Germaine, No. 58, 18 June 1779, Sir Henry Clinton Papers, Clements Library; also in Davies, *Documents of the American Revolution*, 17:146.

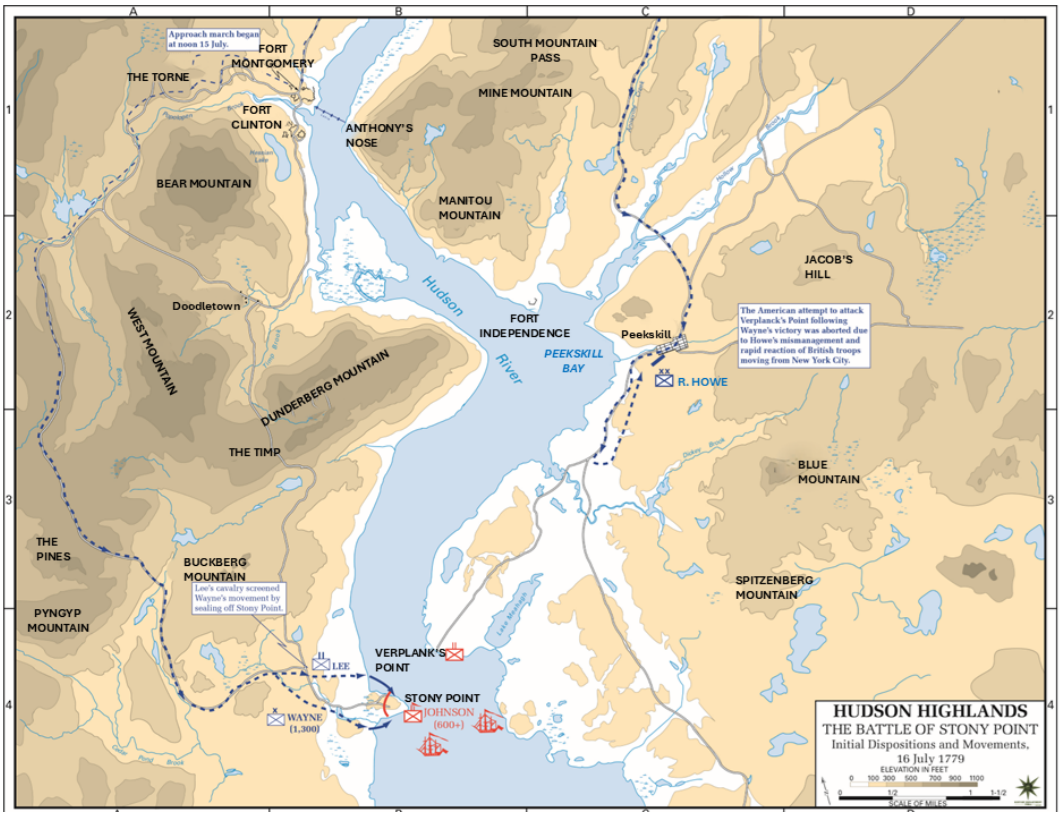


Image 11.6: *Hudson Highlands: The Battle of Stony Point.* (Courtesy of the United States Military Academy Digital History Center, Department of History.)

Fortifications now anchored both ends of the King's Ferry. Since being relieved of his duties at West Point, Colonel Louis de la Radière had been hard at work designing and supervising Fort Lafayette in present-day Verplanck; French Lieutenant Colonel Jean Baptiste de Gouvion would add a blockhouse on the hill at Stony Point some 850 yards to the west across the Hudson. La Radière had drawn up a detailed plan for Fort Lafayette entitled, "A Sketch of a plan of Regulation to be followed in the management of the Works to be erected at King's Ferry." Gouvion would later take over as supervising engineer and would construct one of the blockhouses—possibly at Fort Lafayette, as General McDougall had ordered "Late" Learned's Connecticut brigade on 19 February to have "Good hewers of Wood with their axes" report for duty there. British Major General James Pattison, commandant of artillery, provided a detailed description of Fort Lafayette:

> This small Fort appears to have been originally intended as a Block House, to be defended by Infantry, but a thick Parapet fraiz'd has since been rais'd round it, under which towards the River is a Barbette Battery, mounting one 18 Pr and two 4 Prs.—The Scarp of the Ditch has a Revetement of Stone, & is Stockaded, the Whole encompassed besides with a very strong Chevaux de Frize, & an Abbatis.

On 13 April, McDougall ordered some seventy-five soldiers under the command of Captain Thomas Armstrong of the 2nd North Carolina Regiment to man the garrison there. On the 27th he ordered 100 men from Poor's Connecticut Brigade to report to Gouvion for fatigue duty for a week "on the west Side of the Hudson," presumably to work on the blockhouse at Stony Point.[18] Sir Henry Clinton had decided that King's Ferry with posts at Stony Point and Verplanck's Point was important enough to seize because it was "the most direct and convenient Communication between the Provinces

18. General McDougall explicated his plan for Fort Lafayette in McDougall to Washington, 15 Apr. 1779, Founders Online, https://founders.archives.gov/documents/Washington/03-20-02-0076; Louis de la Radière, "A Sketch of a plan of Regulations to be followed in the management of the Works to be erected at King's Ferry," Sheffield Research Files, USMA Library; entries, 19 Feb., 27 Apr., 1779 Torrey, Orderly Book, vol. 2, USMA Library; 13 Apr. 1779, Lt. John Francis's Orderly Book, 11th MA Regiment; "Letters of Major General James Pattison, Commandant of Artillery, Part I," *Collections of the New-York Historical Society for the Year 1875* (1876): 77, https://babel.hathitrust.org/cgi/pt?id=pst.000020050924&view=1up&seq=10; features of the works are clearly visible in the "Sketch of Stoney & Verplank's Points upon the North River, as taken possession of, and fortified by His Excellency Sir H: Clinton in June 1779," Library of Congress Geography and Map Division, Washington, DC.

on either Side of Hudsons River"; he also wanted to capture the American works there so that "with little Work & few materials" he would be able "to establish at this Pass a Post of tolerable Security." He devised a tactical plan to take the western blockhouse first and then concentrate artillery fire on Fort Lafayette from cannons and mortars there to support Major General John Vaughan's attack.

Initially Clinton's plan was successful. On 31 May, his forces occupied Stony Point after the Americans burned the blockhouse and, overnight, emplaced a battery of two 18-pounder cannons and two mortars, which began a barrage the next morning. So, on 1 June, Captain Armstrong surrendered his surviving North Carolinians at Fort LaFayette to Vaughan's forces, which had marched up from their landing site at Teller's Point; one officer and three soldiers had been killed, with Armstrong, three lieutenants, a surgeon's mate, and seventy men captured. Thereafter Clinton's plan stalled. Nevertheless, the loss of King's Ferry denied the Americans a major communications route between New England and the middle states; more seriously, the British move threatened the Highlands and ultimately West Point.

British personnel returns for 10 June would show a total of 12,313 officers, non-commissioned officers, drummers, and "Rank & File" ("effectives") near King's Ferry with 5,104 at Verplanck's Point, 1,397 at Stony Point, and 5,925 at Philipsburgh. Washington's Main Army had 11,061 Continentals fit for duty in or near the Highlands Department. Washington hesitated briefly to evaluate the enemy's intentions and to determine that the attack was not a feint. He then concentrated the Continental Army around West Point to block any further British advance up the Hudson. Later, learning the British were not strong enough to continue their advance, Washington ordered a raid.[19]

Facing a reduced British force, on 6 July, at Buckberg Mountain, Washington and Brigadier General Anthony Wayne planned an attack to retake Stony Point. In preparation for the offensive, Washington ordered Brigadier General John Nixon's Massachusetts brigade to "the Gorge of the Mountain" near Continental Village. On 15 July, Wayne led his Corps of Light Infantry of about 1,350 men against the British garrison of 564 Redcoats, including the 17th Regiment of Foot, commanded by Lieutenant Colonel

19. Entries, 31 May, 1–2 June 1779, Hitchcock, "Diary," 185–187; Clinton, *American Rebellion*, 122; Clinton to Germaine, No. 57 and 58, 18 June 1779, Sir Henry Clinton Papers, Clements Library; "State of the following Corps Station's At Verplanck's & Stoney Point & Philipsburgh," 1 June 1779, Sir Henry Clinton Papers; 5,377 soldiers were at West Point and the Highlands, and 5,684 were with Washington in the Clove within two-days' march of West Point, Lesser, *Sinews*, 120–121.

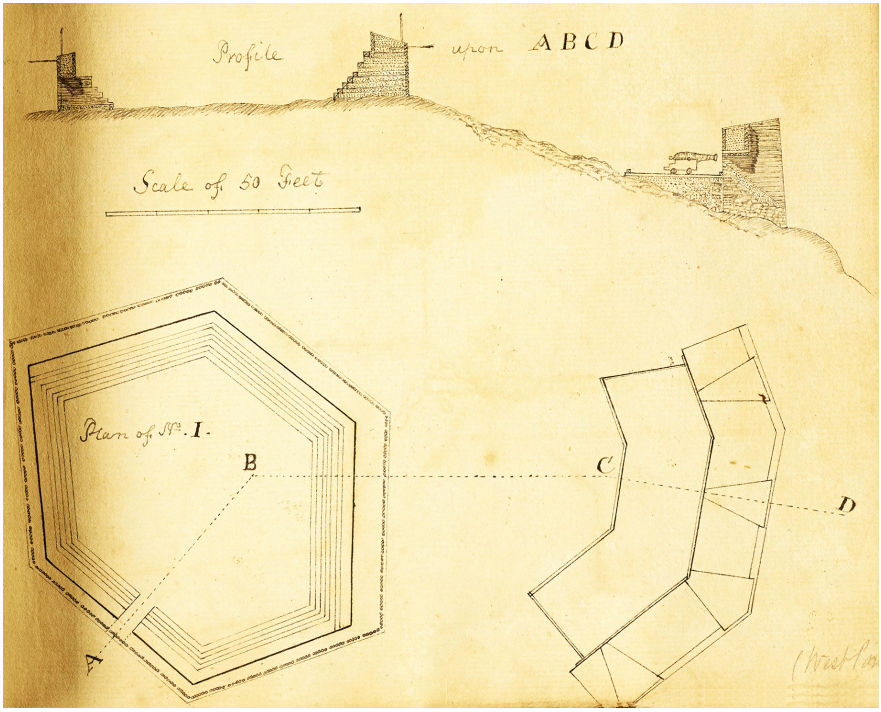


Image 11.7: Sargent's "Plan of [Redoubt] Nº. 1" and Battery. (Courtesy of the Archives and Special Collections, United States Military Academy Library.)

Henry Johnson. After an eight-hour march from Sandy Beach, one and one-half miles north of Fort Montgomery, to Springsteel's farm, Wayne organized his force into three columns for the final movement and the nighttime attack that began at midnight. Led by twenty-one-man "forlorn hopes," two flanking forces, using only bayonets, penetrated the northern and southern ends of the abatis of the Outer Works of the fort while the third column effectively created a diversion with musketry to its front. Both assault columns penetrated the Inner Works, and by 2:00 a.m. on 16 July, Wayne, himself wounded, reported that "the fort & Garrison with Colo. Johnston are ours—Our Officers & men behaved like men who are determined to be free." At a cost of fifteen men killed and eighty-three wounded, Wayne's soldiers captured the garrison, killing at least twenty and wounding seventy-four. Deciding not to maintain the fort, Washington ordered it destroyed and abandoned. The British reoccupied and refortified it on 19 July but abandoned it and the Highlands for good, as it turned out, in October.[20]

20. See James M. Johnson, "Battle of Stony Point." In *The Encyclopedia of New York State.*, edited by Peter Eisenstadt and Laura-Eve Moss. Syracuse, New York: Syracuse

During the month of June, both forces had watched each other while more and more American troops arrived daily at West Point. Finally, on the 19th, Washington decided to place McDougall directly in charge of the post and ordered him to move his quarters there. Brigadier General John Nixon's Brigade was to occupy Constitution Island, and Brigadier General Samuel Parsons's Brigade, Nelson's Point, which would deny that position to British artillery. Washington had already moved his headquarters from Middlebrook, New Jersey, to New Windsor to better control the action. On 21 July he moved it again, this time to Moore House at West Point.[21]

After the British had seized Fort LaFayette at Verplanck's Point and Stony Point, McDougall dispatched over 500 men from the North Carolina Brigade with Colonel Thomas Clark's 1st North Carolina Regiment and Colonel John Patterson's 2nd North Carolina and about 600 militiamen of Ulster County to West Point to join the 4th Massachusetts Brigade ("late Learned's")—Colonel Jackson's 8th Massachusetts, Colonel John Bailey's 2nd Massachusetts, and Colonel James Wesson's 9th Massachusetts regiments—and Paterson's Brigade. Some of the North Carolinians would occupy Fort Arnold on 3 June. The strength of the garrison at West Point was now approximately 2,300. The brigades from Virginia, Maryland, and Pennsylvania were in the Clove around present-day Monroe with the 1st, 2nd, and 3rd Continental Regiments and three independent companies of artillery in Chester augmenting the Department's forces by 8,880; from Smith's Tavern, General Washington reorganized the six brigades of the three state Lines.[22] Parsons's and Brigadier General Jedediah Huntington's Connecticut

University Press, 2005; "After Orders," 13 July 1779, Washington, *Writings* (ed. Fitzpatrick), 15:421; Wayne to Washington, 16 July 1779, Founders Online https://founders.archives.gov/documents/Washington/03-21-02-0431. Major John André received a report that Washington, Wayne, and another general protected by 500 light infantrymen of the 1st, 7th, and 10th PA came as "far as within sight of the works of Stony Point" on 6 July 1779, André, "Intelligence," 8 July, 5 Aug.; 1779 Lt. Col. Johnston's report of 16 July corroborates these numbers with the wildcard of 58 missing, "State of the Kill'd, Wounded, Missing & Taken Prisoners by the Enemy," Sir Henry Clinton Papers, Clements Library.

21. Washington to McDougall, 19 June 1779, Huntington Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0163. The Moore House, sometimes referred to as the Red House, stood in the vicinity of the present sewage treatment plant on Target Hill Field at West Point. Washington made his headquarters there until late Nov. 1779.

22. Entry, 3 June 1779, Torrey, Orderly Book, USMA Library. Charles Tornier, a Brunswicker dragoon taken prisoner near Bennington, VT, and a deserter from the Continental Light Infantry, provided an accurate assessment of the fortifications and regiments at West Point for Sir Henry Clinton: 2,500 men, 50–60 cannons, three main

Brigades were posted east of the Hudson. By June about 200 militiamen had assembled near the Furnace in the Forest of Dean.[23] Washington felt certain that West Point was the British goal, and so by July, he had concentrated the bulk of the Main Army near the Hudson. On the 4th he sent an explicit message by way of Captain James Chrystie to McDougall: "I am determined at the utmost hazard to support the fort and I expect it will hold out to the last extremity." He also directed that "no part of the garrison ought to be militia." He clearly felt that only the better trained, disciplined, and experienced Continentals could hold such an important post under such hazardous conditions, particularly when the fate of the young nation hung in the balance. Meanwhile, General Parsons, who again commanded at West Point, reported, "The Garrison are in high Spirits and are very desirous of receiving the Enemy's attack."[24]

On 13 June, Washington made it quite clear that the defense of West Point would be neither static nor passive. Instructions to his division commanders in the field and to the garrison commander reinforced another operation that was basic to the defense of the Highlands Department: When control of the Hudson was threatened, the mobile army became an extension of the defenses at West Point. Even the post's garrison was to spare as many men as possible to meet the enemy advance outside West Point to delay his approach as long as possible. Washington told his commanders:

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redoubts (Putnam, Arnold, and Webb) with Fort Putnam "the principal," seven regiments of Continentals from MA and two from NC under MG Arthur St. Clair; three redoubts and a fleche at the river; he even included troops at Soldiers' Fortune and Continental Village, Charles Tornier, 6 June 1779, Sir Henry Clinton Papers, Clements Library; McDougall to Washington, 1 June 1779, McDougall Papers, Reel 3, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0008; General Orders, 12 June 1779, Washington, *Writings* (ed. Fitzpatrick), 15: 265–66, and Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0124; Lesser, *Sinews*, 124–25.

23. Parsons to McDougall, 4 June 1779, General Orders, McDougall Papers, Reel 3, USMA Library.

24. Washington to McDougall, 2, 3 June 1779, Capt. James Chrystie and Col. Ann Hawkes Hay, 4 June, Washington, *Writings* (ed. Fitzpatrick), 15:213–14, 219, 225, 228–29, and Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0053, https://founders.archives.gov/documents/Washington/03-21-02-0081; Hall, *Parsons*, 247; Miscellaneous Revolutionary War Records, "Rations Issue at Fort Arnold," 10 June 1779, No. 22104, U.S. National Archives; Lesser, *Sinews*, 120. MAJ John André's report from 28 June, based on a deserter's input, was fairly accurate as to the brigades in the Highlands Department, André, "Intelligence," Sir Henry Clinton Papers, Clements Library.

> The Alarm Guns or other Signals for calling in the Militia Suddenly are to be fired or given the instant the Enemy's designs are discovered. The garrison is to attend principally to the defence of the Post, at the same time they are to spare all the men they can with safety to that object to harrass and dispute with the enemy every inch of ground leading to the works or to the heights above them.[25]

Major General Arthur St. Clair was to maneuver his units so that the British would be prevented from "taking possession of the heights back of our works on Stony [Rocky] hill and Fort Putnam." Brigade commanders were assigned specific posts: Parsons's Brigade was to man Fort Putnam, Sherburne's Redoubt, and Fort Arnold, and the 4th Massachusetts Brigade would protect the "Front (southern) Lines," anchoring on Fort Webb. The signal for the movement of the British army would be "the firing of a Beacon on a hill Near Fort Montgomery." Matrosses in the southwest bastion of Fort Arnold would then fire three cannons to alert the commanders to march their units to their designated posts. On 19 June, Washington ordered Nixon's Brigade to Constitution Island "to carry on the works there." The Main Army, the local militia, and the static fortifications at West Point all functioned as an integrated whole to achieve one common purpose: to keep the Hudson closed to the British.[26]

During the late spring and summer of 1779, the fortifications at West Point were expanded to their fullest. Thereafter, until the end of the war, the engineering effort would be confined to improvements and reconstruction aimed at maintaining the works in serviceable condition. That summer, however, Washington, McDougall, and Kościuszko were concerned about the long north-south ridge west of Fort Putnam and the high ground directly east of West Point. The chief engineer, Brigadier General Louis Duportail, would also weigh in after he had arrived at West Point on 6 June "to Superintend and direct Such Works &c as shall be Judged Necessary for the defence of this Post."[27] The solution was to fortify the ridge. Thus, the

25. Washington to the General Officers, 13 June 1779, Washington, *Writings* (ed. Fitzpatrick), 15:269–271.

26. Washington to the General Officers, 13 June 1779, Washington, *Writings* (ed. Fitzpatrick), 15:269–271; entries 1, 21 July 1779, Torrey, Orderly Book, USMA Library; for regimental and company assignments, see entry, 21 July 1779, Orders American Army, 1778–1783, US Army (Continental) 8th Mass. Regiment, Francis Tufts, Adj. 16 vols, Huntington Library, HM719, vol. 4, https://hdl.huntington.org/digital/collection/p15150coll7/id/42588/rec/5.

27. Entry, 6 June 1779, Torrey, Orderly Book, USMA Library; on 20 July Washington ordered General Duportail "to appoint Engineers to superintend & direct the new Works

westernmost redoubts, later known as Redoubts #1, #2, and #3, and the easternmost, known as North and Middle Redoubts, came into being.

As already mentioned, Kościuszko submitted plans for Redoubt #4 as early as 6 February 1779 and received the order to continue the work on April 17th. It was the only redoubt built during 1779 at West Point to appear on Kościuszko's "ruff map" of April 25th. A letter from General Parsons to Washington on 12 June 1779 implies that nothing had been done by that date on Nelson's Point east of the river. A letter from Washington to Major General Arthur St. Clair dated 20 July indicates that Redoubts #1, #2, and #3 on the western ridge—"the long Hill in front of Fort Putnam"—were underway. However, it is doubtful that much progress had been made on any new fortifications before June 10th.

Prior to that, commanders were involved with the immediate task of preparing to counter the British threat, and insufficient skilled labor appears to have hobbled progress afterward until Washington moved his headquarters to West Point. On the day before his arrival, Washington directed McDougall to assign engineers to supervise the construction of the new works and speed their progress. Thereafter, on any given day in June, for example, eight to ten soldiers of the 2nd Massachusetts Regiment would be detached for guard duty and some thirty for fatigue duty (work parties); on 21 August the 8th Massachusetts had 19 soldiers on guard duty, 123 officers and men on fatigue duty, and 1 sergeant and 7 men making fascines. With General Clinton's forces at King's Ferry and General Washington on site in residence at the Moore house, the commander in chief established his own priority for completing the defensive works on both sides of the Hudson by ordering 2,400 soldiers to do daily fatigue duty in four shifts at Constitution Island, Fort Putnam, "the Redoubt near the Maryland-line," and "at the Point," probably on Knox, Water, Lanthorn, and Chain Batteries. An additional detachment was marched south occasionally to guard "the Ferry" directly across from the Beverley Robinson House near Buttermilk Falls in present-day Highland Falls. Washington provided the rationale in his General Orders of 28 July:

> The extreme importance of having the works and defences at and about West-Point on both sides the river completed with all possible dispatch is so obvious that the General conceives it totally

on the heights East & West of the River and have them forwarded with all possible dispatch agreeable to Orders," entry, 20 July 1779, Tufts's orderly book, Huntington Library, https://hdl.huntington.org/digital/collection/p15150coll7/id/42588/rec/5.

> unnecessary to use arguments in proof of it—In the present unfinished state of them they are a restraint upon every operation and movement of an Army and must continue to be so until they are put in such a posture of defence as to be safely confided to a proper Garrison.[28]

Washington's approach appeared to work as Captain Samuel Shaw, aide-de-camp to Brigadier General Henry Knox, wrote to his friend Captain Winthrop Sargent: "The works at this Post go on briskly, owing to a more judicious mode of allotting the fatigue than has been heretofore practiced—there are fixed superintendents—4 relieves a day, and the business constantly plied." Brigadier General Jedediah Huntington wrote his brother Jabez on 17 November that soldiers had worn out their uniforms carrying "immense Quantities of Timber . . . on their Backs & in their arms" for their huts and "the many Forts which have been made."[29]

From the tone of Washington's July 20th letter to St. Clair, construction on Redoubts #1, #2, and #3 on the ridgeline south and west of Fort Putnam probably began during the week preceding the letter. If the attention of the garrison had been directed to the Battle of Stony Point, the work may not have begun until the day after the battle, July 17th. Washington's instructions to St. Clair were:

> You will be pleased to examine critically the *long* Hill in front of Fort Putnam, at the extremities of which the Engineer is commencing some works. Colo. Gouvion or Mr Rochefontaine will be able more particularly to designate the Hill I mean. The possession of this Hill appears to me essential to the preservation of the whole post and our main effort ought to be directed to keeping the enemy off of it. You will make it the Alarm post for your division in the first instance, from which if requisite you can reinforce the Troops in

28. General Orders, 28 July 1779, Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0572.

29. The Maryland Line was in all likelihood encamped near Redoubt #3 based on process of elimination. Entry, 6 June 1779, Torrey, Orderly Book, USMA Library; General Orders, 22 and 28 July 1779, Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0499, https://founders.archives.gov/documents/Washington/03-21-02-0572; entry, 21 Aug. 1779, Tufts's Orderly Book, Huntington Library; these numbers remained consistent into Sept. until 26 Aug. when no soldiers were assigned to duty making fascines. Shaw to Sargent, 14 Aug. 1779, Wainwright, "Captain Samuel Shaw's Revolutionary War Letters," *Pennsylvania Magazine* 7:282; Brig. Gen. Huntington to Maj. Huntington, 17 Nov., 1779 Huntington Papers.

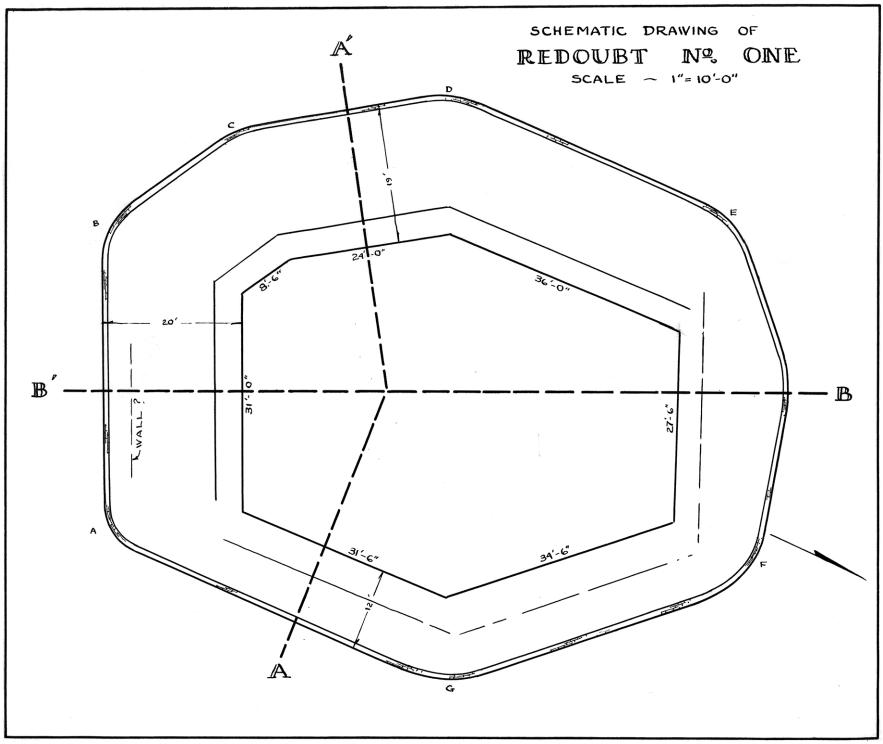

Image 11.8: *Schematic Drawing of Redoubt Nº. One*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

front. You will consider this Hill in all its relations and make yourself completely master of its defence.[30]

The "long Hill" to which Washington referred was the long ridge beginning near the former Delafield Pond and running from northeast to southwest until reaching Redoubt #4, where it increased in height and divided, with one extremity running due south to Redoubts #1 and #2, which were built on short spurs at its end, and the other running southwest with Redoubt #3 placed about halfway along its length. Between these two extremities was a small valley and creek that is now known as Stony Lonesome. Along this ridge Redoubts #1–4 of dry stone masonry were designed as the first line of defense against a British attack from the south and west. Redoubts #1 and #2 were constructed as irregular hexagons with external batteries that negated

30. Washington to Maj. Gen. Arthur St. Clair, 20 July 1779, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0482.



Image 11.9: Redoubt No. 1, c. 1975–1976. (Courtesy of the Archives and Special Collections, United States Military Academy Library.)

any necessity for artillery within the work.[31] Redoubt #3 was built as a pentagonal fortification with up to two external batteries.

Redoubt #1 is an irregular hexagonal redoubt with two external batteries. Captain Sargent's sketch-plan shows neither embrasures nor gun platforms. Although it does not have the high stone scarp walls or foundation like those found at Fort Wyllys, it is constructed on the same principles as that earlier work. There is no evidence of a bombproof in the ruins, nor does Sargent's plan indicate that any were present in 1782. The stone revetments inside the ruin are the remains of the banquette steps. The rampart, including banquette steps, measures 12 to 20 feet wide, although the parapet of earth and fascines or timber would have been less. The thicker parapets faced the higher ground to the west where Redoubt #2 was located, and to the southwest where Bare Rock Mountain rises up just south of Highland Brook. Those parapets were probably built higher, particularly the one facing Redoubt #2, in case that work should fall to the enemy.

The two batteries at Redoubt #1 are also numbered. Battery #2 is the battery next to the redoubt and is oriented west-southwest toward Bare Rock and Redoubt #2. It still shows evidence of four embrasures, and the entire

31. Mead, "Archaeological Survey of Fort Putnam," 35–52.

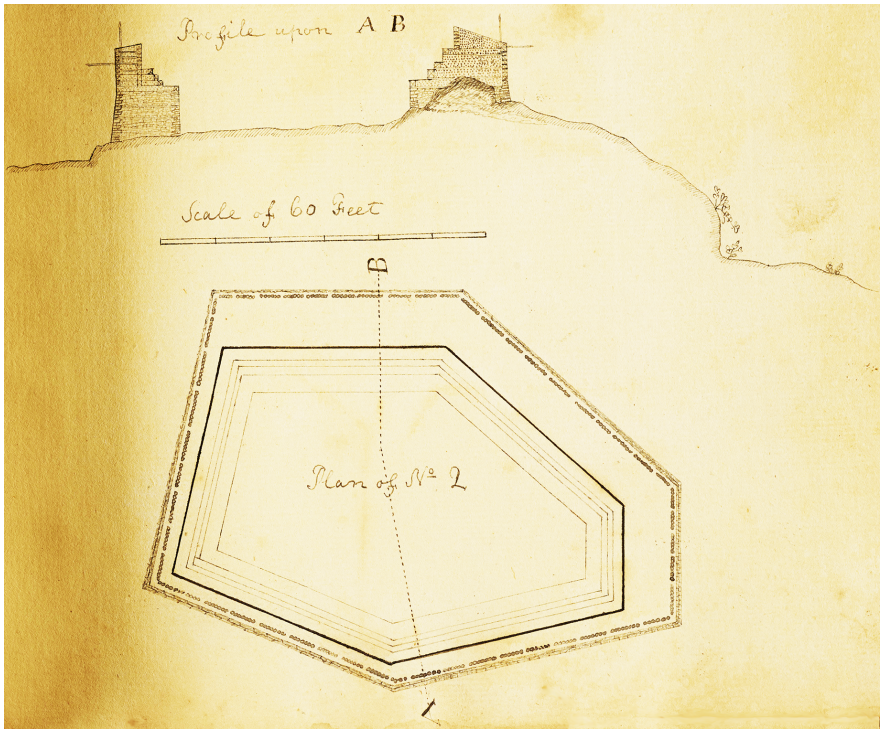

Image 11.10: Sargent's "Plan of [Redoubt] N°. 2" and Battery No. 1. (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

parapet foundation is of stone. The exterior scarp has a slight talus, while the inner revetment is vertical. Although no evidence exists in the ruins, Sargent shows a gun platform that was probably laid directly on the ground with its planks resting on timber sleepers embedded in the soil. The guns at Battery #2 could fire on Redoubt #2 if necessary. Battery #1, on the other hand, was oriented in a southeasterly direction to fire toward the river and against the British forces attempting to occupy the ridge on which the redoubts were located. This battery shows evidence of being a combination battery and redoubt, which is understandable since it was somewhat detached from Redoubt #1. No sketch of the battery exists today. Examination of the ruins reveals that the southwest wall was thicker and probably had been built higher to protect against fire from Bare Rock Mountain. Evidence of an embrasure exists. On the east there are traces of a low stone scarp wall that probably reflects cannon firing *en barbette* toward the river.[32]

32. Washington to St. Clair, 20 July 1779, USMA Library, and Washington, *Writings* (ed. Fitzpatrick), 15:442–43; Mead, "Archaeological Survey of Fort Putnam," 35–52.

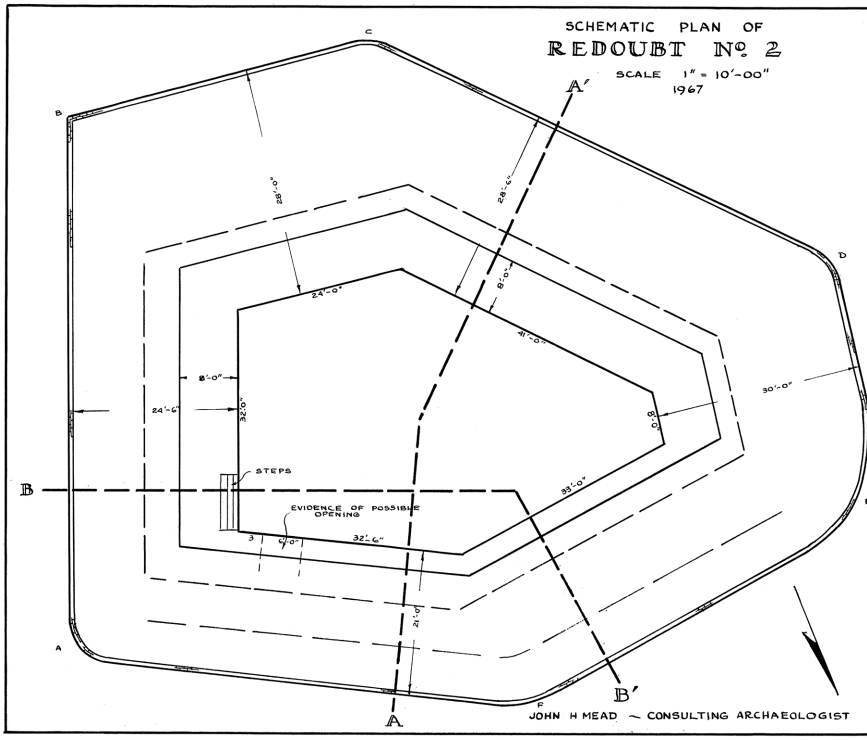

Image 11.11: *Schematic Plan of Redoubt Nº. 2*, by John H. Mead. (Courtesy of the West Point Museum Collection, U.S. Military Academy.)

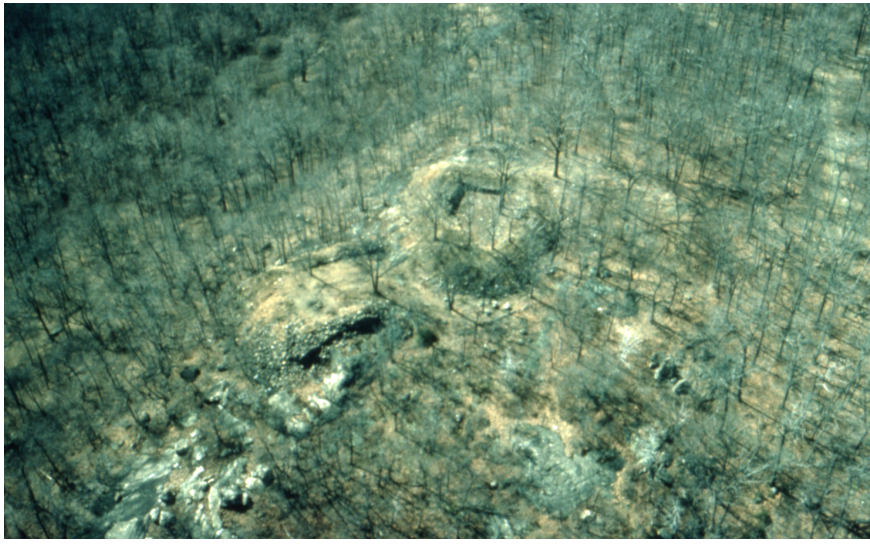

Image 11.12: Redoubt No. 2 and Battery No. 1, c. 1975–1976. (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

Redoubt #2 is also an irregular hexagon. Like Redoubt #1, all its guns were in an external battery. In general, its design was similar, except for the walls. The foundation or scarp measures twenty-one to thirty feet wide, but that great width includes the banquettes again. There is also some evidence of outer scarp walls being built only halfway up, but they either acted as support for the main inner wall or were employed in conjunction with an up-thrusting fraise. There is some indication that a bombproof might have existed, but Sargent's sketch does not show one. The ramparts facing Bare Rock Mountain and Redoubt #3 (to the northwest) are thickest and highest, again to protect against fire from those directions. The battery at the redoubt faces Bare Rock, and consequently its front wall is thickest. The parapet has a scarp six feet high in some places. Two embrasures were cut into the front parapet and three into the east parapet that covered Redoubt #1. No period sketch exists for this battery, but the ground indicates that a gun platform was laid directly on the soil. A large *epaulement* 12 to 15 feet thick on the western flank protected the inside of the battery from Redoubt #3, which was 200 feet higher to the northwest.[33]

Redoubt #3 is a pentagonal redoubt with parapet foundation walls of stone averaging only two feet high. The ruins, however, reveal some of the finest stonework at West Point. There are certain stone structures inside the redoubt that defy explanation, although two might be fireplaces from the way the stone is so well laid. Just outside the southeastern wall of the redoubt are some low stone walls that might have been part of an elaborate entranceway, or it might be the second battery that was referred to in 1780 and 1782 by Villefranche. The complete lack of soil on top of the scarp or parapet foundation indicates that it was constructed entirely of timber or fascines. According to L'Enfant's sketch of West Point, the redoubt had a roof. The battery at Redoubt #3, or at least the one that is still visible at the ruins, was basically oriented toward Redoubt #2 and Bare Rock. Detached from the redoubt, its stone scarp walls average six to seven feet in width and six to eight feet high. Like the redoubt, the lack of soil indicates the parapet was made of fascines and timber. The gun platform rested on stone sleepers similar to those found at Fort Wyllys and was approximately twenty-two feet wide. There is also a slight trace of what may have been a palisade along a low wall outside the battery.[34]

33. Mead, "Archaeological Survey of Fort Putnam," 35–52.

34. Mead, "Archaeological Survey of Fort Putnam," 35–52.

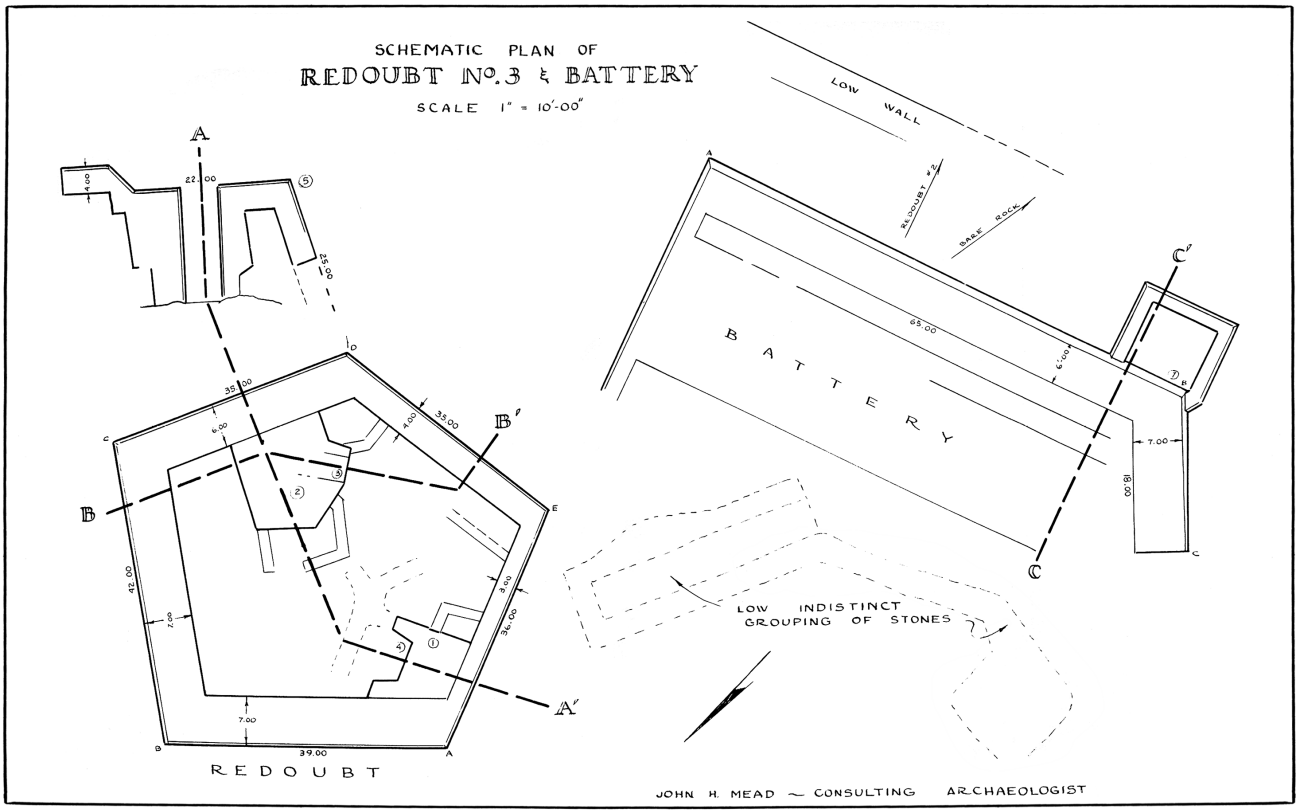

Image 11.13: *Schematic Plan of Redoubt Nº. 3 & Battery*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

Cannons placed on the short right flank of the battery would have fired southwest down the length of the ridge to block an infantry assault from that direction. The south and southwest ramparts of the redoubt would have been protected and possibly masked by the battery, resulting in their not being constructed as thick as the other three in the redoubt. The southeast wall, opposite Redoubt #2, required additional depth. The two northern ramparts, particularly on the northeast, would have been thickest to counter the unlikely possibility of enemy artillery occupying the high ground (same elevation) approximately 250 yards northeast along the ridge. The constant concern for high ground to the rear was just as applicable to Redoubt #3 as to any of the other fortifications at West Point and is substantiated by archaeological investigation.

An unusual and undetermined feature in the battery is a small stone-enclosed structure approximately four feet high on the outside of the angle formed at the juncture of the battery's two flanks. Although the redoubt and battery commanded the ridge, observation southwest at a lower elevation along the backbone of the ridge is masked by two small knolls approximately 250 and 350 yards from the battery. An observation tower would preclude the enemy's secretly massing for an assault under cover of those knolls just outside effective artillery range. Although based on pure supposition, the square stone structure at the battery may be the foundation for such a tower. At other redoubts and batteries the tendency was to raise the entire work to achieve command of the surrounding area if the natural terrain was not adequate for that purpose. Redoubt #3, without earth in its parapet or the parapet of its battery, indicates that construction must have been hasty to save the time required to haul and pack soil in the parapets. If so, there would not be time to raise all the works to sufficient height to achieve perfect all-around observation, particularly if the natural elevation of the terrain offered good general observation except for the narrow sector. Construction of a small tower would be a feasible solution to the problem of the two knolls.

Construction during 1779 was in no way restricted to the west side of the river. In fact, so urgent did General McDougall see the task of fortifying Constitution Island that he ordered the fatigue parties from Nixon's Brigade to be "augmented to 300 men."[35] That summer brought one more redoubt to Constitution Island. The new redoubt was built roughly in the center of the island to help block an attack from the direction of the marsh. Until Redoubt

35. Entry, 21 June 1779, Torrey, Orderly Book, USMA Library.

#6 was completed, the high ground it secured presented a dangerous avenue of approach into the heart of the fortifications on the island. Construction probably did not begin until late July or early August 1779, well after Washington's arrival at West Point. With all of the key participants physically present, it may have been unnecessary to commit the discussion of a simple fortification to writing. There was a problem, however, that had to be resolved.

Prior to George Washington's arrival at West Point on 16 July, the post had paused to celebrate the 4th of July by firing a salute of thirteen cannons. Additionally, the commander in chief pardoned all soldiers with death penalties and released them from confinement.[36] On 24 July, after moving to Lieutenant Colonel Stephen Moore's house at West Point, Washington directed Generals Heath and McDougall to designate the redoubts in their respective areas. Heath commanded the Continental forces east of the river, excluding Constitution Island. Two redoubts were being constructed on the hills east of present-day Garrison that were to be part of Fortress West Point. Known as North and Middle Redoubts under the command of Heath, they represented what might have been a dangerous split in command if they remained under his control rather than responsive to the garrison commander at West Point. (Later Middle Redoubt was most often referred to as "South" Redoubt.) The generals listed the following: Redoubts #1 through #6 and Sherburne's; Forts Arnold, Webb, and Putnam; and Chain, Lanthorn, Green, South, and Little Dick's (at "Meigs and Wyllys Lines") batteries on the west side of the Hudson and Constitution Island; and North, Middle, and Sugarloaf Redoubts on the east side of the river. The document also shows only two redoubts on Constitution Island. From Kościuszko's April 25th map, it is clear that the extreme eastern and western redoubts were already in existence on the island. On the document, however, what is known today as Redoubt #7 is labeled as Redoubt #6. Obviously, the middle redoubt on the island had not been constructed, although it would appear very soon. A change had to occur in the naming system to identify the new middle redoubt as #6, and the western redoubt (#6 on the document) as #7. By 20 August 1779, all redoubts had been accurately sited and identified; the cannons in these works would be manned by 240 officers, non-commissioned officers, and matrosses.[37]

36. General Orders, 4 July 1779, Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0282.

37. A document appearing to be a memorandum summarizing the efforts of Heath and McDougall to name the redoubts has been published as the frontispiece to Fitzpatrick's

Construction with manpower from the Pennsylvania and North Carolina brigades continued on all the redoubts for the remainder of the summer and autumn of 1779, but it is doubtful that those on the island were satisfactorily completed until sometime in 1780. Indeed, one wonders if they were ever completed to satisfaction. No detailed plans or drawings of the redoubts, or possible companion batteries, have survived to the present. Consequently, it is impossible to describe their appearance accurately, although archaeological traces of most of the ruins are very close to those depicted in cartographer Major Jean-Louis-Ambroise, Chevalier de Villefranche de Genton's 1780 map, particularly Redoubts #5, #6, and #7. The parapets of all three were made of earth, fascines, and timber. A visitor to West Point in 1781, presumed to be Baron Cromot du Bourg, aide-de-camp to Rochambeau, wrote in his diary that Fort Putnam was the only fortification at West Point having masonry walls. All others were made of wood and presumably earth. This observation was substantiated by the Marquis de Chastellux, who had visited West Point in 1780. Chastellux noted that the ramparts of Fort Putnam had been made of logs, but that they were being rebuilt of stone.[38]

Redoubts #5 and #6 probably had palisades erected on top of their parapets, and an abatis may have been erected around all three redoubts. Redoubt #7 may have had a fraise between its scarp and parapet to discourage escalade.[39] No evidence exists either in documents or on the ground to indicate any of the three had a surrounding ditch. Although desirable,

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The Writings of Washington, vol. 17. The document is undated; nonetheless, it probably dates from late July or early Aug. 1779, *Writings*, 15:475 and 17: Frontispiece; Report with enclosure, McDougall, Knox, and Durportail to Washington, 20 Aug. 1779, McDougall Papers, Reel 3; Orderly Book, General McDougall, 27 July 1779; West Point Orderly Book; "Weekly Return of the Corps of Artillery at Fort Clinton & its dependencies. . . . July 1st 1780," Sheffield Research Files, USMA Library. For the numbering of Redoubts #1–6 and the officers assigned to "superintend" the works, see Garrison Orders, 296, and 30 July 1779, General Orders, 30 July, Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0589, https://founders.archives.gov/documents/Washington/03-21-02-0577; Tufts's Orderly Book, Huntington Library.

38. "Diary of a French Officer," *Magazine of American History* 4:307; Chastellux, *Travels in North America*, 93. For details on the redoubts and external batteries based on archaeological work, see Appendix C.

39. Report, Villefranche to McDougall, 14 Jan. 1782, McDougall Papers, Reel 4, USMA Library; Report, Villefranche to Washington, 15 Apr. 1782, Washington Papers, Series IV, Reel 84, LOC; report, Gouvion to Washington, 2 Nov. 1780, Washington Papers, Series IV, Reel 72, LOC; a fraise is an obstacle made by embedding sharpened logs between the scarp and the earthworks above it. The logs were placed horizontally or pointed slightly downward and protruded from the wall several feet.

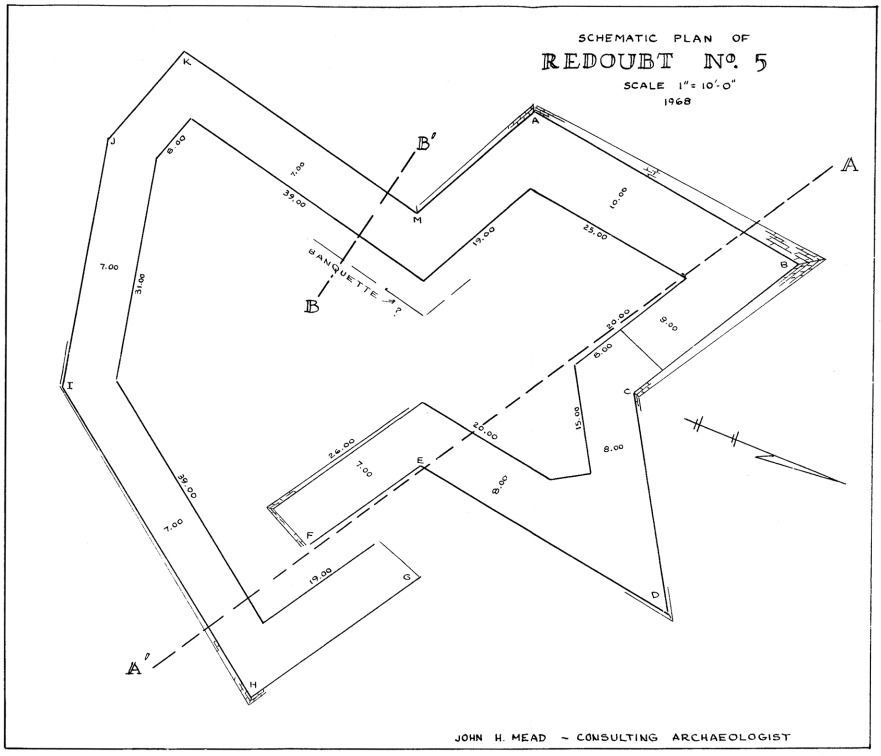

Image 11.14: *Schematic Plan of Redoubt Nº. 5*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

digging such an obstacle into nearly solid rock at the redoubts would have been a monumental chore and probably was not undertaken. Greaton's Battery on Gravel Hill, however, had a dry ditch as an additional obstacle since there was more soil to work with at that location.[40]

L'Enfant's drawing of West Point indicates a blockhouse inside Redoubt #5, although there is no evidence to support that in the ruins today. The scarp wall is clearly visible along the eastern side of the redoubt and measures relatively low, about two to three feet, and about seven feet wide. The great amount of soil that has covered most of the exterior scarp and interior revetment implies that the parapet must have been built to a considerable height. Evidence of gun platforms is not present, but there is some suggestion in the ruins that a *barbette* battery may have been able to fire along the wall in the northwest corner of the redoubt, since this section

40. Report, Kościuszko to McDougall, 1 July 1780, and letter, McDougall to Washington, 3 July 1780, McDougall Papers, Reel 3, USMA Library.

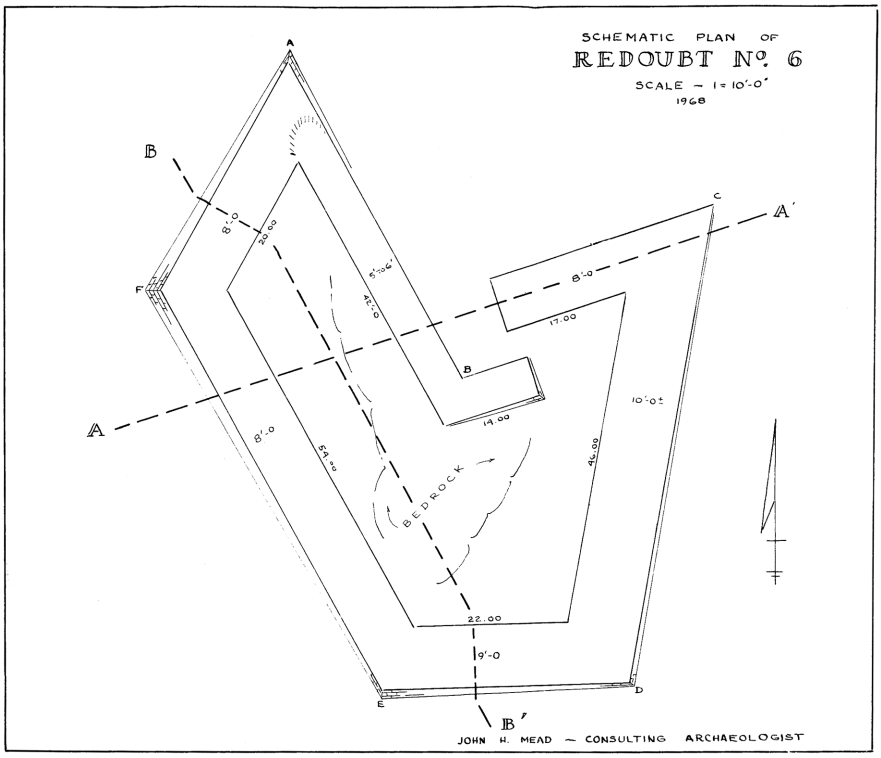

Image 11.15: *Schematic Plan of Redoubt Nº. 6*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

of the redoubt bears resemblance to Fort Wyllys, Battery #1 at Redoubt #1, and Kościuszko's original plan for Redoubt #4. The remains of the parapet approaching that corner undergo an increase in height, while the exterior stone scarp is approximately eight feet high and still in an almost perfect state of preservation. The west wall at that position is ten feet wide. The entrance to the redoubt is on the north side and reveals an unusual design in that it is highly protected by an outward projection of the rampart. Built on a knoll, the best entry to the redoubt was from the north, but that was also the direction from which an attack might come, hence the elaborate protection for the entrance. If guns were located in the northwest corner, they could cover the high ground on which Redoubt #6 was later located, or they could cover the island to the north. They could not cover the eastern approach from the marsh. To accomplish that task, an external battery would have

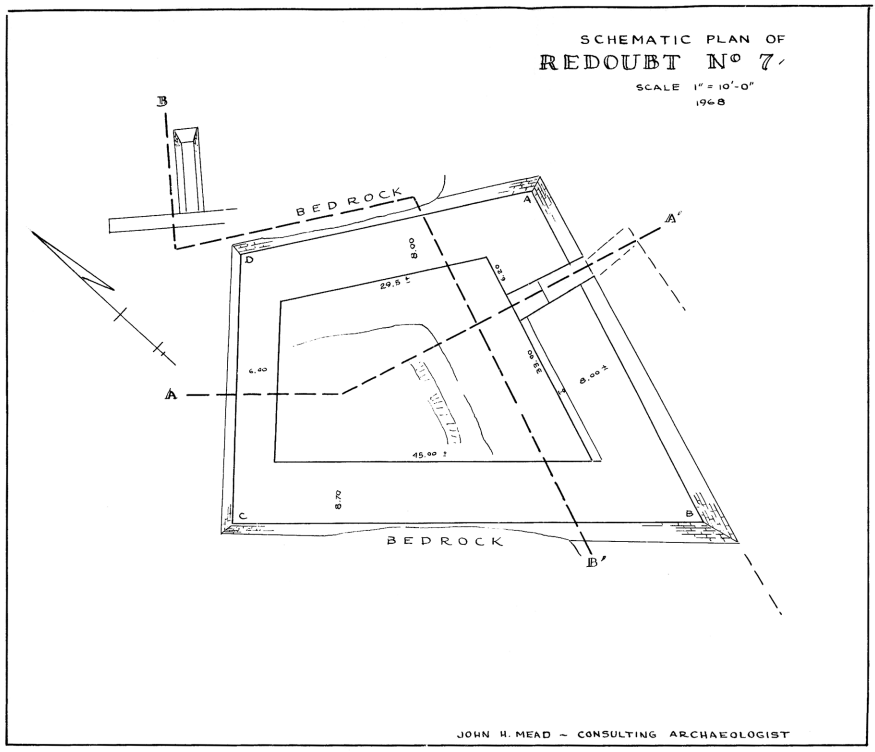

Image 11.16: *Schematic Plan of Redoubt Nº. 7*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

been necessary on the eastern side of the redoubt. No visible evidence of such a battery exists.[41]

Redoubt #6 shows considerable similarity to Redoubt #4, having a large reentrant angle on the north. Like in Redoubt #5, that angle contains the entrance to the redoubt for the same reasons, causing the design to be unique also. The scarp of the rampart, averaging nine feet in height and eight to ten feet in width, was constructed of well-laid dry masonry, also in an excellent state of preservation. The steep sides of the small knoll on which the redoubt was constructed alleviated the need for high parapets. The ruins, moreover, give no indication that guns were located inside the redoubt. L'Enfant's drawing shows a large embrasure on the south wall of the redoubt, raising the possibility of cannons inside. Recommendations to place an artillery battery at the redoubt also support the possibility that one

41. John H. Mead, "Archaeological Survey of Constitution Island and Adjoining Fortifications, 1968–1969" (West Point, NY: The West Point Museum Fund, 1969), 7–11.

was located there, although no visible proof exists to confirm a battery or the blockhouse that was also shown in the sketch.[42]

Redoubt #7 is a magnificent example of dry masonry. The stone scarp walls are as much as seventeen feet in height and vary in thickness at the top from six to nine feet. All the walls have a talus of 1:6, while the interior face is practically vertical. On the interior face of the southeastern wall, there is an inset that could have acted as the foundation for a platform extending over to the bedrock on the opposite wall, making room for a magazine or bombproof with dimensions of twelve feet by eighteen to twenty feet. Guns were recommended for the redoubt, but no trace of either an external battery or internal gun positions can be found today. Finally, L'Enfant's drawing shows a gabled roof on the redoubt for a magazine, which would make it difficult to fire artillery and muskets from the redoubt unless some openings were cut into the roof or parapet.[43]

The apparent ease with which a bombproof could have been constructed inside Redoubt #7 makes it hard to believe that the French engineer, Villefranche, was still recommending one in 1782, as well as for the other redoubts on the island. Nor were there magazines for powder or supplies. Banquettes were recommended for #6, #7, and part of #5, suggesting there were no heavy cannon in any of the redoubts with the possible exception of #5, nor would there be if banquettes were constructed.[44] Cannons firing balls weighing up to four pounds could be discharged from swivels mounted on the ramparts, but larger cannons required carriages, and carriages required gun platforms.

North and Middle redoubts were constructed on the east side of the river. The former was located on the northern end of the ridge overlooking the plain at Garrison. Guarding Nelson's Point, it was very similar in construction to Fort Wyllys and Redoubts #1, #2, and #3. There were no

42. Mead, "Archaeological Survey of Constitution Island," West Point Museum, 12–15.

43. Mead, "Archaeological Survey of Constitution Island," 16–20. A final feature on Constitution Island that continues to remain obscure is the "unfinished" Redoubt located on the first hill due north of Romans's Blockhouse. The style of construction and the unfinished condition almost certainly links it to the early period on the island between 1775 and 1777. The remains of this work are nothing more than small sections of wall from six to eight feet in width and approximately three feet high. Of interest, however, is one exposed section that shows the bedrock scraped level to establish a sure footing for the scarp or rampart walls and explains how the walls of the various fortifications have been able to withstand over two centuries of deterioration.

44. Report, Villefranche to Washington, 25 Apr. 1782, Washington Papers, Series IV, Reel 84, LOC.

reentrant angles, and all the guns were placed in external batteries. North Redoubt had three batteries with three 18-pounders and three 12-pounders, and Middle Redoubt also had three batteries with one 12-pounder and four 6-pounders. Villefranche had indicated that there was a powder magazine at the redoubt in 1782. In January 1781, fifty-one officers, noncommissioned officers, and matrosses of Captain James Simonds's Company of Colonel Thomas Proctor's 4th Regiment of Artillery manned North Redoubt. They drew rations of beef, bread or flour, salt, potatoes, and rum in four-day intervals. By the end of 1779, Colonel Kościuszko would report that Forts Putnam and Webb were finished as well as four redoubts and "the chain battery" on Constitution Island.[45]

North Redoubt was located on the northern end of the ridge overlooking the plain at Garrison. Guarding Nelson's Point, it was very similar in construction to Fort Wyllys and Redoubts #1, #2, and #3. The parapet on the south facing Middle Redoubt was considerably higher than the others, today about an eight-foot difference. The high parapet would provide protection in the event Middle Redoubt fell to the enemy. There is some evidence of a platform in the northwest corner of the redoubt, but its use is unknown. If it had been for cannons, they would have had to fire *en barbette* because there is no evidence of embrasures. A bombproof existed in the redoubt, but there is no evidence of it now. There is a ditch along the south parapet with two small stone walls in it that probably were part of the entranceway that is still visible in that wall. Villefranche had indicated that there was a powder magazine at the redoubt in 1782.

The three batteries at North Redoubt were typical of all batteries at West Point. Battery #1, slightly to the northeast of the redoubt, has a stone scarp approximately six and a half feet high in front with no evidence of embrasures. An *epaulement* on the east flank protected the battery from the higher ground to the east. A small stone wall, probably the base for a palisade of logs, extended from Battery #1 to Battery #2. Built slightly to the northwest of the redoubt, Battery #2 has a low scarp in front and a high *epaulement* (eight feet) on the southwestern flank. This battery would prevent the enemy from controlling Nelson's Point, while the *epaulement* protected the matrosses from fire from the river and from the plain at Garrison.

45. "Acct. of Provisions Drawn for Capt. Simonds Company of Artillery Stationed at the North and Middle Redoubts from ye 13th of Novr. to the 30th; 1780" and "Monthly Return of Capt. Simonds Company," 27 Jan. 1781, Orderly Book, Sheffield Research Files; Kościuszko's note, n.d., McDougall Papers, Reel 2, USMA Library; it is unclear where the fourth redoubt was; Mead, "Archaeological Survey of Constitution Island," 24–30.

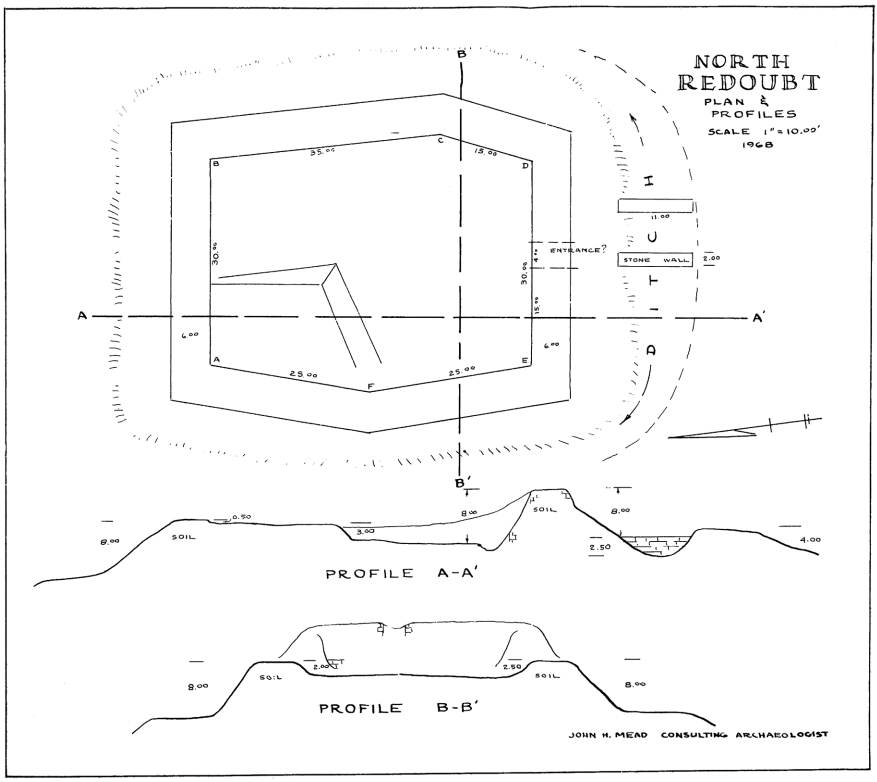

Image 11.17: *North Redoubt, Plan and Profiles*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

The battery apparently would fire *en barbette*. Battery #3, located on the south side of the redoubt, would prevent assault from the direction of Middle Redoubt. Embrasures are still evident.[46]

Middle (South) Redoubt, located on the high point of the same ridge as North Redoubt, is approximately one-half mile to the south of the latter. The comparison made between North Redoubt and other works at West Point holds true for Middle Redoubt also. The remaining parapets on the south and west walls measure about four to five feet high, while on the east and northeast faces the parapet today measures eight and a half feet high.

46. Mead, "Archaeological Survey of Constitution Island," 24–30. John H. Mead, consulting archaeologist for the West Point Museum in 1968–69, concluded that the batteries at North Redoubt "offer what I believe to be excellent evidence of the various construction principles in use at West Point during the Revolutionary War: 1. Embrasures were used when a battery was vulnerable to assault by troops or close fire. 2. Guns were more likely to be placed *en barbette* when assault or direct fire from nearby vessels was unlikely, to gain the benefit of a greater sweep of fire and maneuverability," 27.

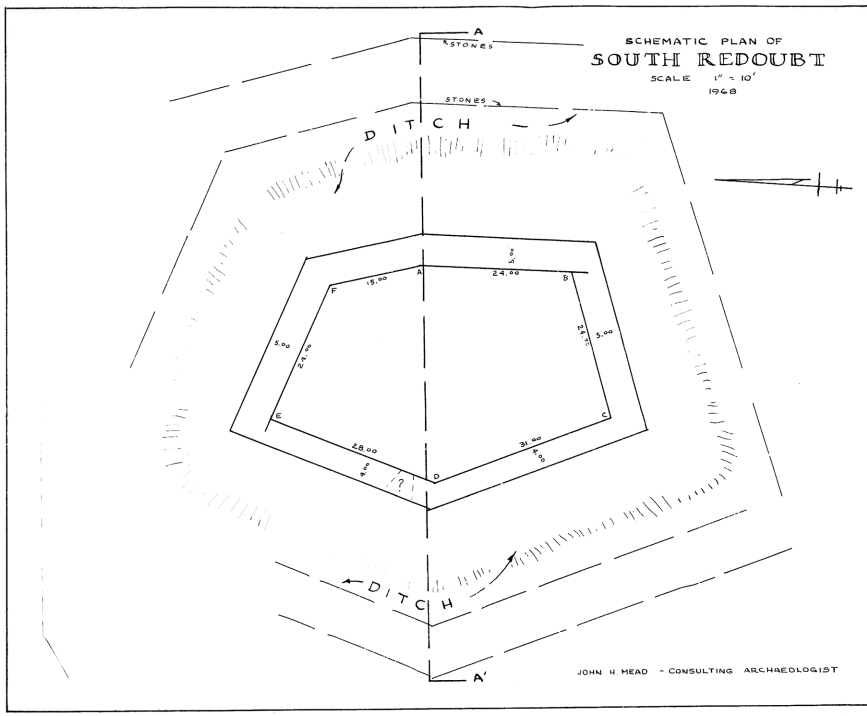

Image 11.18: *Schematic Plan of South [Middle] Redoubt*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

Battery #1 slightly northeast of the redoubt has a stone rampart and an embrasure in each of its two walls. One faces the level ground to the north, while the other is oriented toward the higher ground to the east. Battery #2, if the feature investigated was in fact a battery, had a stone rampart that is barely recognizable today. The absence of any parapet soil would imply that the guns had to fire *en barbette*. The feature is located generally where Villefranche's 1780 map places a battery. Although his map locations for the batteries at both North and Middle Redoubts do not accurately reflect the positions of the ruins as surveyed today, his map is one of the best from the period. Battery #3 is very similar in construction to #1, although it has only one embrasure in its southern face and an *epaulement* on its northern flank that is approximately six feet high, once again to protect from the high ground to the east. Villefranche's map shows a fourth battery that should lie between #2 and #3, but there are no remains of this battery except for some indistinct mounds of soil to the west of Battery #3. The same comments

47. Mead, "Archaeological Survey of Constitution Island," 31–38.

concerning the design and use of the batteries at North Redoubt apply to those at Middle Redoubt.[48]

Even though a great deal of attention was devoted to construction during 1779, there was still time to ensure proper discipline. The British returned to Stony Point after the Americans abandoned it following the battle in July, with the result that tensions remained at a peak. No one knew whether the British would attempt retaliation. Washington reorganized Nixon's, Paterson's, Learned's, and the North Carolina brigades in the Department in anticipation of a move by Clinton. Nonetheless, a carelessly discharged musket could send the entire garrison into a panic. Instructions on 24 July directed that any soldier who fired his weapon without permission was to receive fifteen lashes on the spot and pay one-sixth of a dollar.[49] Later on, with ladies visiting the post, the troops were further admonished concerning off-duty activities:

> There is to be no bathing between the hours of 8 and 5—and the custom of remaining long in the water is to be discontinued, as it is too relaxing and injurious to the health—It is also expected that the soldiers in this kind of recreation will observe more decency than they usually practise. These orders to be read to and impress'd upon them by their officers.[50]

The key fort in the complex defending the westward approach to Fortress West Point was Fort Putnam. Originally Fort Putnam was constructed like all the other fortifications at West Point, a stone scarp or foundation topped with parapets of earth, fascines, and timber or logs for facing. The trace or outline of the fort drawn by Kościuszko on his "ruff map" of 25 April 1779 is identical to the trace of the fort today except for the southeastern portion, which was extended southward in 1794 as part of a major reconstruction effort.[51]

By late 1780 all the rampart walls were lined with stone. But 1780 was also the year of Benedict Arnold's treason. One of the documents found on Major John André, Arnold's contact, described the ramparts of Fort

48. Mead, "Archaeological Survey of Constitution Island," 31–38.

49. Orderly Book, Captain Seth Drew, 24 July 1779, USMA Library.

50. General Orders, 22 July, 5 Aug. 1779, Washington, *Writings* (ed. Fitzpatrick), 16:56, and Founders Online, https://founders.archives.gov/documents/Washington/03-21-02-0499, https://founders.archives.gov/documents/Washington/03-22-02-0033, and Tufts's Orderly Book.

51. For details of the reconstruction in 1794 and 1910, see Appendix C in Mead, "Archaeological Survey of Fort Putnam," 13.

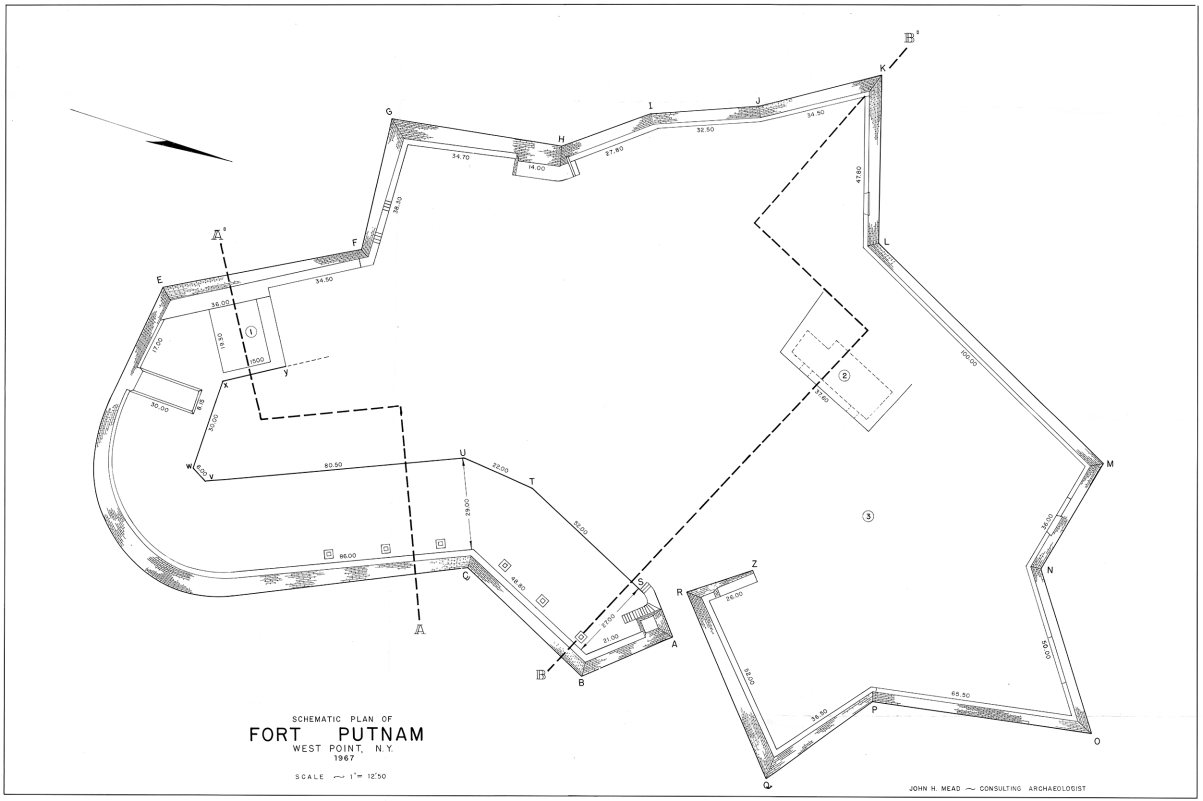

Image 11.19: *Schematic Plan of Fort Putnam, West Point, N.Y.*, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

Putnam as being in very poor condition, fallen down, and open to attack. Certainly, consideration would have been given to repairing those walls after Arnold's plot was exposed and the dilapidated condition of the fort was recognized. Undoubtedly the authorities at West Point were shocked into conducting some rapid maintenance, and quite often in the past various individuals had already recommended refacing the fort in good (lime mortar) masonry. Hence, the walls, or at least some of them, were rebuilt. However, Villefranche in 1782 still recommended that the dry stone walls be rebuilt with good masonry.[52] If the masonry work had not been accomplished by that time, and the parapets were only repaired by restacking the stone in dry fashion, then the lime mortar must have been applied during 1782 and 1783 because by the end of that year the army was greatly reduced and the immediacy for repair work had passed with the signing of the Treaty of Paris. The significance, however, is that there was another period of major construction that lasted from either 1781 or 1782 to 1783 and extended the walls outward with the added layer of mortared stone.[53]

The fort was built according to the terrain on which it was located, utilizing to best advantage the steep slopes and general rise in elevation moving from east to west across the top of the knoll. This dictated that the western parapets would be higher, which created protection for the interior of the fort from the Rocky Hill area to the west. Of course, there are several early maps of West Point that depict different traces for Fort Putnam, but none of them match the present structure as well as Kościuszko's. His map shows two buildings inside the fort; today one has been rebuilt. He indicates what could be three casemates inside the eastern wall. Chastellux saw "souterrains" in 1780, which probably were those casemates.[54] The other casemates

52. Mead, "Archaeological Survey of Fort Putnam," 3, 17. "Details on West Point's Redoubts, circa 1780," Papers found on British spy Major André, André Papers, A4681, New York State Archives, Albany, NY, http://digitalcollections.archives.nysed.gov/index.php/Detail/Collection/Show/collection_id/5338.

53. Gruber to Bradley, "West Point American Revolution Bicentennial Commission Project—Fort Putnam."

54. Mead, "Archaeological Survey of Fort Putnam," 3; the only profile of Fort Putnam is on a 1783 map by John Hinncks, the original of which is in the Library of Congress. The annotation at the top states "Surveyed a Coup d'oeil the 24th Oct. laid down the 27th Oct. 1783." The map of the Highlands at West Point, the profile of Fort Putnam, and the supposed profile of Fort Willit (Wyllys) all contained on the map sheet were surveyed by Hinncks at "a glance" or by the crude technique known as "eyeballing," nor was it put to paper until three days later. The obvious inaccuracies in the map, and the lack of resemblance between Fort Willit and the ruins at Wyllys today, do not inspire confidence in the validity of the profile for Putnam, which depicts a large bombproof in the west

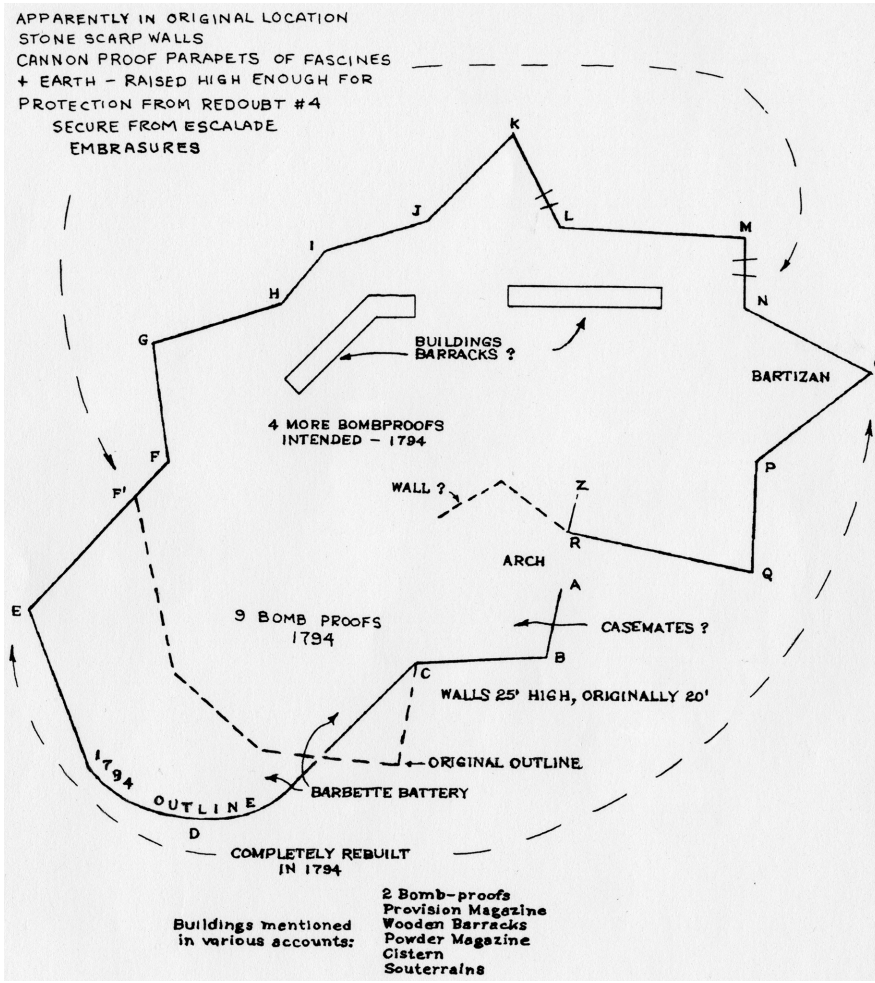

Image 11.20: Illustrations showing some features of Fort Putnam 1778–1794, by John H. Mead. (Courtesy of the West Point Museum Collection, United States Military Academy.)

in the fort today date from the 1794 reconstruction. Embrasures, shown in the L'Enfant sketch of West Point, were in the western ramparts. L'Enfant's drawing shows a bartizan (turret or watchpost) constructed on point "O" that would be ideal for sentries to overwatch the trail leading to the fort without exposing themselves to enemy fire or the elements. A later drawing of West Point in 1796 again depicts this bartizan at the same location in Fort Putnam.[55] The only problem is that a bartizan situated as shown in both the L'Enfant sketch and 1796 sketch probably would have required a mortared stone base on which to perch. Dry masonry might be precarious. By 1796 the bartizan most likely had a mortared base, but in 1780 the situation is more doubtful. It could be that a portion of the fort's walls had some lime mortar by 1780, particularly on the north side, but there is no indication that this might be true, and so the doubt concerning the date of the bartizan persists. The L'Enfant drawing does show two buildings or barracks similar to those on Kościuszko's map.



Image 11.21: Fort Putnam, c. 1975–1976. (Courtesy of the Archives and Special Collections, U.S. Military Academy Library.)

One other feature of the Kościuszko map that is different from the present appearance of the fort is the entryway. The parapets near the entrance on Kościuszko's map are not evident today, although they would have offered better protection to the entrance than the present reconstruction would. The actual entrance to the fort would have been further inside the present gate.

wall of the fort. Although the possibility of such a bombproof having existed must be considered, the profile and the map in general should not be trusted. Bombproofs have been mentioned at Fort Putnam, but they may have been the casemates believed shown on Kościuszko's "ruff map"; Chastellux, *Travels in North America*, 93.

55. Mead, "Archaeological Survey of Fort Putnam," 14.

Also interesting is that to the northeast of the present replica hut was some rubble that has been identified as a two-room building measuring twenty feet by ten feet on the interior. The superstructure was a combination of stone, wood, and brick.[56] The construction date is estimated to be between 1781 and 1783. It is ironic that Fort Putnam, today the only fortification at West Point that has been restored (to the 1906–1910 condition), should have so little known about it other than what can be conjectured based on all the other fortifications that were built at approximately the same time and under the guidance of the same engineer, Kościuszko. For instance, if there were embrasures, they were certain to be located in the thicker and higher rampart facing the high ground to the west. On the east the parapets would have been lower with the guns firing *en barbette*. The entranceway would have been unusual as at Redoubts #5 and #6 because an infantry advance might come from the southeast past Webb and Wyllys and arrive at the fort on the side where the entrance was located. Certainly, gun platforms were used to create stable firing positions. Maybe they were placed level with the ground, or perhaps they were elevated. Without additional detailed archaeological work, most of the questions about Fort Putnam will go unanswered. Kościuszko's housekeeper destroyed his records, which might have explained everything concerning Fort Putnam.[57] Nonetheless, Fort Putnam

56. Gruber to Bradley, "West Point American Revolution Bicentennial Commission Project—Fort Putnam."

57. As more archaeological work is conducted at the fort, more information on its structure and facilities during the war years will be uncovered. But what about the Army records at West Point? Their fate has been recorded by an 1826 graduate of West Point, Augustus Pleasanton, who entered the following into his diary on 22 Oct. 1839: "When I was at West Point the other day Major Delafield told me that a few years ago during the administration of the War Department by either Major Eaton or Governor Cass (he had not then been able to ascertain which) an order was sent from Washington to sell at auction all the old stores of whatever kind which remained in the storehouse at West Point. Under this order all the Revolutionary relics, excepting a small piece of the large chain (about thirty feet of it) which was stretched across the river here during the Revolutionary War to prevent the passage of the British ships were sold. Among this large collection of various curious and valuable property were many barrels which were filled with papers, reports, order correspondence and other valuable information connected with our Revolutionary struggle and particularly with the administration of the forts at West Point and along the Hudson River, all of which were sold by the barrel or lot for waste paper. Thousands of letters, orders, instructions and reports in the handwriting of General Washington, of LaFayette, of Knox, Arnold and of a host of others were thus sold to cheesemongers and greengrocers. Oh shame! most crying shame! I suggested to Delafield the propriety of enquiring for the purchasers and of endeavoring to repurchase them. He was, however, of the opinion that it would be a hopeless task. While speaking on this subject to Lieut. Waggaman of the Artillery at West Point he told me that he was

was the linchpin of the fortifications completed in 1779. The question to be answered now was, could Fortress West Point stand up to a British attack?

serving in Florida as Quartermaster at, I think, Fort King when Lieut. Constantine Smith was killed by the Indians, that he administered upon his estate and among many curious things which belonged to Smith was an original order book in manuscript of General Washington, that at the time it never occurred to him to preserve it and it was accordingly sold with the other property and was bought for old paper. These recitals fairly gave me a chill. How true it is that the Americans are without the organ of reverence," "Diary of Augustus Pleasanton" (USMA 1826), entry for 22 Oct. 1839, 242, available in the Archives and Special Collections, USMA Library.

CHAPTER 12

WAR GAMING THE FORTRESS

With all of West Point's fortifications completed or under construction by the latter half of 1779, General Washington thought that it was time to evaluate and to scrutinize the post's capabilities. Brigadier General Louis Duportail, as chief of the newly formed Corps of Engineers,[1] under guidance from Washington and reflecting his own concern, conducted a detailed investigation and prepared a lengthy "Study for the Defense of West Point" on 20 August 1779. Establishing that the basic object of any attack would be the destruction of the chain "and the fortifications are only made to back it up," Duportail considered several methods by which the British might attempt to achieve that goal. Several tactics were considered too unpredictable and costly for the British to contemplate seriously: a direct assault on the chain itself to either ram it by ship or disembark infantry or marines to cut it at the eastern anchor; disembarking troops on the west bank close to Fort Arnold to seize that position long enough to silence its guns and those of the water batteries while the chain was being cut; by landing on the eastern shore of Constitution Island and moving westward to cut the chain; or by either landing on the east bank somewhere above Robinson's landing or coming overland by way of Peekskill and Continental Village to seize the island and cut the chain. Duportail judged that none of these methods was feasible, but he did feel that an overland approach from the west to take Washington's "long Hill" would probably be the most likely avenue of advance to Fort Putnam once ashore from the Hudson. He made a detailed analysis of what variations of this option would entail. His conclusion was that there was really only one option: The enemy could take Redoubt #3, then #4, and finally Fort Putnam—"the real point of attack against West Point." Because of the construction of Redoubts #1 through #4 and the location of Fort Putnam, Duportail decided that "we have assured the defense of

1. The Corps of Engineers was formed on 11 Mar. 1779, https://www.loc.gov/resource/llscdam.lljc013/?sp=304&st=image.



Image 12.1: *A Plan of West Point. 1779,* by Captain Moses Greenleaf of the 11th Massachusetts Regiment. (Courtesy of the Massachusetts Historical Society.)

this mountain, as much as it is necessary to do it, in view of the number of troops the enemy can sacrifice to the attack of West Point."[2]

Duportail, up to this point, had discussed West Point's ability to defend itself with its own garrison. Thereafter he addressed the use of mobile forces outside West Point in an active role. He disregarded the possibility that the enemy would land at Stony Point because that would entail a long line of communications to support operations at West Point, and that line would be susceptible to American attack. Consequently, only patrols would be needed between Stony Point and the Popolopen Creek area to warn against an unlikely British advance. If a landing on the west shore occurred, it would be somewhere between old Fort Montgomery and West Point, perhaps at Sandy Beach. With that in mind, as well as Duportail's discussion of hypothetical British operations, the first ground the enemy would have to occupy in order to conduct operations against West Point would be the high ground south of Highland Brook, the most dominant feature of which is Bare Rock Mountain. The British attack could be delayed "for a long time," however, if Bare Rock and the accompanying terrain were occupied by "Some hundred men on these mountains making the approaches more difficult by abatis." Duportail continued: "We must reconnoiter, look for ways to attack them, to dislodge them. In areas of difficult access, covered with woods and rocks, this is quite long."[3]

Duportail indicated that abatis had been or would be constructed between Redoubts #1 and #2 to provide another line of delay if the Americans had to fall back toward West Point, which would allow them "to defend this mountain for as long a time as possible for on it depends principally the defense of West Point." The same defensive tactic could be used if the British attacked Redoubt #3 first.[4] The mobile forces that Duportail envisioned performing these tasks would have been provided by the militia or units of the

2. Duportail, "Study for the Defense of West Point," report from Duportail to Washington, 20 Aug. 1779, trans. Dunne, USMA Library. The original manuscript of Duportail's report, 20 Aug. 1779, is in the French Archives Historiques in the Depot de la Guerre under the title *Memoire sur la defense de West Point*. A reproduction with a translation by Lt. Col. Donald T. Dunne is in the USMA Library's Revolutionary War Collection. Note: The map that accompanied Duportail's report is not available. In the report he used letters and numbers to address batteries, redoubts, terrain features, etc. Careful examination of the report identifies all those locations beyond doubt. Hence, there is considerable use of brackets to clarify Duportail's comments. See Appendix D for key provisions of the report.

3. Duportail, "Study for the Defense," USMA Library.

4. Duportail, "Study for the Defense," USMA Library.

Continental Army. These forces would conduct detached operations against the enemy's flank, rear, or front to keep him as far from the fortifications as possible. The overall object was to keep enemy forces from acquiring any position or advantage that might eventually threaten the chain.

Duportail thus comprehensively completed the appraisal of West Point's capabilities that Washington had requested. The only change recommended was submitted as a group by Duportail, Henry Knox (Washington's chief of artillery), and McDougall:

> It is our opinion the two water Batteries East of Fort Arnold, commonly called the Lanthorn Batteries, are of little Importance in the Defence of the place—but, in Lieu of them and the South Battery in the same Range, it is proposed to have two Batteries of heavy Cannon, one on the S.E. and the other on the N.E. of Fort Arnold. The S.E. Battery will range well down the River, secure Nelsons Point & flank any Ships that might lay near the Chain. The N.E. Battery will well defend the Chain from any Attempts that may be made against it by boats or Ships.[5]

Although there is no evidence that a major change in the water batteries took place, an ordnance report for 25–28 December 1782 reflects only Chain, Lanthorn, and South Batteries. Water (Green) Battery appears unfortified. Perhaps that indicates the recommendation was partially adopted, and that Lanthorn and South Battery may have been scheduled to accept larger cannons rather than adding two new batteries near Fort Arnold. There is no proof that this happened.

Accompanying the Duportail-Knox-McDougall report was a list of ordnance required to arm the fortifications. The report, dated 20 August 1779, the same date as Duportail's study, indicates that Fort Webb had a separate battery on the "ridge east of it," and that Wyllys had "advanced lines" (perhaps the conjectured parapet extending toward Meigs) and "batteries to the left." Wyllys had at one major, external battery; perhaps the allusion to "batteries" indicates reference to the battery at Meigs. On the "East Side" at Constitution Island, a "water battery [is] proposed instead of the present one"—Greaton's Battery. Sometimes Greaton's was referred to as the "Grand Battery." Chain (Marine) Battery would have only three 12-pounders to repel

5. Report from Knox, McDougall, and Duportail, 20 Aug. 1779, McDougall Papers, Reel 3, USMA Library.

enemy ships near the Great Chain.[6] Looking at its trace on Villefranche's or Kościuszko's map gives the impression of a large and complex fortification.

On 24 September 1779, Duportail submitted a troop list to Washington identifying strength requirements to man each fortification in Fortress West Point; this dovetailed with the assessment of the required cannons for each. He reported that Fort Arnold and two water batteries (ten 18-pounders, six 12-pounders, and three 3- or 4-pounders) required 630 men, which may indicate that the two Lanthorn batteries (actually Lantern and Water) were not being used based on the earlier recommendation. Fort Putnam (six 18-pounders, four 12-pounders, and four 3- or 4-pounders) took 300 men, Redoubt #4 (two 12-pounders) took 100, Redoubt #1 with its battery (eight 9-pounders) needed 170, Battery #1 (the outlying battery at Redoubt #1 overlooking the river) required 40; Redoubt #2 (five 9-pounders) with its battery took 170, Duportail claimed, Redoubt #3 with two batteries (five 6-pounders) needed 130; and, Fort Webb "with the Battery upon the left" (two 6-pounders and four 3- or 4-pounders) required 200 men. It appears that Redoubt #3 did, in fact, have a second battery, and that Fort Webb had a battery external to the redoubt. Duportail also requested 50 men for a "Battery at the Place marked," which, from the position of this statement in the list, may have been planned between Redoubts #1 and #2. There is no evidence that it was ever constructed. Fort Wyllys "with it's Batteries in front and upon the left" (two 18-pounders and three 3- or 4-pounders) was to have 170 men. Since Meigs and Little Dick's Batteries were not mentioned anywhere in the list, it may be safe to assume that the batteries at Wyllys were the one external to the redoubt and Meigs's and Little Dick's—"batteries to the left."[7]

On Constitution Island, the "Redoubt the nearest the River with it's two Batteries" needed 80 men. The nearest redoubt to the river was #7. In August that redoubt had only four small 3- and 4- pounders recommended, which meant the two batteries, if present, might have been batteries internal to the redoubt. The small caliber 3-and 4-pounders were suited to defense against an infantry attack. The "Center Redoubt," obviously Redoubt #6, with "it's Batterie" needed 120 men. If armed with the recommended four 6-pounders, it probably would have had an external battery. The "Third Redoubt with

6. Report from Knox, McDougall, and Duportail, 20 Aug. 1779, McDougall Papers, Reel 3, USMA Library.

7. Report, Duportail to Washington, 24 Sept. 1779, McDougall Papers, Reel 3, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-22-02-0409.

it's Batterie" was Redoubt #5. It required 160 men and was supposed to have two 12-pounders, two 6-pounders, and four 3- and 4-pounders. These may have been placed in a *barbette* battery inside the redoubt, since this is also the only redoubt on the island whose ruins indicate it might have contained a battery. The "Grand Battery," or Greaton's Battery, took 60 men, and the "Lower Battery," or Marine (Chain) Battery, needed 40. North Redoubt on the east side of the river with its three batteries (three 18-pounders and three 12-pounders) needed 150 men, while Middle Redoubt and its three batteries (one 12-pounder and four 6-pounders) took 160. The total strength requirement for Fortress West Point thus would be 2,730 men and 106 cannons.[8]

Duportail also made several recommendations for the construction of barracks. Fort Arnold, which he felt was susceptible to a surprise attack when the river was frozen, ought to lodge the troops "in the fort itself and in its advanced work the greatest part of the men necessary for its defence." The "advanced work" may have been Sherburne's Redoubt. He went on to say, "We may at once construct a Barrack in fort Clinton [Arnold] upon the bomb proof for the officers—We cannot erect a barrack in the remaining vacant ground of the work, because we must still be erecting other bomb proofs—but in the advanced work we may construct a barrack for 300." He then made reference to the possibility of housing the remainder of the fort's garrison in a barracks that might be built in the "old fort."[9] Comparing Villefranche's 1780 map to Kościuszko's "ruff map" of 1779, it appears that Fort Arnold did not change its exterior shape nor did its size increase in any appreciable manner. What had changed, however, was that a citadel, or last refuge, had been constructed in the northeast corner of the fort. Earlier McDougall had ordered changes to the eastern face of the fort, but somewhere along the line the citadel concept, which was very traditional in European fortresses, made its way into Fort Arnold. A ditch can even be discerned on the western side of the wall separating the citadel from the remainder of the "old" fort. Embrasures are also seen in the east wall, which corresponds with L'Enfant's drawing.

At Fort Putnam, Duportail recommended that "it will suffice to have wherewith to lodge an hundred men or 150—which we already have in the barracks and bombproofs—They may be relieved dayly—The rest of the men

8. Report, Duportail to Washington, 24 Sept. 1779, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-22-02-0409.

9. Report, Duportail to Washington, 24 Sept. 1779, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-22-02-0409.

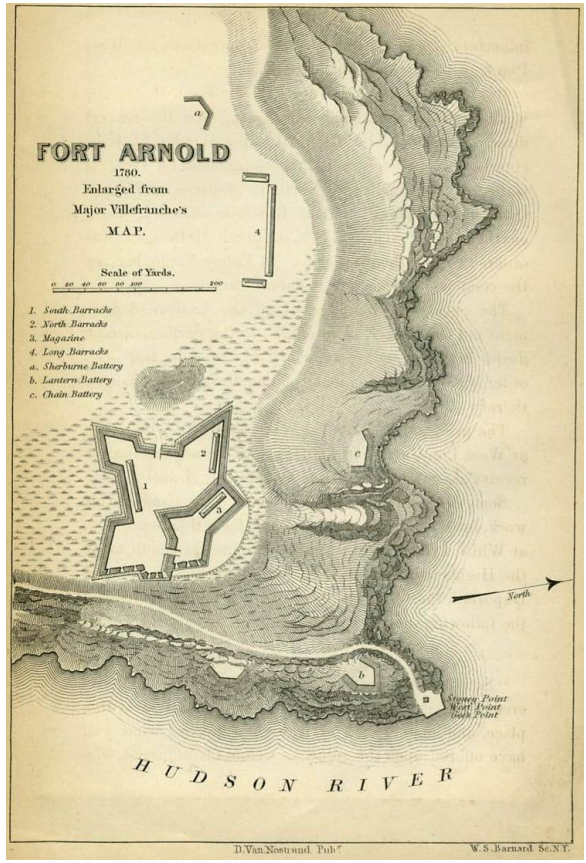

Image 12.2: *Fort Arnold 1780. Enlarged from Major Villefranche's Map*, in *History of West Point, and its Military Importance During the American Revolution*, by Edward C. Boynton. (Courtesy of the Archives and Special Collections, United States Military Academy Library.)

necessary to its defence may lodge in the great barracks already made." The "great barracks" must be the two large barracks northeast of Fort Putnam on the Plain that appear on both Kościuszko's and Villefranche's maps. At Fort Webb, Duportail recommended cover for a "serjeant's guard to prevent its being injured—and the planks, platforms, and fascines torn up for fire wood." It sounds as if Webb was not constantly garrisoned at that point. There was no need for the garrison to sleep there since the redoubt was safe from surprise attack, so only a small guard was needed to control the local vandals. At Fort Wyllys, however, the entire garrison had to be present. The advanced position of that post required barracks to house all the troops

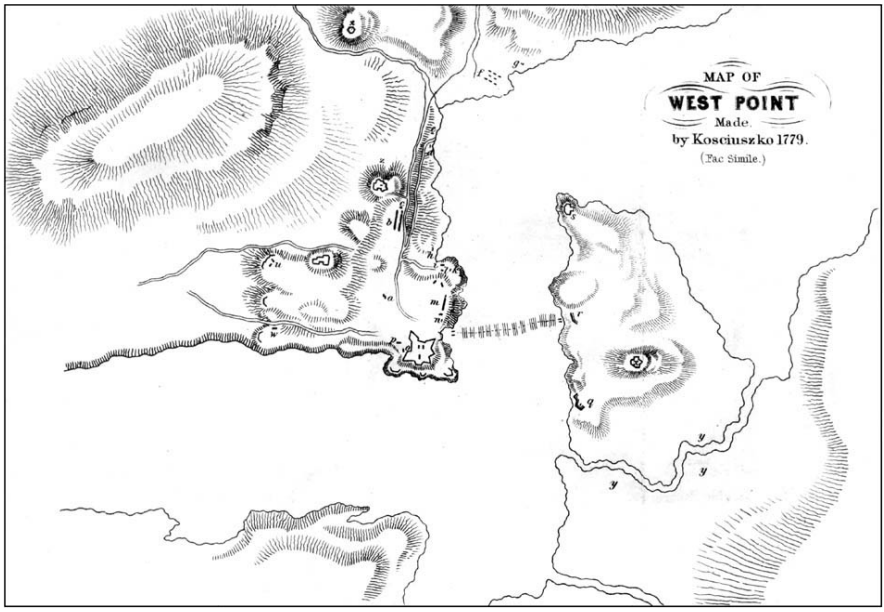

Image 12.3: *Map of West Point Made by Kosciuszko 1779*. For the original, see Image 11.1. (Edward C. Boynton, *Guide to West Point, and the U.S. Military Academy*, 1867, https://babel.hathitrust.org/cgi/pt?id=loc.ark:/13960/t9g45967p&seq=19.)

that would defend the fortification. At Redoubt #4, only a "corporal's guard" had to be housed. The situation there was similar to that at Fort Webb. At Redoubt #1, bombproofs were scheduled for construction inside the redoubt during winter, so that barracks would have to be external "except a covering for a subaltern's guard within during the night." At Redoubts #2 and #3, Duportail gave the same recommendation. The troops also needed to be close to these critical positions. He concluded, "The barracks for these three places will be made as near as possible, and we may surround them with a pallisade and make an approach to the respective redoubts pallisaded on both sides, to prevent surprise & secure a communication." At North and Middle Redoubts, he recommended building barracks on top of the bombproofs but was also apprehensive "that the soldiers inhabiting them during the Winter, will make a prodigious destruction and that in the spring we shall find them in very bad condition. Perhaps on this account it may be preferable to make the barracks without."[10]

As winter approached in 1779, the old problem of preparing quarters and stocking the commissary took on new urgency. As early as 6 November,

10. Report, Duportail to Washington, 24 Sept. 1779, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-22-02-0409.

Major General McDougall was complaining to Washington about the lack of forage for the horses, which always had an unfavorable effect on the rate of construction at West Point. Horses were again sent from the post to reduce the amount of forage that had to be supplied and to increase the chance of survival for those that remained. Without draft animals, the men themselves had to haul supplies. On 6 November, Lieutenant Colonel Gouvion also needed stone masons and ten wagons, pulled by six horses each, to haul timber, presumably for the water batteries "at the point." Even the water used in the mortar at the fortifications had to be carried. Clearly, lime mortar was being used in late 1779, but probably went into such projects as bombproofs or magazines rather than the facing of parapets.[11]

On 14 November, Major General Nathanael Greene, then serving as quartermaster general for the Continental Army, advised Washington that all the necessary supplies and forces to maintain the post must be provided at all costs, but that the long sojourn of the Army in the Highlands Department had depleted the local supplies of food.[12] The Army would have to bivouac elsewhere; Washington chose Morristown, New Jersey. Before leaving he took the opportunity to remind all who remained that discipline would continue to be enforced. On 20 November, Reason Rickets of the 1st North Carolina Regiment, which had been stationed on Constitution Island, was shot to death by a firing squad in Execution Hollow, a large depression near the center of the Plain to the rear of Fort Arnold. Rickets and three companions had wounded a man, robbed him, and sacked a local inhabitant's home. One of the culprits confessed and was sentenced to 100 lashes; the other three were sentenced to death. Washington eventually pardoned two of them but then directed that they be the executioners of the third. The impact was not lost on the troops of the garrison who lined the Hollow to witness Rickets's execution.[13]

Washington's final act before leaving Moore House was to change the command in the Highlands Department and at West Point. Major General William Heath was "appointed to . . . command of the posts upon the North

11. McDougall to Washington, 6 Nov. 1779, McDougall Papers, Reel 3, USMA Library, and Founders Online, https://founders.archives.gov/documents/Washington/03-23-02-0169; Gouvion to Heath, 6 Nov., Sheffield Research Files, USMA Library.

12. Greene to Washington, 14 Nov. 1779, Sparks, *Correspondence of the American Revolution*, 2:356. Founders Online, National Archives, https://founders.archives.gov/documents/Washington/03-23-02-0234.

13. Palmer, *The River and the Rock*, 217; McDougall's Orderly Book, 19 Nov. 1779, Archives, New York Historical.

River." Washington, on 27 November, issued his final instructions to Heath. As for the outlying redoubts and those on Constitution Island, Washington reminded the new commander that he had already "directed that the Bomb proofs (where there were any) should be fitted up for the lodgment of the Men stationed in them, and suitable Barracks erected for the Officers. And it is my wish that there should be in every Redoubt a sufficiency of covering for the Men and Officers destined for its defence—that should the enemy move up during such Weather as requires Men to be under shelter, they may remain conveniently in them without a constant Releif." Apparently, Washington must have accepted most of Duportail's recommendations for housing the troops, although he does not specifically mention constructing any barracks near the redoubts.

Washington directed Heath to keep three brigades on the West Point side of the river and one on the east near Continental Village to ease the forage problem if the commander felt such a split was necessary. He ordered Colonel Benjamin Tupper's 11th Massachusetts Regiment to garrison Fort Putnam with 80 soldiers and to occupy with the remainder the west end of the Long Barracks. The artificers would be in "the old Barracks opposite" and the "Train" in the barracks north of Fort Arnold; it would be garrisoned by 80 soldiers in the bombproof. The other three Massachusetts regiments (Bailey's 2nd, Jackson's 8th, and Brooks's 7th) would occupy the remainder of the barracks chosen by lots. Washington was also concerned with the reserve supply of provisions and recommended that, "if our supplies will admit, that two Months provision should be always before hand at West Point, and in the Works at King's Ferry" (the British had finally withdrawn).[14] That was a tall order, and the terrible winter of 1780 would not make it easy. On top of that, one of General Heath's most immediate tasks was to remove the Great Chain from the Hudson before it froze. A cannon fired from Fort Arnold on 29 November would signal that "the Chain is cast off" and "the Officers and men of the Garrison (Except Guards) will repair to the Hd Qrs to aid in drawing and Securing the Chain." The operation was completed by 5 December.[15] The garrison at West Point settled in for the long winter.

14. "George Washington Papers, Series 4, General Correspondence: George Washington to William Heath, Nov. 27, 1779," LOC, https://www.loc.gov/item/mgw456271/. Washington, *Writings* (ed. Fitzpatrick), 17, 192–96, and Founders Online, https://founders.archives.gov/documents/Washington/03-23-02-0353.

15. Entries, 28 Nov., 5 Dec. 1779, Torrey, Orderly Book, USMA Library.

CHAPTER 13

MAINTAINING THE FORTRESS

The "Black Year" of 1780 began with one of the worst blizzards known to the Hudson River Valley. Boats froze fast in the river, forcing occupants to return to shore across the ice. The soldiers of the garrison at West Point, gripped by the subzero temperature, were huddled behind closed doors after the howling wind swept away the tents of those troops still camping on the Plain. The storm's fury lasted three days, during which the garrison struggled to survive. Finally, the snow and cold abated on the 5th of January, but the weather that winter would be recorded as the worst of the war—"the hard winter," according to Joseph Plumb Martin. Dr. James Thacher reported in his journal, "The weather for several days has been remarkably cold and stormy. On the 3d instant, we experienced one of the most tremendous snow-storms ever remembered; no man could endure its violence many minutes without danger of his life."[1] The cold and misery continued, and with it a shortage of supplies and wood. Rations were cut, and men went hungry. Mutiny was not far behind. The most heinous event of the year, however, was the defection of Major General Benedict Arnold to the British in September, but after averting the "sale" and loss of West Point, the remainder of the year proved uneventful.

Military operations had already shifted to the South in accordance with British plans. British superiority at sea gave Sir Henry Clinton the advantage of interior lines. From his major base in New York City, he could move by ship to any spot on the American coast faster than Washington and the Continental Army could march. With the war stalemated in the North, success might be gained in the South where Loyalist sympathies were much stronger. With Sir Henry's invasion force aboard transports, he set sail for his objective: Charleston, South Carolina. The formal siege began on

1. Thacher, *Journal*, 184–85; entries 2–5 Jan. 1780, manuscript in New York Public Library; entries 2–5 Jan. 1780, Adams, "Diary," manuscript in New York Public Library and at https://joelcampbell1735.blogspot.com/2014/05/the-amazing-winter-of-1779-1780-from.html; Heath, *Memoirs*, 208; Palmer, *River and the Rock*, 221–22; Martin, *Private Yankee Doodle*, 170.

1 April 1780. Clinton moved forward by classic approaches and squeezed the American garrison until the city capitulated on 12 May. From that point on, the focus of the war was in the Carolinas and Virginia until the defeat of Cornwallis at Yorktown on 19 October 1781. In the meantime, however, hardships continued at West Point.

During January 1780, extreme shortages of bread and meat fostered discontent among the troops. As early as the first of the month, West Point's garrison commander Brigadier General John Paterson had reported to Major General William Heath, the commander of the Highlands Department, that "toward a hundred men from the 4th Massachusetts Brigade have this morning very early mutinied and set off for home with their Arms, I on the first intelligence ordered a party of about one hundred properly officered to pursue them and bring them back dead or alive." He had also alerted militiamen in advance of their march "to take them."[2] Heath replied that same day from his headquarters in Robinson's House on the east side of the river that he approved the steps that Paterson had taken and had written "the commanding officer at Fishkill by express to have his Regt. in readiness and not to take them past that place. . . . Strict discipline and the most spirited conduct must be observed." He had added another paragraph to the order of the day, ordering "that one gill of rum per man should be served all the Troops," cautioning "the soldiers not to entertain an Idea for a moment of following the mutinous example and have told them what the consequences of such conduct will be."[3]

Regardless of Heath's implication, generally the punishment for mutineers was rather lenient despite the fact that mutiny was a capital offense. After all, conditions had been severe at West Point. Although most of the offenders were pardoned, some received up to a hundred lashes.[4] Heath outlined the major difficulties to New York Governor George Clinton on 25 January 1780 that boiled down to lack of rations, particularly bread as the ration of flour was three-fourths pound a day, and readily available firewood. Some of the troops were living in tents despite the cold weather. He, therefore, reported, "The situation of this army at this instant is truly alarming and without speedy relief, most serious and disagreeable consequences may

2. Paterson to Heath, 1 Jan. 1780, Egleston, *Life of John Paterson*, 205, https://archive.org/details/lifejohnpatersoo3eglegoog/page/204/mode/2up.

3. Heath to Paterson, Egleston, *Life of John Paterson*, 206.

4. Palmer, *River and the Rock*, 223; entry, 1 Jan. 1780, Bradford, "Orderly Book," 1 Jan.–27 May 1780, NYH; entry, 1 Jan. 1780, "Diary of Doctor Samuel Adams," NYPL.

be expected. . . . Instead of raising magazines at this post, to enable the garrison to maintain a siege, which is indispensibly necessary, we can scarcely obtain our daily Bread."[5] The mutiny was over but not the problems that caused it.

Fires were another constant problem. Soldiers were packed into the barracks, 288 in the sixteen rooms—eighteen to a room—in the "old Barracks" and 360 in twenty rooms in the "New Barrack," for example; some ninety-seven rooms, tents, and huts accommodated 54 officers and 1,516 men at West Point and Constitution Island. Men trying to keep warm often built their fires too large or left them unattended. On 26 January, fire destroyed the "Quarter-Master's barrack" with great loss to public and personal property. On 2 February, Heath reported to Washington that the bombproof in North Redoubt had again caught fire on 1 February, as it had on 9 January; he also indicated that the bombproof at the west end of the redoubt had not been damaged, clearly identifying at least two bombproofs in that redoubt. Although arson was not suspected, the cold, dry weather had turned the barracks, forts, redoubts, and batteries into serious fire hazards. Heath acknowledged that "repeated Fires" were "extraordinary."[6]

As soon as the weather improved, the task of building and repairing resumed in earnest. General Heath would no longer be responsible as he passed command of the Highlands Department to Major General Robert Howe on 21 February. A member of a prominent family from North Carolina, Howe was its senior Continental general and had commanded the Southern Department as the British captured Savannah and occupied Georgia. As fate would have it, he would be president of the court-martial of Major General Benedict Arnold for improprieties during his command of Philadelphia and would serve as a member of the trial of the spy Major John André. He had held important political positions, including in the Committee of Safety and provincial congresses and, as a militia officer, had fought in the French and Indian War and commanded the 2nd North Carolina Regiment early in the Revolution. His biographers concluded that as a general he was unlucky. Joshua Hett Smith thought that he "was well versed in tactics, a rigid disciplinarian, and was acknowledged to be an engineer of the highest

5. Heath to Clinton, 25 Jan. 1780, George Clinton, *Papers*, 5:464–67.

6. Heath to Washington 27 Jan., 2–3 Feb. 1780, Founders Online, https://founders.archives.gov/documents/Washington/03-24-02-0226, https://founders.archives.gov/documents/Washington/03-24-02-0278; "Estimate of Barrack Room at Westpoint," n.d., Sheffield Research Files, USMA Library; Heath, *Memoirs*, 209, 211.

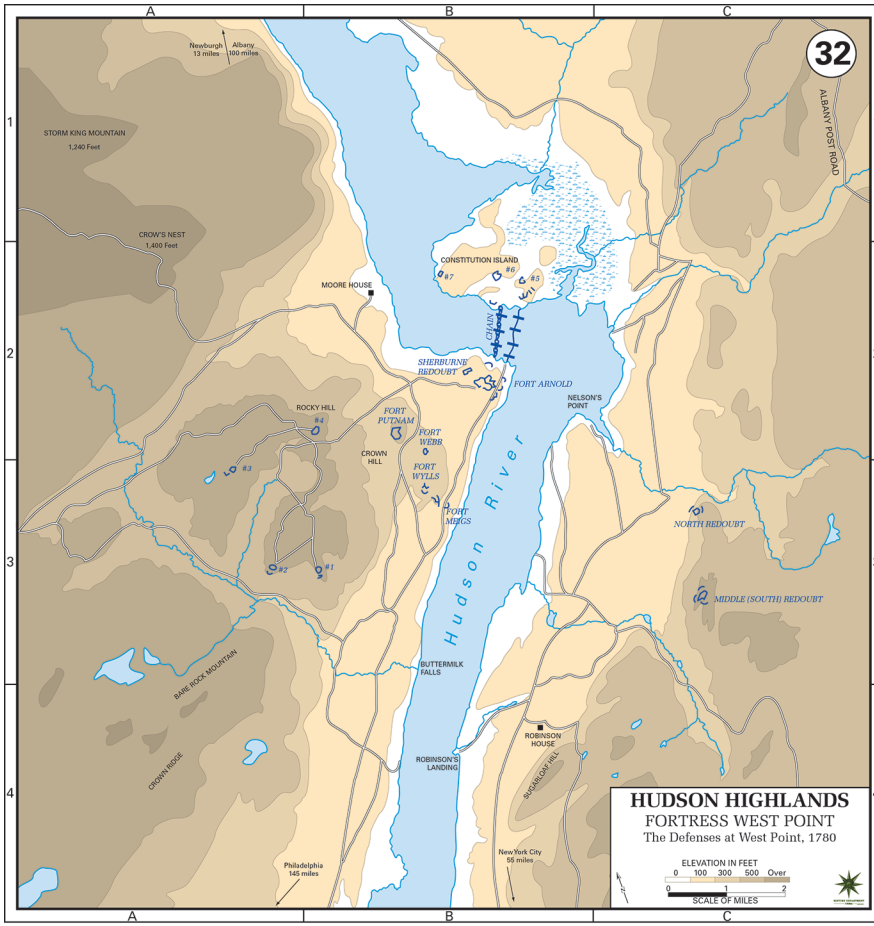

Image 13.1: *Hudson Highlands: Fortress West Point.* (Courtesy of the United States Military Academy Digital History Center, Department of History.)

reputation." Howe should have been a perfect fit to meet the challenges of supervising the ongoing construction at his new command. Alas, he was not up to the task. Major General Arnold visited West Point on 16 June 1780 and found it to be "so totally neglected" by General Howe and, by implication, the Continental Congress; he found "The works . . . (though well executed) most wretchedly planned to answer the purpose designed, viz to maintain the Post and stop the passage of the River"—hardly Howe's fault.[7]

7. Washington to Howe, 5 Feb. 1780, Founders Online, https://founders.archives.gov/documents/Washington/03-24-02-0304; Heath, *Memoirs*, 215; quoted in Bennett and

At West Point, it seemed as if projects were never completed. Several factors adversely affected the rate of construction and generated concern that Fortress West Point might never be finished: varying labor shortages, scarcity of materials, poor weather, repairs taking precedence over new construction, and the complexity of the projects themselves whenever they did not conform to standard design. Most progress occurred in a "crisis" atmosphere. Although the greatest amount of work was accomplished when the Main Army was at or near West Point, it came to the Highlands only in response to a British threat. To counter the immediate threat, new fortifications would be hastily constructed, adding strength and depth to the defenses. However, hastily constructed fortifications did not last. Considered vital to the defense of West Point—actually, the defense of the Great Chain—these works were constantly being rebuilt as timber, logs, and fascines decayed and rotted. Stones that were laid up in a hurried and careless manner would fall under the extreme winter conditions, and the winter of 1780 was particularly harsh on the fortifications. Some works, such as outlying batteries for redoubts, were planned but not yet begun because time and materials were unavailable. Constant repairs and reconstruction drained those critical resources before new work could begin or unfinished work was completed.

On 3 July 1780, Major General Alexander McDougall, sent by Washington to command the garrison at West Point, forwarded two engineering reports to Major General Robert Howe at his headquarters in Robinson's House. Kościuszko's "Report of what to be don for sufficient deffence and the number of Fatigue and Artificers," dated 1 July, did not provide a lot of detail but laid out the general scope of work for construction and maintenance on both sides of the Hudson:

> No 4 and one battery
>
> Fort Putnam
>
> Wyllys Redoubt and two batterys
>
> Battery at Fort Arnold and compleat the ditch at Fort Constitution [probably for the front of Greaton's Battery]
>
> No. 1, 2, 3 and four batterys

Lemon, *Quest for Glory*, 99, 112–14, 127, 154. Van Doren, *Secret History*, 266–67; Arnold to André, 16 June 1780, Sir Henry Clinton Papers, Clements Library.

He then specified the work force required to complete the projects in two months: "six hundred men one hundred & sixty Carpenters twenty massins, and twelve Miners, ten teams."[8]

The report from Lieutenant Colonel Jean Baptiste de Gouvion, also dated 1 July, "Report of what is to be done at the Redoubts number 1, 2, 3, exclusive of the bombproofs, to be put in order of deffense," zeroed in on the status of the work to be done at Redoubts #1, #2, and #3 (not including bombproofs):

> at Number 1. one of the batteries to be compleated.
>
> at Number 2. one battery for 5 pieces of cannon to be almost entirely Made.
>
> at Number 3, two batteries of three pieces of cannon not yet begun.
>
> the above works want 200 fatigue men, forty carpenters, six masons, and six teams serving one month.[9]

While McDougall seemed to accept the two apparently uncoordinated reports as to the construction required, he wrote that he could not provide the more than 1,000 workers requested. By his own analysis, "The Guards, occasional fatigue, and other duties of the Garrison, put it out of my power to give more than two hundred Men, for fatigue on the Works. So that on the principle of the engineers Reports it will be six months, before the works will be compleated with my present strength."[10] Perhaps responding to McDougall's reports, on the same day, Howe wrote to Washington, "I had put Sir, some of the Men on Gabion & Fascine Fatigue, but Necessity compels me to order them from it to employ them about our Works, which from our State of Imbecility want a great Deal to be done to them, & which I consider as an Object very capital indeed."[11] The commander in chief in his reply to Howe on 7 July supported Gouvion's request for fatigue parties "to

8. Kościuszko, "Report of what to be don for sufficient deffence and the number of Fatigue and Artificers," 1 July 1780, McDougall Papers, vol. 5, Sheffield Research Files, USMA Library.

9. Gouvion, "Report of what is to be done at the Redoubts number 1, 2, 3, exclusive of the bombproofs, to be put in order of deffense," 1 July 1780, McDougall Papers, vol. 5, Sheffield Research Files, USMA Library.

10. McDougall's Letter Transmitting Gouvion's and Kościuszko's Reports, 3 July 1780, McDougall Papers, vol. 5, Reel 3, Sheffield Research Files, USMA Library.

11. Howe to Washington, 3 July 1780, Founders Online, https://founders.archives.gov/documents/Washington/03-26-02-0481.

prepare Fascines, Gabions and sleepers for platforms," directing that Howe "afford Colo. Gouvion the assistance which he requires" once 1,000 Levies from Connecticut arrived.[12]

Washington, meanwhile, hoped to attack New York City and knew it would take all the forces he could concentrate, to include those at West Point. Positioning the Main Army between West Point and Sir Henry Clinton, who had returned to New York leaving Cornwallis in command at Charleston, "justifyed deploying the entire garrison except for Invalids"; Clinton commanded 19,115 soldiers in and around New York City at this time, from which he could draw an attacking force.[13] On 27 July the garrison, minus the New Hampshire brigade and some New York militia, received orders to join the Main Army in anticipation of the attack on New York City. There were eight Continental brigades in the Highlands Department in July 1780; British Captain Sir George Beckwith reported to Major John André on 30 July that Poor's New Hampshire's, Clinton's New York's, and Paterson's Massachusetts' brigades were at West Point, Parsons's and Huntington's Connecticut brigades were at Nelson's Point, and Glover's and Nixon's Massachusetts brigades were at Robinson's house and Continental Village respectively.[14] Washington's plan failed to materialize, and, even worse, it caused construction at West Point to stop. There was no recourse without troops to supply the necessary labor, and West Point would remain understrength until Arnold's defection.

On 3 August 1780, Major General Benedict Arnold took command of the Highlands Department with its key post of West Point "and its dependencies, in which are . . . all from Fish-kill to King's Ferry." He had inveigled himself, with the help of Robert R. Livingston and Major General Philip Schuyler, into the position from which he could solidify his plan to turn West Point over to the British. Following his fraught stint as the military commander of Philadelphia, which included a court-martial, command of the Highlands Department, instead of the Left Wing of the Main Army, seemed out of

12. Washington to Howe, 7 July 1780, Founders Online, https://founders.archives.gov/documents/Washington/03-27-02-0020; a British report located the Connecticut Brigade at Nelson's Point, "Intelligence," July 1780(?), Sir Henry Clinton Papers, Clements Library.

13. Palmer, *River and the Rock*, 232; "State of the Army 1st August 1780," Clinton Papers, Clements Library.

14. Washington to Howe, 27 July 1780, Founders Online, National Archives, https://founders.archives.gov/documents/Washington/03-27-02-0269; Beckwith to André, 30 July 1780, Sir Henry Clinton Papers, Clements Library.



Image 13.2: *Major General Arnold Wounded Dec. 31-1775 at the attack of Quebec.* Benedict Arnold commanded the provincial troops in the Canadian wilderness under General Richard Montgomery. (United States, 1780. Photograph. Retrieved from the Library of Congress, https://www.loc.gov/item/2001697061/.)

character for a warrior who had gained operational success as a result of the battle of Valcour Island and had been seriously wounded at Quebec and Bemis Heights. Washington instructed Arnold to build provision magazines in those works where there were none or where bombproofs could not serve the purpose. He also directed that militia units from New Hampshire and Massachusetts would comprise West Point's garrison. Ultimately, he hoped that the brigade of 1,500 militiamen from Massachusetts alone would suffice.[15]

A change in the defensive concept had occurred. With the Continental Army within supporting distance of West Point, Washington seemed to feel that he could entrust that post to the militia as long as he had the ability to maneuver the Main Army. Recognizing that his plan to attack New York meant West Point would be out of immediate danger, the commander in chief may have also thought that the defenses were in such an advanced state that they could be defended effectively by the less-experienced militia. Perhaps Washington was merely willing to accept greater risk because he needed all the experienced troops he could muster for his plan. Whatever the reason, greater reliance was placed on the militia to defend West Point. As of 13 September, the garrison comprised 1,413 men from a brigade of the Massachusetts Militia (928) and two regiments of New Hampshire Militia (485). The Continental artillerymen from Colonel John Lamb's 2nd, Colonel John Crane's 3rd, and Colonel Thomas Proctor's 4th regiments and the West Point detachment numbered 1,003.[16]

Another change occurred at West Point that also coincided with the appointment of Arnold. Learning that Gates's antagonist would command West Point, Kościuszko accepted the offer to accompany his former commander in the Saratoga campaign, who was taking command of the Southern Department. Kościuszko left on 7 August. His replacement was Major Jean-Louis-Ambroise de Genton, the Chevalier de Villefranche. Villefranche was not one of Franklin's original French engineers but came to America with Philippe Du Coudray in February 1777. He had started his career as a

15. Washington to Arnold, 3 Aug. 1780, Fitzpatrick, *Writings*, 19:309–31, and Founders Online, https://founders.archives.gov/documents/Washington/03-27-02-03611; Washington to Arnold, 3 Aug. 1780, George Washington Papers, LOC, https://www.loc.gov/item/mgw424647/. Bennett and Lemon, *A Quest for Glory*, 127; General Orders, 1 Aug. 1780, Founders Online, https://founders.archives.gov/documents/Washington/03-27-02-0334.

16. Lesser, *Sinews*, 181; McDougall's return for 2 July 1780 indicated a total of 1,702 of all ranks: 141 officers, 55 staff, 289 NCOs, and 1,217 rank and file; 5,435 soldiers would have been needed to complete the ranks of the regiments, McDougall Papers, vol. 5, Sheffield Research Files, USMA Library.

lieutenant of Dragoons and then transferred to Topographical Engineers in 1770. After drafting a plan for the defense of Charleston, South Carolina, he was promoted to captain and then major in the Corps of Engineers after being "discovered" by Brigadier General Duportail in York, Pennsylvania. Duportail introduced him to Washington as one who had "studied with a view to become a Member of the Corps—he has studied Geometry, understands surveying and Drawing, and therefore might be very useful to us." He would finally be promoted to lieutenant colonel after his service at West Point.[17] Now all but Colonel de Laumoy had finally made their way to West Point. Arnold would not be far behind.

The plot to deliver West Point to the British would fail as Arnold had had too little time to weaken the fortifications before Major John André, General Clinton's Adjutant General and spymaster, had fallen into the hands of three militiamen, John Paulding, David Williams, and Isaac Van Wart, as he was attempting to return to New York after meeting with Arnold.[18] By the time Benedict Arnold fled downriver from his headquarters at the Beverley Robinson house to board the sloop *Vulture* on 25 September, the condition of the fortifications at West Point had deteriorated considerably.

Among the papers captured on Major André was an assessment of the works at West Point written in Arnold's handwriting, which gives one of the best descriptions of the post:

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17. Thaddeus Kościuszko to Washington 4 Aug. 1780, George Washington Papers, https://www.loc.gov/item/mgw424671/; Washington to Arnold, 6 Aug. 1780, Fitzpatrick, *Writings of Washington*, 19:331–32, Founders Online, National Archives, https://founders.archives.gov/documents/Washington/03-27-02-040; Howe to Arnold, 5 Aug. 1780, George Washington Papers, https://www.loc.gov/resource/mgw4.069_0027_0029/?sp=2&st=image; https://www.loc.gov/resource/llscdam.lljc010/?sp=7&st=image. "His name is Ville franche and he brought a particular recommendation from General R. How to the President of Congress," Duportail to Washington, 18 Jan. 1778, with short biography, Founders Online, National Archives, https://founders.archives.gov/documents/Washington/03-13-02-0226; Heitman, 667.

18. For the chronology of the treason, see https://www.hudsonrivervalley.org/documents/d/guest/andresmap; account of André's meeting with Benedict Arnold and the damage to the *Vulture* from the 6-pounder and a howitzer on Teller's Point, Robinson to Sir Henry Clinton, 24 Sept. 1780, and Clinton's letter to Lord George Germain on 12 Oct. 1780 describing André's fate, Sir Henry Clinton Papers, Clements Library; a number of sources recount the story of Arnold's treachery and André's capture and hanging as a spy at Tappan on 2 Oct. 1780: Randall, *Benedict Arnold*; Van Doren, *Secret History*, 461; the recollections of General Joshua King, who as a Lieutenant in Colonel Elisha Sheldon's 2nd Continental Light Dragoons had supervised André in South Salem, 9 June 1817, Connecticut Museum. King passed on André's characterization of the three militiamen as "bushmen"; John Evangelist Walsh in *The Execution of Major André* validates their patriotism.

Fort Arnold is built of Dry Fasines and Wood, is in a ruinous Condition, Incompleat and Subject to take Fire from Shells, or Carcases.

Fort Putnam Stone wanting great repairs the wall on the East side broke down, and rebuilding From the Foundation as the Wt & South Side have been a Chevaux de Frise on the Wt Side broke in many Places. The East Side open. two Bom [Bomb] Proofs & a Provision Magazine in the Fort, & a Slight wooden Barrack. A Commanding piece of ground 500 Yards West, betwen the Fort & No 4 ___ or Rocky hill.___

Fort Webb Built of Fascines & Wood. a slight work very dry & liable to be set on fire as the approaches are very easy, without defence, save a Slight Abatties.

Fort Wyllys built of Stone 5 Feet high the works above Plank filled with Earth the Stone Work 15 feet the Earth 9 feet thick. __ No Bomb Proofs. the Batteries without the Fort. . .

Redoubt No. 1. On the So Side wood 9 feet thick the wt., North and East sides 4 feet thick, no Cannon in the works. a slight & single Abatties. no ditch or Picket. Cannon on two Batteries. No Bomb Proofs

Redoubt No 2 The same as No 1 no Bomb Proofs

Redoubt No 3, a Slight wood Work 3 Feet thick very Dry no Bomb Proofs, a Single Abattis, the work easily set on fire ____ no cannon

Redoubt No 4, a wooden work about 10 feet high and fore or five feet thick, the west side faced with a stone wall 8 feet high and four thick. No Bomb Proof, two six Pounders, a Slight Abattis, a Commanding piece of Ground 500 Yards Wt.

The North Redoubt on the East side, built of stone 4 feet high, above the stone, wood filled in with Earth, very dry, no ditch, a Bomb Proof, three Batteries without the Fort, a poor Abatis, a Rising piece of Ground 500 yards So. the Approaches Under cover to within 20 yards_____ The Work easily fired with Faggots diptd in Pitch &c

> South [Middle] Redoubt, much the same as the North a Commanding piece of ground 500 yards due East 3 Batteries without the Fort.[19]

Arnold referred to Fort Webb as a "slight" work, which might have been its appearance in 1780 if Duportail's 1778 recommendation to close almost half of it as being useless was put into effect. Moreover, if his description is accurate, West Point was not in very good condition. Of course, Arnold did not make any effort to improve conditions—instead he made it difficult for Villefranche to maintain repairs. Troops were sent off on timber-cutting missions, to raise sunken gunboats, and to perform other miscellaneous tasks that retarded and delayed necessary work on the fortifications. Colonel Lamb, commandant of the post since 14 August, complained, "If such draughts as are called for are made from the garrison, we shall neither be able to finish the works that are incomplete, nor in a situation to defend those that are finished." In an earlier letter to Major John André, Arnold had assessed "the Point" as "well executed" but "most wretchedly planned to answer the purpose defined, vizt to maintain the Post and stop the passage of the River." He identified Redoubt #4 as the critical objective for a British attack. He also thought, "A single Ship, large and heavy-loaded with a strong wind and tide would break the Chain." Nonetheless in a series of questions in 1780 or 1781, probably from Sir Henry Clinton, about the possibilities of taking Fortress West Point with a garrison of 4,000 men by "a Coup de main," his respondent concluded that "it would seem to be a very dangerous—measure & little probability of succeeding in it" and would require a "Siege" of Fort Putnam with a total force of 20,000 men. Arnold's unmasking and flight from the Highlands "totally ruined a most important project," of Sir Henry Clinton's—the capturing of Fortress West Point.[20]

General Arnold estimated that the garrison comprised 2,438 soldiers, excluding artillerymen. He counted 3,086 soldiers throughout the Highlands Department from King's Ferry to Fishkill Depot and New Windsor. Except for Redoubt #7 (78), each fort or redoubt was manned by over 100 troops (average 124); Fort Arnold had 620 and Fort Putnam 450. He counted 125

19. "Details on West Point's Redoubts, circa 1780," papers found on British spy Maj. André ("André Papers"), A4681, New York State Archives, https://www.nysarchivestrust.org/exhibits/treason-during-american-revolution/documents/details-west-points-redoubts-circa-1780.

20. Lamb to Arnold, 18 Aug. 1780, Leake, *John Lamb*, 251; Arnold to André, 16 June 1780, André's "Intelligence," 1780(?), Sir Henry Clinton Papers, Clements Library; Van Doren, *Secret History*, 460–61; H. Clinton, *American Rebellion*, 216.

cannons ranging from mortars to 24-pounder (4) cannons; the largest number of the different calibers was 18-pounders (21), 12-pounders (32), and 6-pounders (14). Finally, he indicated the disposition of the artillery companies "in Case of an Alarm."[21]

Major Sebastian Bauman pointed out deficiencies in the artillery at West Point that he had observed since his arrival in June 1779 to command the artillery on post. He was particularly concerned that the ordnance stores were "inconceivably great but badly housed, without any manner of System, and without any manner of Security." He concluded that it "would puzzle the greatest artillerist in the knowing world at least forty Eight hours in order to prepare the guns in this Garrison for action." He found three items particularly troubling. First, the 400 barrels of powder in the magazine in Fort Clinton were in a "simple" bombproof behind a single wooden door "under the care of a singal sentinel." Second, Fort Putnam's powder magazine was "in worse Situation, for it stands upon the Surface and its wall made of wood therefore liable to common accidents of fire." Both would be "exposed to all manner of Shot and Shells from the northeast to the southeast." Third, "The Batteries and their platforms *mostly* throughout this Fortification are *in my humble opinion* ill contrived and insufficient for heavy guns." These deficiencies would have aided Arnold's treachery.[22]

On 1 October ,Washington directed Major General Arthur St. Clair, the commander of Fort Ticonderoga when it fell in 1777, to assume command of West Point and its dependencies in the Highlands Department. Relieving McDougall, who had temporarily commanded after Arnold's escape, St. Clair would soon be relieved as well.[23] Major General Nathanael Greene, the former quartermaster general, wanted the position and, with Washington's consent, took the command on 9 October. Having earlier served on a committee to inspect the fortifications in the Highlands Department, he immediately went to work and assigned his brigades to their posts: the New Jersey Brigade to Redoubts #1–#4; the New York Brigade to Forts Putnam, Webb,

21. "André Papers." The size of garrison came from Villefranche's estimates with 140 soldiers in Forts Wyllys and Webb, "Estimates," Sheffield Research Files, Box 6, USMA Library.

22. Bauman to Heath, 5 Jan. 1781, Bauman Papers, Sheffield Research Files, Box 6, USMA Library; original in "American Revolution," box 3, NYH. I have reconciled the two sources to make sense of the discrepancies.

23. Washington to McDougall, 27 Sept. 1780, Washington File, box 5, 1780–1781, Huntington Library; Washington to St. Clair, 1 Oct. 1780, Founders Online, https://founders.archives.gov/documents/Hamilton/01-02-02-0883.

and Wyllys; Stark's brigade to Fort Clinton; and two regiments (1st and 2nd) of the New Hampshire brigade to Constitution Island and two (3rd and Hazen's) to "table of ground" below North and Middle (South) Redoubts.[24] Greene, however, would be sent south to correct the confusion and disorder left by General Gates after his decisive defeat in the Battle of Camden. With Greene gone, the only individual capable or available to command at West Point was McDougall.

Before Greene left, however, he found time to inspect the works and found they were "very incomplete; indeed, very little has been done to them this campaign." Lieutenant Colonel Gouvion led the inspection party, and when it passed the area between Redoubts #3 and #4, Greene noticed that there was an unoccupied hill about 500 meters west of Redoubt #4 at a greater elevation. That same hill was about 300 meters north of Redoubt #3 at about equal elevation. If occupied by the enemy it would threaten both redoubts. To neutralize that position, Greene decided "that a blockhouse is absolutely necessary" and gave "orders for the construction accordingly." Greene had correctly assessed the likely British avenue of approach: "If the Enemy should possess that ground I am persuaded they could soon dispossess us of the redoubts No 3 and 4. No 1 and 2 would become useless, and artillery could be immediately opened upon Fort Putnam, and all lower works; which could not fail of reducing them."[25] If Greene's blockhouse was built, there is no record or evidence of it. Greene requisitioned the deputy quarter master, General Colonel Hugh Hughes, for provisions, lime, forage, wood, and rum, without which "we cannot employ our Fatigue Parties; and nothing can reconcile the Soldiery to their Suffering so effectually as this Article." He departed too soon to follow up on his requests for West Point but would perform admirably in the Southern Department. McDougall was once again in command of the Highlands Department.

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24. Greene to Washington, 13 Oct. 1780, Conrad, *Papers of General Nathanael Greene*, vol. 6; Washington Papers, Series 4, Reel 71, LOC, and Founders Online, https://founders.archives.gov/documents/Washington/03-28-02-0281; Dearborn, *Revolutionary War Journals*, 206–207, https://archive.org/details/revolutionarywaroodear/page/206/mode/2up; original in New York Public Library, "Diary of Col. Dearborn from Oct. 28, 1779 to Dec. 10, 1781; movements of the army about New York; siege of Yorktown," Manuscripts and Archives Division, New York Public Library, https://digitalcollections.nypl.org/items/c1332e23-1f7d-d271-e040-e00a18063c4b#/?uuid=c1332e23-1fa6-d271-e040-e00a18063c4b.

25. Greene to Washington, 13 Oct. 1780, Founders Online, https://founders.archives.gov/documents/Washington/03-28-02-0281.

On 2 November 1780, Gouvion submitted another report on the state of the works at West Point. By this time, after Arnold's betrayal, no one dared call the original Fort at West Point by anything other than the name of the New York brigadier general—James Clinton—whose regiments initiated its construction. Hence, the name "Fort Clinton" appeared in all correspondence pertaining to that fortification. Washington had declared that

> **Treason of the Blackest** dye was yesterday discovered, General Arnold who commanded at West Point, lost to every sentiment of honor of private & public obligation, was about to deliver that important post into the hands of the Enemy, such an event would have given the American cause a Deadly wound, if not a fatal stab, happily the Treason has been timly discovered to prevent the affords the most convincing proof that the Liberties of America is the object of the Divine Protection, at the same time the Treason is to be regrated.[26]

Gouvion's report was detailed, but, even more importantly, it was very clear on the current status of all the works comprising the fortress. At West Point, he reported that, while Redoubts #1–#4, Fort Wyllys, Fort Webb, Fort Clinton, and the water batteries had been completed, most required additional work to add bombproofs and batteries. Fort Putnam "wants one bombproof more for an hundred and fifty men of its garrison, with a bombproof magazine for a part of the provisions, the third part of its walls are to be rebuilt with lime, being made with dry stones only, which are of short duration." Sherburne's Redoubt, originally built of fascines, was being abandoned because it was "of so little consequence."

On the east side of the Hudson, including Constitution Island, soldiers had "perfectly" finished the South (Middle) and North Redoubts with batteries and bombproofs, Redoubts #5 and #6, and a water battery—perhaps Marine Battery; the latter needed bombproofs. Redoubt #7's parapet needed "to be rised of one foot and half, and the fraizes to be placed, there is a bombproof wanting in that work." Gouvion predicted that the work would be done on all the main works and batteries by the winter, except the batteries at Redoubts #3 and #4 and "one Begun for the defense of the Chain,

26. Entry, 26 Sept. 1780, Samuel Frost, Orderly Book, 6th Massachusetts Regiment, USMA Library.

it is of great importance."[27] (See Gouvion's report in Appendix F.) The only inconsistency in this report with what is known today is the possibility of a fifth water battery on the west bank, probably close to Chain Battery since it was to guard the chain, and the projected construction of another battery on Constitution Island to guard the creek entrance to the large marsh on the east side of the island. It is doubtful that either of these projects was developed to any great extent.

By 7 November, Major General William Heath was back in the Highlands Department again as commander. He immediately found the Great Chain to be in a precarious situation, as a portion of it was sinking. It had been in that condition since Arnold was at West Point. Villefranche had prepared to repair it, but when the new logs were stacked at Moore House, a woodcutting crew, not realizing their importance, made quick work of them. Without logs, the chain's rafts could not be repaired. Heath was concerned that a sudden snowstorm might place enough extra weight on the chain to sink it completely: "The chain having began to sink and part of it got upwards of twenty feet under Water—a Number of Men & Boats required to be constantly with it to prevent the whole from sinking, I am determined to take it up tomorrow." Luck was with the garrison, and, on 14 November, the chain and its rafts, under Gouvion's supervision, were "taken up without the least accident" and were safely stacked, "with skill and dexterity," again at the Moore House.[28]

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27. Gouvion to Washington, 2 Nov. 1780, Washington Papers, Series 4, Reel 72, LOC, https://www.loc.gov/resource/mgw4.072_0341_0343/?sp=1; Greene and Heath to Hughes, 10, 15, 30 Oct., 3, 4, 26 Nov., Hughes to Fisher, 2 Dec. 1780, Hughes's Letterbook, Huntington Library.

28. Heath to Washington, 20 Oct., 7 Nov. 1780, Washington Papers, Series IV, Reels 71 and 72, and Founders Online, https://founders.archives.gov/documents/Washington/03-28-02-0337 and https://founders.archives.gov/documents/Washington/03-29-02-0082.The letter that conveyed Heath's concerns and complaints to Washington also contained an interesting postscript concerning Mrs. Warren, Kościuszko's housekeeper at West Point. Heath had sent for a chest left behind by Kościuszko when the latter departed West Point, but Mrs. Warren admitted burning all the plans contained in the chest for fear that, if they were found in her possession, they might have implicated her in Arnold's plot. She did not know that Kościuszko would have exposed Arnold rather than plot with him. The long-range effect of her decision, however, has been confusion and a lack of documentary material to support a conceptual reconstruction of Fortress West Point. Hughes to Heath, 29, 30 Oct., 4, 8, 15 Nov. 1780, and 5 Jan., 14 Feb., 12 Mar. 1781, Hughes's Letterbook, Huntington Library, 25, 26, 34, 36, 42, 45, 49, 57. Information about Soldiers' Fortune may be found in private letters from Forster to Belcher, 22 Mar. 1955, and to Haacker, 15 Oct. 1956, Beverley Robinson entry, 17 Mar. 1781, and a map of the Continental camps in the personal collection of Robert McDonald.

In the meantime, Heath had other critical problems to solve. With winter in the offing, he assigned brigades to the existing barracks and huts. For example, he ordered the New Jersey Brigade into the Long Barracks from which its regiments could defend Fort Putnam, Wyllys, and Webb. The New York Brigade would defend Redoubts #1–#4 from huts near Redoubt #3. General Stark's New Hampshire Brigade occupied the barracks at Fort Clinton. Brigadier General Enoch Poor's Connecticut brigade stretched from Constitution Island to Connecticut Village near present-day Nelsonville to Soldiers' Fortune at the farm (alternately known as either Hopper's or Travis's) off the Post Road on the east side of the Hudson. In a letter to Washington, Heath summarized the situation that his soldiers faced as "peculiar"; "ill clad and ragged," they lacked pay, uniforms, and flour for bread. It was bad enough to suffer the hardships of hunger and cold from lack of clothing, but, as Poor suspected, to have food available and withheld by contractors for a better price must have taxed the loyalty of American troops. Colonel Hugh Hughes did fill General Greene's requisition for rum, having pledged "50 Teams" for the round trip to Springfield, Massachusetts, although the barrels did not reach Claverack until early January 1781; he also provided 300 bushels of lime, 21 barrels of tar, junk (cordage), peas, nuts, and 4,000 boards. The patience of both Continentals and militiamen was a credit to themselves and their leaders. Of course, coercive restraint was also imposed during war. General Heath had George Baker hanged for intending to desert to the enemy and for inducing others to desert at Fort Schuyler. The execution was conducted at West Point.[29]

During this period, the Marquis de Chastellux, a major general in the French Army, visited West Point. He left a detailed description of what he saw. He first visited Fort Putnam and discovered, "It is placed on a rock very steep on every side; the ramparts were at first constructed with trunks of trees; they are being rebuilt of stone and are not yet entirely finished. There is a bomb-proof powder magazine, a large cistern, and a souterrain for the garrison. . . . Above this fort, and on reaching the highest peak, you can still see, on the three other summits, three strong redoubts lined with cannon, each of which would require a formal siege." He judged "by the eye of the very intelligent manner in which they are calculated for mutual protection." After visiting Fort Wyllys with General Heath, he found that it was "a large

29. Heath, *Memoirs*, 243, Heath to Washington, Founders Online, National Archives, 13, 15 Nov. 1780, https://founders.archives.gov/documents/Washington/03-29-02-0140, https://founders.archives.gov/documents/Washington/03-29-02-0157; 19 Nov., Hughes's Letterbook, Huntington Library, 41.

pentagonal redoubt, built of huge tree trunks . . . picketed (*fraisé*) and lined with artillery" commanding approaches from the south. From Wyllys, he observed Fort Meigs and Little Dick's Battery, guarding Little Dick's Ferry to Garrison Landing, completing "the security of the southern part." While returning to Fort Clinton, he "saw a redoubt [likely Fort Webb] that has been allowed to go to ruin, as being useless, which in fact it is." He was impressed with the magazine in Fort Clinton, "where not only the powder and ammunition necessary for this post are kept in reserve, but also the depot for the whole army." His conclusion was highly complimentary: "These magazines neatly filled, the numerous artillery one sees in these different fortresses, the prodigious labor necessary to transport and pile up on steep rocks, huge trunks of trees and enormous hewn stones, impress the mind with an idea of the Americans very different from that which the English ministry have labored to give to Parliament."[30]

With all major military operations taking place in the Southern Department, life at West Point became routine for the remainder of the war. A change did occur, however, in the composition of the garrison. On 21 June 1781, from his headquarters in New Windsor, Washington ordered Colonel Lewis Nicola, commander of detachments of the Corps of Invalids (wounded or ill combat veterans) in Boston and Philadelphia to march them to West Point. He cautioned Nicole that "it is my earnest wish, if the greatest attention should be paid to the convenience & accomodation of this body of Veterans both on their march & in quarters, and that the greatest possible number of them should be brought on by easy Marches to the point of destination, as soon as the circumstances will admit." While informing Nicola that the post would be a healthy environment, due to the uncommon "salubrity of its air; the accomodations of a stationary Post" for the wounded and disabled, he also expressed confidence in placing those soldiers at such an important location: "the importance of trusting its defence to a body of tried Men, all point out very forcibly the propriety of employing your Corps as a part of the Garrison."[31]

The command at West Point changed several times during the spring of 1781. In May, Heath was sent to New England to solicit the provisions and funds that he claimed were needed to support the army in the Highlands

30. Chastellux, *Travels in North America*, 93–94.

31. Washington to Lewis Nicola, 21 June 1781, Washington, *Writings* (ed. Fitzpatrick), 22:241–42, https://archive.org/details/writingsofgeorge22wash/page/241/mode/2up, and Founders Online, National Archives, https://founders.archives.gov/?q=%20Author%3A%22Washington%2C%20George%22&s=1111311113&r=19692.

Department. Before leaving, he had supervised the essential task of stretching the Great Chain over the Hudson on 12 April: "The laying of the chain has been completed without the least accident or damage of boats or otherwise." He also worked with Colonel Hughes to procure two whaleboats for the "Water Guard" upon whose "Vigilance" the garrison's "Safety is much involved." Washington appointed Major General Robert Howe as his replacement.[32]

During Howe's tenure the volatility of the Neutral Ground would become apparent. At sunrise on 14 May, "about fifty Horse and two hundred foot" of the Loyalist Westchester Refugees under the command of Colonel James Delancy crossed the Croton River at Oblenis Ford and attacked fifty men of Colonel Christopher Greene's 1st Rhode Island Regiment at his headquarters in the Richardson Davenport House. Many of the soldiers were formerly enslaved, who along with Natives, had been recruited when the Rhode Island legislature had voted in February 1778 that "every able-bodied Negro, Mulatto, or Indian Man Slave, in this State, may enlist into either of the said two Battalions to serve during the Continuance of the present War with Great-Britain: That every Slave, so enlisting, shall be entitled to, and receive, all the Bounties, Wages, and Encouragements, allowed by the Continental Congress, to any Soldier enlisting into their Service." Dr. James Thacher reported in his journal that Delancey's troops "first attacked Colonel Greene's and Major Flagg's quarters, and killed the major while in bed." The colonel was "carried into the woods and barbarously murdered. Two subalterns and twenty-seven privates were also killed, and a lieutenant and surgeon, with twenty men, taken prisoners." In the battle of Pine's Bridge, the soldiers of Greene's headquarters detachment distinguished themselves, choosing to fight to the death in defense of their new-found freedom. Partisan warfare would remain a staple of the Neutral Ground for the rest of the war as the civil war in New York continued.[33]

32. Heath raised concerns about the need to get the Great Chain in the water: "As the Season is uncommonly forward and Moderate, the chain must be soon laid down," Heath to Hughes, 8 Mar. 1781, Hughes's Letterbook, Huntington Library, 56; Heath to Washington, 12 Apr. 1781, Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-05372.

33. In June 1778, Rhode Island enslavers were able to force the repeal of the law; nonetheless some 140 Black men out of a total of 225 soldiers served in the regiment "by far the largest percentage of blacks in an integrated military unit during the American Revolution," Partin, "First Rhode Island Regiment," BlackPast.org, https://www.blackpast.org/african-american-history/first-rhode-island-regiment/. Johnson, "Remembering the Revolution," Hudson River Valley Institute, https://www.hudsonrivervalley.org/documents/d/guest/rrseptember2005.

Effective 21 June, McDougall was back on the job. Washington had planned to take as many troops as possible from West Point for another attempt on New York City, leaving only the Corps of Invalids and some militia to defend the post. The total number of rank and file proposed as a permanent garrison came to 440. The Corps was an ideal choice for such permanent duty, although the Board of General Officers considering the proposal wondered if it was wise to "to trust the posts at King's Ferry and West point to the following Garrisons, composed of the weakliest and worst Men, but who are always to remain in the Works assigned them."[34] Washington never completely stripped the post of able-bodied troops, but he also realized that McDougall would be highly displeased with responsibility for the post under current conditions. Therefore, he instructed McDougall to conduct enough inspections that he would have little opportunity to bemoan his absence from command in the field, duty that he and other past commanders preferred over responsibility for West Point:

> Visit the Redoubts twice or thrice in a week at uncertain periods. call the Roles regularly, and every Man to be present or satisfactorily accounted for. the Redoubts to be kept perfectly clean & sweet. no officer to be absent without your leave; nor any Soldier without leave from a Field Officer. ten days wood, water & provisions to be deposited in each Redoubt; the Garrison to sleep within them, and to keep, at least, two Sentries upon the Parapet. the supper Barracks to be clean'd out & kept for Hospitals, & perticular attention will be paid to prevent damage being done either to Barracks or Houses. if there shou'd be provisions in any of the Public Magazines, it must be frequently inspected; and the safety of the Magazines of Military Stores will require your perticular attention.[35]

Why was Washington so explicit? Knowing the garrison would be understrength and composed mostly of Invalids, he could not help being apprehensive. He was willing to risk that the British would not be able to attack the post while the Main Army was conducting its own attack on New

34. Board of General Officers, 12 June 1781, Washington, *Writings* (ed. Fitzgerald), 22:203, https://archive.org/details/writingsofgeorge22wash/page/203/mode/2up; Washington to McDougall, 21 June 1781, Washington File, Box 5, 1780-81, Huntington Library, and Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-06125; Heath to Hughes, 30 Mar. 1781, Hughes's Letterbook, Huntington Library, 67.

35. Washington to McDougall, 22 June 1781, Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-06139.

York, but simultaneously he wanted the garrison and the fortifications to be prepared for any eventuality. While concentrating his forces and those of the French *expédition particulière* under General Rochambeau in front of New York, Washington was economizing in the Highlands Department at West Point. The total French forces were 5,350, with 857 on detached duty and 251 sick in hospitals along the route of march. After a joint Franco-American Grand Reconnaissance of the outer fortifications of New York City by Washington and Rochambeau from 21–23 July, the attack on New York did not materialize again, and even greater victory lay ahead. It was at Philipsburg, on 14 August, that Generals Washington and Rochambeau learned that the fleet of French Admiral François Joseph Paul, Comte de Grasse, was sailing to the Chesapeake Bay. Beginning on 18 August the armies of Washington (with 2,700 troops) and Rochambeau (with 4,240 troops) left New York and marched to Virginia where the military events of the war would end at Yorktown with the surrender of General Cornwallis at Yorktown on 19 October 1781.

Before Rochambeau left, he visited Washington at West Point on 23 August. First Lieut. Jean-François-Louis, comte de Clermont-Crèvecoeur of the Auxonne Regiment, Royal Corps of Artillery, summarized descriptions of the West Point that Rochambeau observed. Describing it as "the key to America," he noted that it was "in a very formidable position, being perched on high rocks with very steep sides above a plateau on which 1,200–1,500 men can deploy in line of battle." He mentioned six forts, all but one "built of wood," "several fine batteries" overlooking the river, and the chain, singling out Fort Clinton as "large enough to provide a very strong *place d'armes*."[36]

Upon McDougall's departure to join the Main Army enroute to Virginia, Heath took over the command the Highlands Department with seventeen

36. Robert A. Selig, *The Franco-American Encampment in the Town of Greenburgh, 6 July –18 August 1781: A Historical Overview and Resource Inventory* (Town of Greenburgh, 2020), 175–76, 213; Rice and Brown, *The American Campaigns of Rochambeau's Army*, 1:41. Total French forces were 5,350 with 857 on detached duty and 251 sick in hospitals along the route of march. The British had very good intelligence about Rochambeau's Expeditionary Corps. See "Letter from Lt. Col. Upham to Maj. Gen Riedesel," 30 June 1781, in "Original Documents: Sir Henry Clinton's Original Secret Daily Intelligence," *The Magazine of American History with Notes and Queries*, 11 (Jan.–June 1884): 439, https://www.google.com/books/edition/The_Magazine_of_American_History_with_No/yXFIAAAAYAAJ?hl=en&gbpv=1; also see Capt. Marquand's report, based on two deserters' intelligence, 8 July 1781, Sir Henry Clinton Papers on microfilm, USMA Library, that shows 4,500 French soldiers, 250 cavalrymen, and 74 cannons and 32 howitzers with Continentals of the "New England Line" at 5,900. For coverage of Rochambeau's army in New York, see Selig, *The Washington-Rochambeau Revolutionary Route*, 103–11; 116–37.

New England regiments (two New Hampshire, ten Massachusetts, and five Connecticut), the Corps of Invalids the 3rd Regiment of Artillery, Sheldon's Legion of cavalry, and as much of the militia as was still in service for a total of 9,776 soldiers.[37] Among the Continental regiments were 2,801 militiamen from Massachusetts and Connecticut. On 4 October Lieutenant Colonel Luke Drury's Massachusetts regiment mustered 205 soldiers of all ranks, contributing 20 to guard duty and 59 to fatigue duty. The commander in chief's charge was that "[t]he Security of West Point and the Posts in the High Lands is to be considered as the first Object of your Attention." In November quartermasters issued 10,515 daily rations of flour or bread, fresh beef, pork, and mutton, salt pork, beef, and fish, soap, candles, rum, and salt. On 1 December, the Second Massachusetts Brigade, for example, under the command of Brigadier General John Paterson, had 22 commissioned officers, 12 staff personnel, 108 noncommissioned officers, and 369 privates "for duty" out of an assigned strength of 1,063. Paterson's soldiers were posted at Redoubts #1, #2, #3, and #4 (86), Forts Putnam, Wyllys, and Webb (66), and Fort Montgomery (12). The First Brigade, billeted in the "York Hutts," had 1,182 officers and soldiers on the rolls in December. One hundred twelve soldiers served as light infantrymen, 21 were on duty at King's Ferry, and 4 at Dobbs Ferry, 113 were guarding prisoners in Albany, NY, and 12 were guarding prisoners in Pennsylvania. [38] West Point and its environs would not

37. Lesser, *Sinews*, 210.

38. "Return of Provisions and Stores," 25 Nov. 1781, Sheffield Research Files, USMA Library. This is a major change from May 1781 when Washington wrote to Mesheck Weare, president of New Hampshire, that "supplies, particularly of beef-cattle, must be speedily and regularly supplied, or our posts cannot be maintained, nor the army kept in the field for much longer," 10 May 1781, Sparks, *Correspondence of the American Revolution*, 8:37. William Heron, an Assemblyman and American spy from Connecticut, based on letters from Washington and the testimony of Maj. Gen. Heath before the Connecticut Assembly, wrote of "the deplorable state of the troops at West Point" who were "subsisting several days on half allowance, and at last reduced to quarter allowance" (Hiram [William Heron] to Maj. Oliver De Lancey, British Adjutant Gen., 17 June 1781, "Original Documents, Sir Henry Clinton's Original Secret Daily Intelligence." *The Magazine Of American History With Notes And Queries*, 11 [Jan.–June 1884], 254). For more on Heron and Maj. Gen. Samuel H. Parsons, see New England Historical Society, "Connecticut General Samuel Parsons—American Hero or British Spy," n.d., https://www.newenglandhistoricalsociety.com/connecticut-general-samuel-parsons-american-hero-or-british-spy/, and Redding, CT, "General Parsons and William Heron—A Chapter of the Secret Service of the Revolution from The 'History of Redding' by Charles Burr Todd Volume 2," http://www.historyofredding.net/HRrevwar_spies.htm. Washington to McDougall, giving McDougall the opportunity to resume command of his division, 19 Aug. 1781, Founders Online, https://founders.archives.gov/documents/

be understrength. News of victory at Yorktown reached the post on October 24th. Afterward activity slowed as everyone waited for the formal diplomatic end to the war.

In the spring of 1782, Washington brought the Continental Army, by now a truly professional force, back to the Highlands Department where he established his headquarters at the Hasbrouck House in Newburgh. That winter the troops were housed at the New Windsor Cantonment. Marching had given way to guard duty, fatigue details, and waiting. For the last time, at West Point, the garrison, after delays, apparently floated the Great Chain in early May; General Heath had reported to General Washington on 1 May: "The chain is now ready to be stretched across the river, but the logs are every day growing dryer and lighter while out of the water, will consequently swim longer in the Fall. The chain will be laid down whenever your Excellency thinks proper to direct." The troops on Constitution Island lived in huts and tents until later in the fall when a large, two-story barracks was completed. The hut sites were scattered about the island, usually in a ravine or at least on the leeward side of a hill to gain some relief from the bitter north winds of winter. The ruins of stone fireplaces mark these sites today. The huts were built quickly by the soldiers of a unit, usually a regiment. No doubt the soldiers used whatever materials they could find and shared their finished dwelling with several comrades who participated in its construction. Sometimes huts built in previous years by other units were available and were made habitable with relative ease.[39]

Washington/99-01-02-06730; Washington to Heath, 19 Aug. 1781, Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-06729.

39. Numerous letters may be found in the *Washington Papers* relative to quartering the troops. Only selected citations are given here. Heath to Washington, 13, 28 Nov, 3 Dec. 1780; Huntington to Washington, 2 Dec. 1780, *Washington Papers*, Series IV, Reels 72 and 73, LOC. Hughes reported that work was being done to prepare the Great Chain for its return to the Hudson: "The Boats for floating the Chain are in Repair, and Junk and Oakum sent over for Calking the Logs, and every other thing doing that the Season & Circumstances will permit" (Hughes to Heath, 27 Feb. 1781, Hughes's Letterbook, Huntington Library, 51). Heath to Washington, 1 May 1782, Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-08301; the exact date of completion is unknown, as the "laying down of the Chain, may be deferred a few Days longer" (Trumbull [for Washington] to Heath, 1 May 1782, Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-08302). Joseph Plum Martin reported that the Great Chain was not put in the Hudson in the spring of 1783, signifying that the war was over (Martin, *Private Yankee Doodle*, 278). Heath to Washington, 20 Oct. 1780, *Washington Papers*, Series IV, Reel 71, LOC, and Founders Online, https://founders archives.gov/documents/Washington/03-28-02-0337; Orderly Book, McDougall, entry for 1 Oct. 1779, McDougall Orderly Books, NYH..

Tents were probably used throughout the island during the entire war. L'Enfant's drawing shows a tent encampment behind Greaton's Battery. Because it was not always possible to move troops into barracks or huts as winter approached, tents sometimes had fireplaces in them. Consequently, the specter of losing men in a blazing tent was ever present. The barracks were built during 1782, and, as far as can be determined, it was the only permanent barracks constructed on the island between 1778 and 1783. Joseph Martin, a Continental soldier assigned to the island in 1782, noted in his memoirs:

> After we had ended our stone blasting, we went to building a new range of barracks, and elegant ones, too. They were two stories high with wings at each end, brick chimneys, and a gallery in front the whole length of the building, with large flights of steps to ascend to the gallery and the upper room—large enough to accommodate two or three regiments.[40]

Yorktown had not signaled the end of construction or repair work on the fortifications at West Point. If anything it made troops available to perform the work that had been waiting for so long. Villefranche, who would continue as senior engineer until the Treaty of Paris, submitted a report to McDougall as early as 13 January 1782, listing the status of powder magazines at all the works: "Fort Clinton, has not a powder Magazine in itself, there is one outside which is the General Magazine for west point and its Dependencies." Both Forts Putnam and Wyllys on the west side of the Hudson and North and South (Middle) Redoubts overlooking the eastern shore had powder magazines "Secure for powder in grain or in Cartridges." Redoubts #1–#7 had none.[41]

A day later, on the 14th, Villefranche submitted another report to McDougall on work that was needed to complete the fortifications consistent with the earlier recommendations of Washington and Duportail.[42] Submitted in the dead of winter, the report could not be acted upon. It appears, however, that the same report with some amplification was submitted to Washington

40. Martin, *Private Yankee Doodle*, 267. Heath to Washington, 20 Oct. 1780, *Washington Papers*, Series IV, Reel 71, LOC, and Founders Online, https://foundersarchives.gov/documents/Washington/03-28-02-0337; Orderly Book, McDougall, entry for 1 Oct. 1779, McDougall Orderly Books, NYH.

41. Villefranche's Report in Response to a Request from Gen. McDougall, 13 Jan. 1782, McDougall Papers, Reel #4.

42. Villefranche's Report to McDougall on "Necessary Work to be Done at West Point," 14 Jan. 1782, McDougall Papers, Reel 4, USMA Library.



Image 13.3: *Plan of West Point*, by Major Jean-Louis Ambroise de Genton, Chevalier de Villefranche, the chief engineer at West Point starting in 1780. (Courtesy of the West Point Museum Collection, United States Military Academy.)

upon his return to the Highlands.[43] It was dated 15 April 1782 and is the last available wartime description of the fortifications at West Point from an engineer's viewpoint (work to be accomplished, which also implies work that has been completed). He started with Fort Clinton, the citadel of Fortress West Point, recommending that the "old fascines ought to be taken away entirely and timber put in the place of them, or good masonry." He concluded that "the old fort ought to be demolished quite to the powder magazine." He then provided a detailed list of the materials, carpenters, "fatigue men," and teams of oxen or horses required to complete the work; he estimated that the construction could be completed in forty-three days with these resources.[44]

Villefranche also indicated that 1782 was the year that lime mortar may have made its way into Fort Putnam on a large scale, since "half of the fort which is built with dry stone wall, aught to be rebuilt in good Masonry," and that Fort Webb had been "abandond." At Fort Putnam, he was concerned that "that part of the fort which faces the river is very easy to be stormd, a little breast work erected on the top of the parapet would add greatly to its defence."[45]

Concerning Fort Wyllys, Villefranche revealed an important measurement with possible significance for all the fortifications at West Point: the interior face of the parapet would be four feet four inches above the banquette upon which the soldiers stand when firing muskets. At the outlying redoubts to the west, two batteries at Redoubt #1 were finished, and others were well on their way to completion. In addition to some necessary repair work, Villefranche reiterated most of the same recommendations for new work described in earlier reports. Redoubts #1–#4 still needed powder magazines.

On Constitution Island the reconstruction of Marine Battery was still not complete. Apparently since 1779, some progress had been made, but then shortages of manpower and materials forced the work to stop. In varying stages of completion and unprotected from the elements, the ruinous effects of the weather extracted their toll from the fortifications at an accelerated

43. Two reports were found in the Washington Papers. The first, dated 15 Apr. 1782, repeats Villefranche's Jan. appraisal but also includes materials needed to perform the tasks, as well as amplification on some of the individual tasks. The second report, dated 16 Apr. 1782, is shorter and appears to be an addendum by Villefranche to his report of the previous day. Both are found in Washington Papers, Series 4, Reel 84, LOC, and Villefranche to Washington, 15 Apr. 1782, Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-08168. See Appendix G.

44. Villefranche to Washington, 15 Apr. 1782, Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-08168.

45. Villefranche to Washington, 15 Apr. 1782, Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-08168.

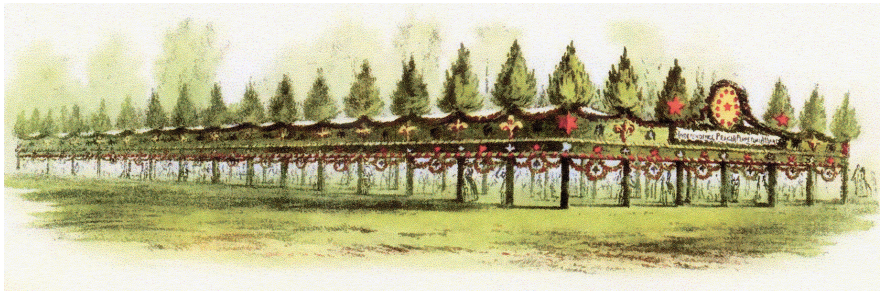


Image 13.4: *Major Villefranche's Pavilion*, in *History of West Point, and its Military Importance During the American Revolution*, by Edward C. Boynton. (Courtesy of the Archives and Special Collections, United States Military Academy Library.)

rate. Villefranche continued to recommend work for the remainder of the island as projected in past reports. Above Nelson's Point, Redoubts North and South (Middle) and their batteries were complete.

Construction on any one fortification did not require an inordinate amount of materials or time—two weeks on average—but the lists of timbers, planks, board, palisades, pickets, and abatis, all cut to specific dimensions, to include soil hauled in hand barrows, teams to haul the materials, carpenters and men for general fatigue work, all coalesced into a tremendous undertaking in an age when power machinery was not available to simplify the countless tasks that had to be done by hand. There should be little wonder that some fortifications at West Point never reached completion, or that others developed an appearance over the years that was not entirely consistent with original plans. In the march toward completion of the numerous forts, redoubts, batteries, magazines, bombproofs, and other works at West Point, the old cliché of "two steps backward for every one forward" is a realistic description of the difficulties encountered in constructing a fortress that took on the semblance of permanency amid a revolutionary struggle.

While the Continental Army waited in the Highlands as an army of observation for the war to end officially, there was enough time to relax and celebrate the birth of the Dauphin of France, Louis XVII, on 31 May 1782. Probably the grandest celebration held at West Point or anywhere in the Highlands during the war, the highlight was a massive *feu de joie* (fire of joy) of artillery and musket fire in the evening from the garrison's troops of the six brigades from Massachusetts and Connecticut, formed in a huge circle on the hills on both sides of the Hudson, that, incidentally, outlined the ring defense at West Point. More than just a salute to the Dauphin, it represented American appreciation and gratitude for French support of arms

during the Revolution and also offered the opportunity for a little revelry over America's military success.

Dr. James Thacher, the surgeon at West Point, described the event in great detail. The centerpiece was the "grand colonnade" six hundred feet long and thirty feet wide, supported by "one hundred and eighteen pillars, made of the trunks of trees"; it was on the Plain and accommodated more than five hundred "gentlemen and ladies." Thacher described the three volleys of the *feu de joy*, as equivalent to "tremendous peals of thunder, and the flashing from thousands of fire arms in the darkness of evening, could be compared only to the most vivid flashes of lightning from the clouds." After "three shouts of acclamation and benediction for the *Dauphin*, by the united voices of the whole army on all sides . . . the celebration was concluded by the exhibition of fire works,"[46] consisting of "rockets, wheels, fountains, trees, bee-hives, ballons, stars and fleur-de-lis, admirably constructed and played off at twenty minutes past 11 o'clock."[47] As the festivities ended, the celebrants had no idea that the war would continue for more than a year. The drudgery of daily guard and fatigue duties would continue through July 1783 as commanders and engineers worked to maintain the fortifications at West Point with diminishing resources and support.[48]

The Massachusetts and Connecticut Lines continued to supply the majority of the troops in the Highlands Department in three brigades from the former and two from the latter with 4,376 officers and rank and file in May 1782. In addition, there were 348 artillerists from Colonel John Crane's 3rd Continental Artillery Regiment and Captain Andrew Moodie's detachment of the 2nd Continental Artillery Regiment, three companies of Sappers and Miners commanded by Major Villefranche, and 202 members of the Corps of Invalids, bringing the total soldiers "Present Fit for Duty & on Duty" to 4,926. After the majority of the Main Army moved to New Windsor Cantonment, the garrison comprised 1,497 of all ranks from the 1st through

46. Thacher, *Journal*, 310–12, 372–74, https://archive.org/details/jamesthachermiloorevorich/page/373/mode/2up.

47. Boynton added more details in *History of West Point*, 160–63, https://archive.org/details/historyofwestpoio1boyn/page/163/mode/2up?ref=ol&view=theater.

48. In a one-day snapshot of the Main Guard detail at Fort Clinton, one subaltern, one sergeant, one corporal, and twenty-one privates mounted seven sentinels during the daytime and seven at night and guarded seven prisoners for crimes ranging from insulting a LT Lane (2) to robbery (5), "Report of the Main Guard in Fort Clinton, 13 Feb. 1782(?)," American Revolution Collection, Box 5, File 1, American Antiquarian Society, Worchester, MA.

the 5th Connecticut Regiments, 618 from the 2nd and 3rd Continental Artillery Regiments, 66 Sappers and Miners, and 139 Invalids. The ordnance to be served by the artillerymen totaled 124 brass and iron, mounted cannons and mortars with 91 in the Park of Artillery and the remainder in five redoubts: Fort Clinton (twenty-two, of which six were 18-pounders and four were 12-pounders), Sherburne's Battery (five 6-pounders), Lanthorn (one brass 6-pounder and one iron 12-pounder) and Middle Redoubt (one 18-pounder and one 12-pounder). For the rest of 1782 and until May 1783, the infantry would be reduced to the 1st through 3rd Connecticut Regiments and the same supporting units. In the last official return of July 1783, the garrison at West Point had been reduced by furloughs to the 2nd Massachusetts Brigade (650), Colonel Heman Swift's (Consolidated) Connecticut Regiment (434), five companies of New Hampshire Continentals (277), Lamb's and Crane's Artillery Regiments (272), and Captain David Bushnell's 12 Sappers and Miners for a total strength of 1,645.[49]

Because of West Point's permanence and proximity to the Main Army, the fortress began to take on the atmosphere of a major military arsenal. After General Heath succeeded McDougall as commander of the Highlands Department, Major General Henry Knox followed and would command it from 29 August 1782 until 9 January 1784. He received the usual orders: "To visit the Redoubts frequently—see that they are kept in proper order—that the Garrison's allotted to them are alert—and that they make it an invariable Rule to sleep within the Works." He passed on his concerns for the logistical needs of the garrison: The redoubts "should each be furnished constantly with ten days Wood and Water . . . the detached Works should be provided with ten days provisions."[50]

Knox discovered that West Point had not been built as a military arsenal, and on 9 July 1782, he had mildly complained to General Washington about the inadequate facilities, especially powder magazines. He promised, "One magazine will be immediately began—An attempt will be made to throw in a sufficient supply of stores before winter." The construction of a central powder magazine then became an issue that received a great deal of high-level attention over the course of the year. Earlier on 4 July, Major General Benjamin Lincoln, then serving as president of the Board of War, wrote to Colonel

49. Lesser, *Sinews*, 230, 236–55; "Report of the ordnance at the different Posts & Park of Artillery on West Point," 24 Dec. 1782, Sheffield Research Files.

50. "From George Washington to Henry Knox, 29 August 1782," Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-09311.



Image 13.5: Panoramic view of West Point, New York, showing American encampments on the Hudson River, 1782, by Pierre Charles L'Enfant. (Library of Congress, https://www.loc.gov/item/2004678934/.)

Timothy Pickering, quartermaster general for the Continental Army, "The very exposed state of our powder at the several Magazines on the Hudson, and the insufficiency of the Magazine at West Point safely to Preserve the ammunition necessary for the defence of that important post has induced a determination to build a magazine either on West Point or Constitution Island."[51]

Under engineer Villefranche's supervision, workers dug the foundation for a magazine on Constitution Island, but the lack of materials and scarcity of masons soon made it clear to him that the magazine would not be completed during the remaining good weather. He proposed that priority of effort be shifted from the magazine to "repairing and building accommodations for the troops" for the forthcoming winter. In the meantime, the powder would be protected in Redoubt #7, which "has a roof put upon it, and is

51. Lincoln to Pickering, 4 July 1782, National Archives, Old Military Records, Record Group 93, document number 25455. "The plan of the building you will herewith receive," mentioned in the first paragraph, might be the unidentified and undated plan found in the undated section of the Knox Papers. See also "Plan of a powder magazine," draftsman and date unknown, Knox Papers, Reel 55, Massachusetts Historical Society Archives, https://archives.nypl.org/mss/1661; Knox to Washington, 9 July 1782, "Estimate of Mill Stores," Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-08871. Journal entry, Waste Book for Quartermaster Stores, West Point, 1796 (Oct 1796–Aug 1805), 3 Feb. 1797, powder return, Waste Book for Ordnance Stores, 1791, 7 Dec. 1795, USMA Library; Doughty to Knox, 12 Mar. 1785, Knox Papers, Reel 18; and Flemming to Knox, Nov. 6, 1788, West Point Letter Book Number 2 (1786–1790), USMA Library. There can be no doubt that the removal of the powder in January 1797 closed out the magazine on the island. The quantity on hand there in December 1795 was: 46 double barrels, 392 single barrels, and 998 half barrels. The quantity removed in Jan. 1797 was: 46 double barrels, 392 single barrels, 978 half barrels.



otherways prepared as a temporary deposit of powder. It is amply large to receive all the powder in this vicinity not lodged in the respective magazines within the works." What had started out as a temporary expedient in the autumn of 1782 became a permanent magazine until January 1797 when a large quantity was moved from Constitution Island to the magazine in Fort Clinton. The parapet may have been stripped off in later years and the roof rebuilt directly on the stonework. Perhaps that is why no earthen spoil can be found on top of the old scarp today.[52]

The war gradually wound down with a cessation of hostilities on 19 April 1783, the furloughing of the Continental soldiers from June until December, mostly from New Windsor Cantonment to the north, and the signing of the Treaty of Paris on 3 September 1783. At about the same time, Congress ordered the Continental Army reduced to one reinforced regiment of 500 men. By the beginning of the new year Knox reported that the reduction had taken place; as of 29 January 1784, there were fifty-seven officers and men to mount guard—fifteen sentinels by day and fifteen by night. But military austerity was just beginning. By 2 June 1784, Congress ordered the army reduced to fifty-five men at West Point and other magazines, and twenty-five men at Fort Pitt. Only eighty men were to remain on active duty. The redoubts and

52. Knox to Washington, 17 Sept. 1783, Washington Papers, Series 4, Reel 93, and Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-11824; Knox to the President of Congress, 3 Jan. 1784; Resolution, "By the United States in Congress Assembled," 2 June 1784, Knox Papers, Reels 16 and 17. "Report of the several Guards Mounted in the Garrison of West Point," 29 Jan. 1784, American Antiquarian Society.

batteries of the "out posts" at Fortress West Point were partially disarmed of cannons as early as the autumn of 1783.[53]

Francisco de Miranda, a Venezuelan who would become a general in the French revolutionary army, visited West Point during the winter of 1783–84 and recorded the last general description of West Point while it still retained its wartime appearance. Mentioning "four sturdy capstans fixed on both banks" to keep the chain taut, he admired the genius and industry that went into that great obstruction on the river at the cost, he was told, of £70,000. However, he was more critical concerning the outlying redoubts that, located on commanding ground, were "weak advance works . . . which ought to be the strongest." Although key terrain, as de Miranda pointed out, should be strongly fortified in the type of static defense represented by the fortifications, it would not have been practical to place large forts at Redoubt #3 or #4 when the enemy could avoid those positions and attack along the river from the south. Time, materials, men, and money were not available to build large forts on all the critical pieces of terrain. At best, small fortifications capable of delaying the enemy and requiring him to attack in force until he arrived within artillery range of his final objective was the proper technique for the defense at West Point. Coming to the Plain at West Point, de Miranda encountered the larger forts that commanded the area against which the enemy would conduct his final siege operations. As the enemy weakened his forces by fighting his way into the heart of the fortress system, he would continually encounter stronger fortifications that would extract a greater toll on his resources until he was weakest when he reached the strongest position, Fort Clinton. Miranda, on the other hand, was still a product of the old school and did not recognize the innovation that characterized West Point, writing that "the productions of art in fortifying them are neither ingenious nor of much soundness." He recognized the demands of maintaining the many defensive works as "Imperfections in this fort were still being corrected when the war ended, and one sees a million yet to be corrected." He did concur, however, that Fortress West Point would have been able to resist the British:

> West Point is the most advantageous position that could be selected to cut off the navigation of the river, because, in addition to the narrowness of the latter at that spot, the turn it makes forces every vessel to shift sails and consequently reduce its speed, at which time the obstacles and batteries . . . can destroy it very easily. An attack

53. Knox to Washington, 17 Sept. 1783, Washington Papers, Series 4, Reel 93, Founders Online, https://founders.archives.gov/documents/Washington/99-01-02-11824.

> upon the post by land would have been of more probable success, but, as the army always maintained such a position as to be capable of coming to its aid in case of necessity, this was not possible either.[54]

As it turned out, the British must have reached the same conclusion, as they never tried to assault Fortress West Point. After Major André's failed mission in 1780, West Point stood as a symbol of strength for deterrence. Thus, Commander in Chief George Washington would conclude, "The importance of this last mentioned Post [West Point], is so great, as justly to have been considered, the key of America."

54. Miranda, *New Democracy in America*, 85–88.

EPILOGUE

Fortress West Point was the anchor in the Highlands Department of the Continental Army designed to defend the Hudson River at its west point from a British joint operation in the Revolutionary War. Its dependencies stretched from the Fishkill Supply Depot in the north to "the Lines" on the Croton River in the Neutral Ground to the south. Works at Verplanck's Point and Stony Point guarded King's Ferry, and supply depots and troop camps dotted the eastern shore, including Continental Village, Soldiers' Fortune, the New Hampshire Huts off Canopus Road, the Connecticut Camp near Nelsonville, Rhode Island Village near Red Mills at Lake Mahopac, and New Boston off Robinson's Road to the northeast of Sugar Loaf.[1]

Starting in the fall of 1775, at Fort Constitution across the river from West Point, New Yorkers—backed by the Continental Congress and its army—put incredible resources into fortifications to prevent the British from controlling the Hudson River. Such control would have split the New England states from the Middle Atlantic states, impeding political unity, communications, and the movement of supplies, goods, and troops between north and south on the river and between east and west across it. British Major General Vaughan's and Captain Wallace's foray up the river to Robert R. Livingston's Clermont and Belvedere mansions in October 1777 showed what British troops supported by the Royal Navy could accomplish once they had relatively free rein. After January 1778, the fortifications of Fortress West Point, with its Great Chain across the river to Constitution Island, had successfully deterred Sir Henry Clinton's forces from sailing north further than Stony Point.

The mission of Fortress West Point was to block the river and maintain a defense for at least fourteen days. At an estimated cost of $3,000,000 for the garrison's construction, it accomplished that mission and served to presage new developments in land fortifications.[2] Construction had been completed with extremely limited resources and within the constraints and

1. Thomas, "Revolutionary Camps," *Journal New York State Historical.*

2. The cost estimate was made by Capt. Horace M. Reeve, "West Point in the American Revolution, 1778–1904," in USMA, *Centennial of the United States Military Academy*, 173.

uncertainties of a revolutionary environment. The hardships, deprivations, and sacrifices of all who contributed to the construction and defense of Fortress West Point exemplified the level of commitment that Americans devoted to their cause. Secretary of War Henry Knox had rightly concluded, "West Point is of the most decisive importance of the said river."

The fortifications in the Highlands Department evolved over time and in distinct phases. Fort Constitution was the main effort from 1775 to 1776 with Romans's Blockhouse and batteries that included Romans's, Marine, Hill Cliff, and Gravel Hill. Forts Clinton and Montgomery, as well as the chain across the Hudson, occupied manpower and resources from 1776 to 1777. From January 1778 until 1784, Fortress West Point finally lived up to James Clinton's and Christopher Tappen's vision of June 1775. At its peak, the Fortress consisted of three concentric defensive rings with the chain at their center. The outermost ring contained the outlying Redoubts #1, #2, #3, #4, North, Middle (South), and Sugar Loaf redoubts. Closer were Forts Meigs, Wyllys, Webb, Putnam, Sherburne's Redoubt, and Redoubts #5, #6, and #7. The final ring contained Fort Clinton, the five water batteries on the west bank, and Marine and Greaton's Batteries on the Island. The British would have had to penetrate each ring successively in an overland attack to make their approach to capture Fort Putnam, to lay siege to Fort Clinton, and to gain control of the Great Chain, which would have required naval support. The cost would have been great, particularly in time and resources.

Fortress West Point was novel. It represented a transition from the massive, permanent fortifications of eighteenth-century Europe to the ring fortresses that evolved during the nineteenth century. Under the supervision of Colonel Kościuszko and the French engineers, West Point evolved in a pragmatic and piecemeal fashion in response to new threats and constant concerns about dominating hills. The Americans frequently reappraised their situation and, as time and other resources permitted, assured that everything had been done to guarantee success. Usually, that meant constructing new fortifications that previous exigencies had not permitted. The fortress had to survive a siege for only fourteen days. Initially, the military would be deployed in the hills outside the third or outermost ring to delay the attacker, subsequently falling back to defend along the outer ring in conjunction with the fortifications. If forced to withdraw again, they would fall back to the fortifications in the second ring, and, if necessary, make a determined stand at the innermost defenses with Fort Clinton as the citadel. The garrison should have been able to achieve its mission with those tactics.

West Point was designed to hold just long enough for outside forces to arrive and create an untenable situation for the enemy. Positioned as it was in one of the best pieces of defensive terrain anywhere in America, it allowed Washington to protect the Hudson River with minimal troops while moving his Main Army to react to British operations in other areas. It was the defensive works at West Point that allowed Washington and Rochambeau to march south in 1781 while a British army remained in New York City. The Americans' perception that an attack was imminent limited both the size of the fortifications and the type of materials used in their construction. The leaders and engineers based the construction of their defenses on practical and immediate considerations. As the war continued, all the hastily built fortifications had to be rebuilt. Unnecessary duplication would appear to be a viable criticism of the engineering effort at West Point without an understanding of the context of the situation requiring temporary construction techniques.

After the Treaty of Paris was signed on 3 September 1783, the materials used to construct the fortifications at West Point were sold to recoup some of the funds expended to build and fortify it. With the war over, there was no immediate need to obstruct the river nor guard the approaches to the Great Chain. However, West Point would continue as an active military post. Since 28 January 1778, West Point has been the longest continuously occupied post in the U.S. Army. The ruins of fortifications built by French and Polish engineers would for almost 250 years inspire future American engineers, as well as future officers of all branches of the Army.

In 1784, the process of dismantling the fortifications began, as parts of the old works were sold for whatever material could be salvaged. What escaped the crowbar was consumed by decay and weather over succeeding years. Later, in 1794, increasing tensions arising from war in Europe would lead to renewed interest in the Hudson and the reconstruction of Fort Putnam. Once artillery cadets occupied the existing buildings starting in 1794, West Point hosted a school of practice. However, time, climate, and weather eventually reduced most of the individual fortifications to their stone foundations. Only Fort Putnam, Knox Battery, and Trophy Point received upgrades as a part of river defenses. The trace or outline of the fortress drawn by Kościuszko on his "ruff map" of 25 April 1779 is identical to the trace of the post today, except for the southeastern portion, which was extended southward in 1794 as part of a major reconstruction effort. A French engineer, Colonel Vincent, reported in August 1794, "The repairing of the enclosure of the fort is now going on; one part has been alterated, according to the strong

reasons reported."[3] Major David Niven, the engineer in charge of repairs at the fort, wrote to the secretary of war on 12 December 1794 that he was

> repairing such parts of the rear wall of Fort Putnam . . . judged sufficient . . . that all the old wall of Fort Putnam, facing Fort Clinton be taken down and rebuilt; enclosing the point for the advantage of enlarging the battery facing the ridge where Forts Webb and Wyllis stood . . . have taken away the old wall and built a new one, with the foundation on the rock, agreeably to your instructions, on durable principles of masonry. The new wall is raised from twenty to twenty-five feet high except the gate-way, for want of free-stone to face the arch. 9 bomb-proof arches are closed over the barracks and magazines. I had hopes to finish four more . . . that the brick be moulded in the shape of a key stone to turn the arches.[4]

On 16 March 1802, President Thomas Jefferson signed into law the bill creating the United States Military Academy (USMA) at West Point, and Fort Clinton would soon become the site of the June encampment.[5] In 1829, the U.S. Army sold most of the links of the Great Chain to the West Point Foundry in Cold Spring for scrap. However, a few links were spared and remained at the Ordnance Compound. In 1857, these links were put on display at West Point, on Trophy Point. They remain there today, thirteen

3. Quoted in Mead, "Archaeological Survey of Fort Putnam," 13.

4. Mead, "Archaeological Survey of Fort Putnam"; *Annual Report USMA*, 1905, 52, https://usmalibrary.contentdm.oclc.org/digital/collection/superep/id/7/rec/16; 1906, 55; 1910, 10; 1911, 29, https://usmalibrary.contentdm.oclc.org/digital/collection/superep/id/14/rec/22; Crozier, "Archaeological Survey of Fort Putnam," 40–42. Archaeological investigation along wall M-N has revealed that behind the 1906–1910 Portland wall was a lime mortar stone wall, and behind it a dry masonry wall that was relatively low. The lime mortar wall, however, was of much cruder construction than the lime mortar masonry found on the eastern walls of the fort. The latter work was done by skilled masons in 1794. The less-skilled work in wall M-N was not part of the 1794 project that rebuilt the eastern walls. Wall M-N is located on the northern side of Fort Putnam where the slope is gradual, and the road approaches the fort. Logically, it would have been one of the first walls to be faced with dry masonry stone. Excavation of wall M-N revealed an embrasure in the 1781–1783 rampart, but that does not mean there was one earlier. Since the original dry masonry walls were so low, there would not have been any need for embrasures. As a point of interest, when the twentieth century wall was built at M-N, a new embrasure was built into it while the one in the old wall was covered. If the same thing happened in wall K-L, there may be an old embrasure hidden there also behind and below the one now visible. See Image 11.19.

5. In 1901, workers leveled ramparts on the western half of Fort Clinton and filled the ditch to create additional room for the encampment.

original chain links, one link for each of the original thirteen states, a clevis, and a swivel, resting in a place of honor.[6]

With an appropriation from Congress in 1905, work was done on Fort Putnam's complete restoration from 1906 to 1910. Originally the plan was to use the same stones that had fallen from the walls, replacing them using Portland cement. Soon it was decided to use new stones because the old ones had deteriorated so badly. The result was that a twentieth-century layer of stone and concrete covered the old walls of the fort. The Department of Practical Military Engineering, Military Signaling, and Telegraphy predicted that "when the work is completed, will probably be the most inspiring of all the monuments to our early struggles for independence."[7]

At the time of the 125th anniversary of the American Revolution and later in 1909, several years after USMA's Centennial, a Board of Officers recommended work on key fortifications, which led the Detachment of Engineers to commit one noncommissioned officer for 229 days "[t]rimming trees, clearing out brush, rebuilding fallen walls and old parapets and preparing stones or boulders for inscriptions" on almost all of the sites. The work on the various parapets and the inscriptions on the designated boulders was substantial enough that the engineers concluded "that these various historic works are now in condition to withstand ordinary wear and tear for many years to come." In fact, they believed that the work done at Fort Putnam—"this historic and important fortification"—in particular, would "maintain it for another one hundred years."

Fortunately, nineteenth- and twentieth-century progress left Constitution Island across the Hudson untouched under the stewardship of the Warner sisters, Susan and Anna.[8] Thanks to Anna Warner and Margaret Olivia Slocum Sage, USMA owns this last relatively undisturbed historical resource from the War for Independence. On both sides of the river the stone foundations or scarps of most of the works have survived, while the barracks, stores, and other buildings either gave way to roads and new buildings as USMA expanded or were targeted by greedy souvenir hunters.

The Bicentennial of the American Revolution in 1975 provided the next opportunity to reclaim West Point's legacy. Fort Putnam was the primary

6. See Image 9.9. For the story of the selling of the Great Chain for scrap, see Diamant, *Chaining the Hudson*, 178–80, including a facsimile of the contract with the West Point Foundry.

7. *Annual Report USMA*, 1911, 26, 29.

8. Anna Warner lived on the island until her death in 1915.

project, with a "partial restoration" that included construction of sections of the parapet, restoration of casemates, construction of the McLean Museum Building, and installation of fourteen replica cannons. For the remaining western fortifications, Fort Clinton and Redoubt #4 received upgrades to support infrastructure. All others, including those on Constitution Island, were cleared of brush and marked with memorial plaques. Infrastructure was installed on Constitution Island, and Redoubt #7 was designated for repair. Beyond these, the project "Preservation of Redoubts and Forts on West Bank" was never completed.[9]

The ruins of Fortress West Point represent an American heritage that deserves preservation, and USMA is pursuing that goal. In 2011, four friends, the author (USMA '69), his wife Lois, and Dr. Betsey and Dr. Colonel Don Blakeslee (USMA '70), formed the Friends of the American Revolution (FAR) at West Point with the mission of preserving West Point's fortifications for posterity. Since 2013, FAR, under the direction of its president, Betsey Blakeslee, has worked closely with four superintendents and eight commanders of the U.S. Army Garrison, West Point, to gain support for the project.[10]

On 20 April 2018, West Point Superintendent Lieutenant General Robert L. Caslen approved the *Strategic Plan* on behalf of USMA and directed the "West Point Fortifications" be placed on the list of Academy "Funding Needs," saying, "We are the stewards, and it is our ethical responsibility." Six years later, in the spring of 2024, Superintendent Lieutenant General Steven Gilland, with the help of AOG's President Mark Bieger and Chief Operating Officer Patrick Ortland, once again placed the Fortress West Point project in the superintendent's Unrestricted Endowment & Fund.[11]

Under the direction of the Executive Committee, FAR produced strategic and engineering plans for the garrison to provide a blueprint for the

9. *Annual Report USMA*, 1911, 26, 29; Lieut. Col. John H. Bradley, "Bicentennial Program, 1973–1977," "After Action Report, United States Military Academy, 1973–1977," 17 June 1977, USMA Library.

10. Dr. Betsey Blakeslee (American Studies, University of Maryland) recruited Albert D'Agostino and Angelo Corva to join the organization. Architect Corva designed FAR's logo, and Attorney D'Agostino, on behalf of FAR, created a New York not-for-profit corporation, filing for approval with the New York State Department of State in 2012. The organizational meeting took place in 2013 at West Point. In June 2014, the Federal government approved FAR's application to be designated a 501(c)(3) not-for-profit organization.

11. Decision briefing for Lieut. Gen. Caslen, on Fortress West Point Project on 27 April 2018; Fortress West Point–West Point Ready, https://www.westpointready.org/fund/fortress-west-point/.

preservation of twenty-one American Revolutionary fortification sites. Under the supervision of the West Point AOG and with funding from the West Point class of 1970 and other donors, the stone foundations at Fort Meigs in the Lusk Housing Area were restored in 2018, followed by Fort Clinton and the Water (Green), Lanthorn, and Chain batteries in 2024. The preservation of Redoubt #4 was funded in May 2025 by the West Point Class of 1969, and Redoubt #2 for the fall of 2025 funded by the West Point Class of 2009. FAR is committed to implementing West Point's and FAR's *Strategic Plan* to preserve the remaining fortifications.[12]

FAR's leadership has worked with appropriate USMA professors to recruit cadets willing to do their senior capstone projects on subjects related to Fortress West Point. Cadet history and computer science majors researched African American troops in the 6th Connecticut, who helped construct Fort Meigs, and designed an augmented reality simulation of Fort Wyllys. Two other teams of cadets designed and built the viewing platforms at Fort Meigs in 2019 and at Kościuszko's Garden in 2023 as their senior capstone projects in Civil Engineering.[13]

The 2025 Semiquincentennial, the 250th Anniversary of the War for Independence, provides new opportunities to tell the story of Fortress West Point in the Highlands Department and its contributions to victory. The

12. The Executive Committee members are President Kevin Reymond (Honorary, USMA '70), President Emerita Betsey Blakeslee (Honorary, USMA '70), Vice President Johnson (USMA '69), Secretary John Connors (USMA First Captain, '70), Treasurer Kevin Reymond and Joseph Reeder (USMA '70). In 2025, Kevin Reymond succeeded Betsey Blakeslee as president. In 2012, Dr. Blakeslee received the Gold Cross of Merit from President Bronisław Komorowski of Poland for her work on the restoration of Kościuszko's Garden at West Point, the start of the project to preserve Fortress West Point.

13. Copies of the founding documents, Board minutes, and plans are filed with the U.S. Army Garrison, West Point, in accordance with its Memorandum of Understanding (Federal Tax ID # 46-1939590), FAR IRS exemption 501(c) (3), effective date of exemption: 12/31/12, IRS Notification Letter dated 5 June 2014; State of Incorporation: New York, 12/31/12. Copies of Dr. Betsey Blakeslee's and Dr. James M. Johnson's *United States Army Garrison West Point Strategic Plan to Preserve Fortress West Point American Revolutionary Fortifications 1775–1783* (West Point: Friends of the American Revolution at West Point, March 2018) and Jane M. Wooley, *Fortress West Point Dry Stone Preservation & Reconstruction Plan Revolutionary War Fortifications 1775–1783* (West Point: Friends of the American Revolution at West Point, 24 May 2022) are in Archives and Special Collections, USMA Library. Other FAR Board members have included over the years Margaret Moten, Patrick O'Malley, Alison Spear, Alex Storozynski, Matt Taliber, Vincent Tamagna, Denise Toole, and Evelyn and Craig Watters. Lieut. Gen. (Ret.) Dave R. Palmer has served as an adviser, and Patrick Railey and Paul Hudson, Cultural Resources Officers, as Garrison Points of Contact. See https://old.thekf.org/kf/events/past/Kościuszko_s_fortifications_gard/.



Image E.1 Fortress West Point Project Team. From left to right, Neil Rippingale, Dry Stone Conservancy, Inc. (DSC); John Connors, Friends of the American Revolution at West Point (FAR); Christopher Branson, West Point Association of Graduates; Michael Ginquitti, West Point Directorate of Academy Advancement; Kevin Reymond, FAR President; and Jane Wooley, DSC. Not shown: Paul Hudson, Cultural Resources Manager, U.S. Army Garrison, West Point. (Courtesy of Kevin Reymond.)

work of FAR, combined with the Department of History's Digital History Center, will provide a living laboratory for cadets in the required core course "The Army of the Republic: Leading Citizen Soldiers" (HI101) and follow-up courses to understand West Point's Revolutionary heritage and the construction of its mutually supporting batteries, forts, and redoubts. Starting in 2011, the Friends of the American Revolution at West Point accepted as a challenge the Board of Officers' conclusion about its work on Fort Putnam in 1911 to preserve all of West Point's existing fortifications from the American Revolution "for another one hundred years."

APPENDICES

Appendix A Copy of "B. Romans's Estimates and Expenses of erecting the Fortifications of Hudson's River, in the Highlands, in the Colony of New-York."

Appendix B "Plan of a part of Hudson's River Near & about the Fortifications now erecting in the highlands" (See Image 2.4 for the original plan.)

Appendix C "Captain Champion's Plan of a Hudson Highlands Fort, 1778" (Transcription) (See Image 8.1 for the original.)

Appendix D Duportail's "Memoir on the works made in the Highlands"

Appendix E Duportail's "Study for the Defense of West Point"

Appendix F Gouvion's "A Report of the State of the Works at West Point"

Appendix G To George Washington from Jean-Louis-Ambroise, chevalier de Villefranche de Genton, 15 April 1782

APPENDIX A

COPY OF B. ROMANS'S ESTIMATES AND EXPENSES OF ERECTING THE FORTIFICATIONS OF HUDSON'S RIVER, IN THE HIGHLANDS, IN THE COLONY OF NEW-YORK.

New-York, September 18, 1775.

These works require:

2,400 perches of stone wall, each perch containing 16½ feet in length, 18 inches high, by 12 wide, at 5*s* 6*d*. per perch £660. 2½ bushels of lime are taken up by each perch, 4,000 bushels, at 6d. per bushel, £100.

1,000 pieces ranging timber, 18 feet long, 12 inches square, for five block-houses, and for the morlins [merlons] of the battery, &c. These contain 216,000 superficial feet, at 6*s*. per hundred, (price at *Windsor* Landing,) £648.

1,500 two-inch plank, for platforms of the battery and floors of the block-houses—400 of 24 feet long, 10 inches wide; 1,200 of 20 feet long, 10 inches wide—49,600 feet, say 50,000 feet, (at *Windsor* Landing,) at 6s. per hundred, £150.

1,200 beams and sleepers, for block-houses and platforms, of different lengths, from 8 to 24 feet long, 9 inches by 3, supposed to contain 50,000 feet, (at *Windsor* Landing,) at 6s per hundred, £150.

3,200 for each, make 16,000 shingles for five block-houses, at £5 per thousand, £80.

140 lathes, of 14 feet long, for each, make 700 lathes, of 2½ inches by 1¼ for the roofs of five block-houses, at £15.

8 rafters of 16 feet long, 8 rafters of 10 feet long, make 160 rafters for the block-houses, their mean measure being 6 inches by 3, 3,120 feet, at 6*s*. per hundred, (at *Windsor* Landing,) £9 7*s*., say £10.

2,000 fascines, for leveling, &c., will cost about £25.

4,000 pickets, to picket them, out of about 1,000 lathes, £20.

500 tompions, for loopholes, about £2.

40 ports, 5 windows, and 6 doors, for block-houses and magazines, and a gate, &c., for the citadel, about £30.

6,400 broad-headed spikes, for the gate and wicket, and block-house doors and windows, 10 to all, of iron, make 640 pounds; 14 bolts of 10 pounds each, 140 pounds; 5 bolts of 4 pounds each, 20 pounds; 26 hinges, on an average, 250 pounds; 50 iron hoops, for swivels, about 200 pounds, small iron work, about 200 pound—in all, 1,450 pounds, say 15 cwt. wrought iron, at l*s*. per pound, £75.

Broad-headed copper nails for magazine door, 360, 10 to a pound, 36 pounds; copper hinges and bolts, 30 pounds; two copper circles, or busses for vessels, 20 pounds—about 80 pounds wrought copper, at 3*s*. 6*d*. per pound, £14.

5 ordinary locks, £2; 1 large lock, £l; 1 copper lock, £1; about 1,000 pounds nails, £40; 5,000 trundles, £25.

Necessary tools—6 stone mauls, 20 pick hammers, 20 pick axes, 50 hand bill hooks, 50 axes and hatchets, 50 spades, 40 mallets, 300 sand bags of crocus, 50 hand barrows—about £150.

For the barracks, 80 by 20 feet; 2 sills, 4 by 5 inches, 80 feet long, 270 feet; 2 plates, 4 by 6 inches, 80 feet long, 320 feet; 25 beams, 4 by 6 inches, 20 feet long, 1,000 feet; 50 posts, 4 by 6 inches, 8 feet long, 800 feet; 50 rafters, 4 by 4 inches, 13 feet long, 870 feet; 20 joists, 4 by 4 inches, 14 feet long, 360 feet: 25 sleepers, 4 by 6 inches, 20 feet long, 1,000 feet-in all, 4,620 feet, at 6*s*. per hundred, £14.

5,000 shingles at £5 per thousand, £25.

250 lathes, 14 feet, about £5.

500 inch boards, 14 feet at 10*d*. per hundred, £20.

200 inch and a half boards, 14 feet, 1*s*. 3*d*. per hundred, £21 10*s*.

400 pounds nails at 10*d*. per pound, £16 13*s* 4*d*.

2 double stacks chimneys, of brick, £20.

Store-houses and guard-room 60 by 20 feet: 2 sills, 4 by 6 inches, 60 feet long, 240 feet long; 2 plates, 4 by 8 inches, 60 feet long, 320 feet; 20 beams, 4 by 6 inches, 20 feet long, 800 feet; 40 posts, 4 by 6 inches, 9 feet long, 720 feet; 40 rafters, 4 by 4 inches, 15 feet long, 800 feet; 15 joists, 4 by 4 inches, 14 feet long, 280 feet; 20 sleepers, 8 by 3 inches, 20 feet long, 280 feet—in all, 3,440 feet, at 6*s*. per hundred, £10 16*s*.

4,000 shingles, at £5 per thousand, £20; 200 lathes, £4 10*s*; 375 inch boards, £15; 300 pounds nails, £11 5s; a stack of chimneys, £ 10—in all £84 l*s*.

Labour of and provisions for 150 men four months, 26 days to the month, at an average of 3*s*. per day, £2,250.

Entire cost, £4,645 4*s*. 4*d*.

Five iron stoves, for the block-houses.

The above is exclusive of ropes, &c., to raise the guns, transport of stoves, and such tools as may be made by the blacksmiths on the spot, besides other small incidental charges.

B. Romans

N. B. It is most probable that swivel guns cannot be procured otherwise than by purchase.

Force, Peter, 1790–1868. *American Archives: Consisting of a Collection of Authentick Records, State Papers, Debates, And Letters And Other Notices of Publick Affairs, the Whole Forming a Documentary History of the Origin And Progress of the North American Colonies; of the Causes And Accomplishment of the American Revolution; And of the Constitution of Government for the United States, to the Final Ratification Thereof. In Six Series . . .* [Washington, 183753.] https://babel.hathitrust.org/cgi/pt?id=mdp.39015011821371&seq=441.

APPENDIX B

PLAN OF A PART OF HUDSON'S RIVER NEAR & ABOUT THE FORTIFICATIONS NOW ERECTING IN THE HIGHLANDS

Description of the Works already finished & further intended to be finished at this Post.

A a Storehouse 60 f^{t} by 20 f^{t}

B Barracks 180 f^{t} by 20 f^{t}

C a Blockhouse intended to prevent mischief from a Vessels top.

D to E a Wall of 200 foot in Length at whose west End is a Subterraneous Bombproof magazine, I have ventured to place fourteen cannon on this Battery, although according to rule it ought to have only ten

E to F an intended flanker of 69 foot to mount 6 cannon

F to G an intended flanker of 200 foot, this happens to run in a hollow & Some part will be 35 foot high, But it is the Soul of the work affording

1st the only practicable cover for the Barracks

2dly a Battery of 14 heavy cannon Commanding the Bay & furnishing a most terrible Crossfire with the Battery's H & I So as to make it totally impossible For a vessel to Stand it

3dly Several Subterraneous Bombproofs for Stores Of every Kind & Lodgments for the men off of duty in case of a Bombbardment.

H a Battery of 10 heavy cannon commanding the reach down

I a Battery of 4 heavy cannon to prevent a Bombarding Vessel from Lying at K

L a Blockhouse & Small work to protect & defend the Line of Communication between the works from A to H

M a Small work to annoy a Landing at D

N a Battery of four Cannon this is a most important Post, it being the only Landing where it is practicable to bring cannon up, & as the road to the forest of Dean Leads from it nearly in the direction here laid down, is the only practicable Spot for an Enemy to annoy us by Land.

O a Beacon

if I can obtain Leave to make fascines & prepare platforms &c^{r}. during Winter, I can undertake to throw up those works in Less than one weeks time, early in ye Spring

& as to the intended Stone works if I may be allowed to Break Stone during winter I can engage to throw up the whole of the wall F, G in 20 Days time provided I have the necessary number of masons well attended by a Sufficiency of Labourers.

I am further directed by a committee of the Continental Congress to make out an estimate of Expence for a heavy Battery at Pooploops-Kill, but not having viewed the ground yet, I choose to be Silent on this head.

B Romans Engineer

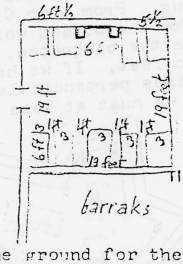
"Plan of a part of Hudson's River Near & about the Fortifications now erecting in the highlands," undated [Nov. 1775?], USMA Library.

APPENDIX C

CAPTAIN HENRY CHAMPION'S PLAN OF A HUDSON HIGHLANDS FORT, 1778

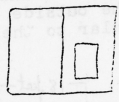
Transcription

The barraks must be two story high. Each room 19 feet by 19 feet the story in the outside. Each room will contain 9 beds about upon the floor and 9 above them so each room will contain 18 beds, 36 men; the two story, 72 men; and in case of great necessity, more. So we want for a garrison of 600 men about 18 rooms of 19 feet by 19 or 9 with storys, or barraks 180 feet long besides the barraks for the officers. I suppose that my barrak will be enough for them and part of these of the quarter master.

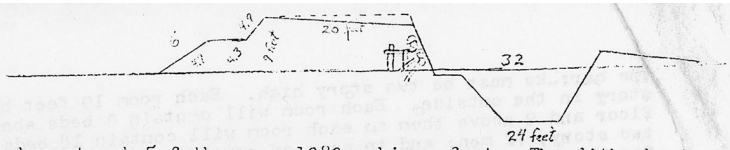


I think that we must keep the ground for the pouldre magasin and the store house to put them parallel to the curtine if it is possible, or one as the garde house should ( ). Each magasin shuld be 20 feet weidth and 40 feet long in the wid at less. If we had time we could make them bombeproof and so that we could make use of them like traverde and like citadele.

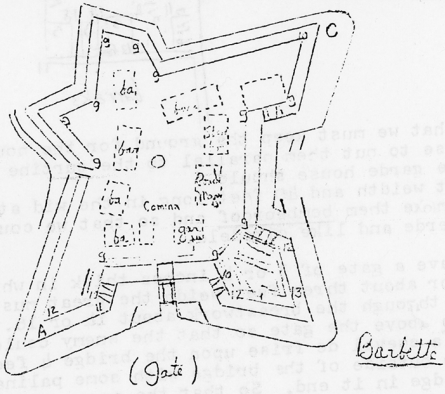
We must have a gate of 3 or 4 inches thick in which there must be a little door about three feet weidh the great must be 10 feet or 12 and the place through the breastwork about 14 or 16. We must have piquets with sharp above the gate so that the enemy could not put ladder. We must have a cheval de frise upon the bridge 4 feet before the gate and one in the outside of the bridge with some palinados in the two sides of the bridge in it end. So that the enemy would not come early upon this bridge we must cover the bridge at less with an entrenchement of pickets. If we had time we could make one gate on the inside of the breastwork with plankes of three inches and loopholls.



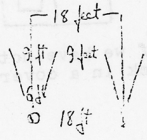
With should have a well. If we have not place enough for all barraks we may put some upon the rock in a covered place.



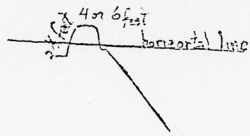
Cube of the breastwork 5 fathoms or 1080 cubique feet. The dith about 32 feet on the top and 24 feet in the bottom, the deepness according to the ground which will be wanted. If we can make this little glacis it would be the best to covere the breast work ( )so that we can fire early against the {van} up this glacis. Breast work from A in C 20 feet when it will be 9 feet high and a little less when it will be higher. This is no material thing. From A in C the earth must be beaten every feet or 18 inches to make the breast work stronger. None stone must be in the breast work above the banquette. The sticks must be sunk in the ground as in A every two feet. If we have time and fascines enough we must put a rank of fascines perpendicularly to the breast work with sticks in the ground or we must at less put fascines in this manner in



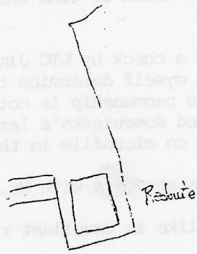
the place where the braces join the posts, three sticks for each fascine at less. We must take care for the ground in all saillant angles because we will get too much ground for them. The embrasures must be 2 feet in the inside and ( ) in the outside and their bottom ( ) from 6 inches since the inside ( ) to the outside (vide the figure. The line of their midle must be perpendicular to the flanc.



The little parapet round the brinke of the hill must be very small, about so:



Captain Champion knowes the thickness of the other breastwork. That is - about 12 feet and the ditch 18 on the top and deep according to the ground. If we make the redoute he knows the place. We may make the two communication with small parapet if we had not time that is 12 feet thick with palinados.



Merle Sheffield Papers, Archives and Special Collections, USMA Library.

APPENDIX D

DUPORTAIL'S "MEMOIR ON THE WORKS MADE IN THE HIGHLANDS"

TO GEORGE WASHINGTON FROM BRIGADIER GENERAL DUPORTAIL, 13 SEPTEMBER 1778

Memoir on the works made in the Highlands

White Plains 13th [September] 1778

The works, which are in hand at West Point and some inconsiderable ones, which it is necessary to add to them, will, with the help of the chain, perfectly fulfil the object which is proposed, that of hindering the enemy's remounting the North River.

Fort Putnam, which is, as it were, the key of all the others may be rendered almost impregnable. There is indeed a height, which commands it, but besides that this height may be taken possession of with a redoubt, it would be very difficult for an enemy, even when master of it to bring heavy cannon there. Besides it would be too far to make a breach. This fort has nothing to fear, but a bombardment, or escalade. with respect to a bombardment, the mean to render it ineffectual is to have bomb-broofs sufficient for three fourths of the Garrison, magazines hospital &c.—I am told Col: Koshiusko proposes, at this time to begin one; but which will not suit more than 70 or 80 men. This is far from sufficient. There must be another, the place and size of which, I have pointed out to the Captain who conducts the works. It will contain about two hundred men—with respect to the escalade, to prevent its success, the side of the fort which looks towards the river and is the most accessible, as well as that which looks towards Fort Arnold, must

be raised a great deal more than it is, and besides the palisades and chevaux de frises, abaties must be made in front. The roof of the great bomb-proof, which I propose, may be made use of to collect the rain and conduct it into the Cistern. This will always be a small resource.

Fort Willis does not appear to me well traced. It ought to be put entirely upon the declivity which looks towards the River, the face next Fort Putnam following the ridge of the eminence. In this manner, it would have overlooked equally all the valley between Fort Putnam and itself and all its interior would have been under cover of Fort Putnam; the face next the river would have extended to the very border of the declivity; and the work in every respect would have been a great deal stronger. In its present position it is too large its parapet makes too great a circuit. It will be best perhaps to rebuild this fort altogether; if this is not done, to remedy its inconveniences, the face opposite Fort Putnam must be raised not so as to cover the interior, which I am told Col. Kosciousko proposes, because it must be prodigiously elevated to answer that purpose—but instead of this, I would prolong the eminence which is in the middle of the work, and improve it into a Traverse, to extend the whole length of the work—I would then reject a third of the work on the South, as altogether useless—the bomb-proof will be backed by the traverse abovementioned.

I should have prefered to the Redans which are in front of the Redout Willis, on the south side, and which require for their defence four or five hundred man—a small inclosed work to secure the possession of the eminence and protect the batteries in front—but for the present, matters may be left as they are.

Fort Arnold appears to me to be pretty well situated and traced—but if the intention of Col. Kosciousko is to leave the sides next the River at the present height—(as appears to be the case) I cannot approve it—they are exceedingly liable to an escalade—it is proper to elevate them, and even to make a small covert way without, having good palisades in front, to secure the body of the place against all Surprise.

The Scantlin[g] for the Bomb proofs appears to me too feeble—the top will be almost flat—What is made of earth ought to have been of Masonry or bricks—however I forbear enlarging upon this subject, because time will hardly admit of a Remedy—the Stuff being Squared, and ready to be put together—observing only that the work should be sunk more in order to furnish a greater thickness of earth for the roof.

There is below Fort Putnam, a battery nearly round, which is extremely well placed for battering the Vessels which should approach the Chain—but its situation likewise exposes it to the fire of the Ships—at least as it is much advanced, the fire of the tops would injure the Gunners, and the more, as by the form of the battery they are collected within a very small Space—it appears to me advisable, to raise the parapet of this battery several feet—and to cover the embrasures from the top of one Merlon to another—so as not to interfere with the working of the Guns—altho it is equally necessary to secure the Chain on the left-hand Shore of the River—it seems to have been little attended to—there is no enclosed work on this side to hinder the enemy from debarking a sufficient number of men to get possession of the ground and cut the Chain. there is only a battery which may answer some good ends—but cannot prevent the enemy from doing as abovementioned—With three small works we shall render this point perfectly secure—the *first* to be place(d) where the block house of fort independence stood—it is sufficient for it to contain abou(t) sixty men—its end is to afford an immedia(te) defence to the Chain and its extremity—against a hardy enterprise, which a few men are engaged sometimes to undertake by dint of money or other recompences—the parapets ought to be of wood in order to take less room—and sufficiently elevated to cover the area.

the *second* Redout should be placed on a steep eminence which commands all the other rising grounds in the island.

the *third* on an eminence in the rear of the newly constructed battery—these two Redouts ought to be made for 150 men or 200 at most.

There was a battery, the remains of which are still in existence, (below Fort Independence)—it was perfectly well placed for battering the enemys Ships—it ought to be rebuilt, with a strong parapet of earth—and as this battery is low and exceedingly exposed to a plunging fire from the Tops of Ships—the parapets must be high, and terminated by a Roof of thick plank for the protection of the Canoniers—this battery as well as that which is just finished, will be interlocked by the three Redouts—and be in perfect safety—With these works we shall be completely masters of the Island.

As to the Chain itself, I would not have it floating on the Surface of the Water—which exposes it to be laid hold of by machines prepared for the purpose, on board the Vessels that may approach—but the greatest danger arising from this would be the breaking it by Cannon Shot—when a vast number comes to be fired on both sides in a contest between the enemys Ships and the batteries—I should think it more eligible therefore to suspend

the Chain three feet below the surface of the water—because as the greatest number of the Shots bound when they strike the water—there would be so many ineffectual with respect to it—besides, the matter would be very easily executed—by placing the floats above instead of below the Chain—and having another chain made fast at each end to the great one, and carried above the floats—by these means the great Chain may be supported at the depth which is judge(d) suitable—if a shot should carry away the Chain, by which the great one is made fast to the floats—the whole mischief that would result, would be, that the Chain in that place would douse a few feet more.

There are so many accidents by which an iron Chain may be broken, that it would be prudent to have a stout cable in reserve to supply its place in part, for a time.

Every thing that I have explained being finished—1800 men will render us completely masters of the River, and put us out of reach of the enemys enterprises—At least, the Resistance that may be made will allow ample time for the arrival of Succours, however remote the Army may be.

The following is the Distribution of these troops as nearly as can be judged—

In Fort [Arnold]	700
Willis Redout	200
Fort Putnam	400
Small Work above Fort Putnam	100
For the Works on the Island or Peninsula, on the left-hand Shore	400
	1800

At the present moment, if we except the batteries against Ships—the works are not in a state of defence—but a little time would be sufficient for completing fort Putnam, which is the most important—the Redouts on the island on the left-hand Shore—are likewise objects of the first attention.

His Excellency had ordered me to give him an account of the expences arising from all these works to the present time—it is not in my power to present any thing on this subject, not having seen Col. Kosciousko, who alone is possessed of these facts—I am going to write to him for this purpose.

I was likewise at New Windsor—The River appears to me very wide in this part for a defence of Chevaux de frise—besides the Chevaux de frise themselves appear to me to be very weak—and I can with difficulty

persuade myself, that a Ship would be much embarrassed by them—And indeed until West point is completed—I do not think we should occupy ourselves about New Windsor—I shall therefore forbear adding any thing farther relative to it.

Duportail.

For an annotated version of this letter, see "To George Washington from Brigadier General Duportail, 13 September 1778," Founders Online, https://founders.archives.gov/documents/Washington/03-16-02-0637.

APPENDIX E

DUPORTAIL'S "STUDY FOR THE DEFENSE OF WEST POINT"

20 August 1779[1]

If one examines the terrain above Fort Clinton [Arnold], one will see the heights which . . . are occupied rather extensively in two directions. On one side Putnam, Rockhill [Redoubt #4] and Redoubt [Sherburne] . . . ; from the other side Webbs, Willys, but also one sees a mountain which begins at Rockhill and which extends behind Putnam, Webbs, and Willys and which perfectly dominates these works, so that this array of fortifications which prescribes a great deal at first look, is reduced to little for effect, because the enemy, supposedly in possession of this mountain can establish at the same time cannon and mortar batteries against Rockhill . . . , Webbs and Willys . . . these last two works are not even tenable for very long under these conditions, being too prolonged. It will be necessary then to abandon them early and consequently the enemy would advance along the slope [where Wyllys and Webb are located] . . . and can set up his batteries against Clinton [Arnold] without even having taken Fort Putnam. It is evident then that the real point of attack against West Point is from the mountain . . . in question, since one [also] comes all of a sudden from it to the attack on Putnam instead of making successive attacks on all the Forts. . . . Now with respect to the difficulty to the enemy to get to this place (the mountain), if there were no works, there would be none. This mountain is most accessible from any

1. The original manuscript of Duportail's report, 20 August 1779, is in the French Archives Historiques in the Depot de la Guerre under the title *Memoire sur la defense de West Point*. A reproduction with a translation by Lieutenant Colonel Donald T. Dunne is in the USMA Library's Revolutionary War Collection. Note: The map that accompanied Duportail's report is not available. In the report he used letters and numbers to address batteries, redoubts, terrain features, etc. Careful examination of the report identifies all those locations beyond doubt. Hence, there is considerable use of brackets to clarify Duportail's comments.

side and its slope from the west is such that cannon could easily be brought there, so that supposing the enemy, disembarked opposite Robinson's, establishes himself on the mountain, sets up his batteries and fires his first cannon shot against Putnam, cannot require more than four or five days (since the batteries can be constructed even while the cannon are being brought up) it would be indispensable, then, to occupy this mountain; that is what we have done by the two works (Redoubts #1 and #2) . . . the advantages of which are: firstly, the batteries overlooking [the river] . . . I don't think it any longer possible for the enemy to select it as a . . . debarkation point; it is true that from there to the first battery . . . is more than a mile; but one must consider that it is not a question of firing on a work, on a small space, but on a multitude of boats, ships, horses, carriages, men; everything conceivable assembled in one spot where all the apparatus of an army['s] munitions of all types being unloaded. . . . We can conclude that he will prefer to disembark at the other place [farther south]. . . . This is already an advantage, to move further away the enemy's disembarkation point; this stretches still more his communications, gives greater facility to attacking him, renders more difficult the transportation of [his] artillery and munitions.

Let us suppose now that the enemy established [himself] . . . on the mountain [Bare Rock Mountain south of Highlands Brook] . . . opposite our redoubts, what decision will he make then? Will this be to advance on our left [along the river] under the fires of Batteries [at Redoubt #1] . . . and those that can be set up [to block the attack] . . . on the redoubt Willys, then on Webbs, from there to Putnam or Clinton [Arnold]? The absurdity of such a plan is too palpable (evident) for there to be a need to show its effect. The enemy can do only one of these two things. He can advance by the mountain [to the west of Stony Lonesome Brook] . . . , attack redoubt [#3] . . . in order to march against Rockhill . . . and from Rockhill against Putnam; but it must be noticed that redoubt [#3] . . . can only be attacked in strength because it is perhaps impossible for the enemy to bring up large cannon against it as long as he does not control Redoubts [#1 and #2] . . . [and] after having taken redoubt [#3] . . . by strong attack he must likewise take Rockhill and then Putnam for . . . the enemy cannot find (neither at the Redoubt [#3] . . . nor at Rockhill) cannon suitable for firing on the works. [Cannon seized at either Redoubt #3 or at #4 would not be of large enough caliber to seriously threaten Fort Putnam.]

The other route that the enemy can take to get to Putnam (which is still the central point which must be taken) is by the mountain [east of Stony

Lonesome Brook]. . . . He must then capture Redoubts [#1 and #2]. . . . If he captures only Redoubt [#1] . . . he can easily establish his troops on the mountain, but he could only bring his cannon up there with an extraordinary, laborious and long toil, by the eastern slope; if he captures only Redoubt [#2] . . . he must [bring] his cannon along the road [running northwest through Highland Brook valley]. . . . which can be regarded as almost impracticable, because it cannot be supposed in advance that he will bring his cannon through the valley under fire from Redoubts [#1] . . . & [#2] . . . and of their batteries. As to the difficulty itself of capturing the works, one can only set up batteries against them on the slope of the mountain opposite [Bare Rock] at more than 500 Toises [Approximately 3,000 feet], too great a distance to destroy them with cannon. There will be, moreover, in each of these redoubts an underground bombproof shelter to protect the garrison. The enemy must then always come to an attack in force and they are in such condition that the undertaking would certainly be very dangerous.

It seems to me that we have assured the defense of this mountain, as much as it is necessary to do it, in view of the number of troops the enemy can sacrifice to the attack of West Point.

APPENDIX F

GOUVION'S "A REPORT OF THE STATE OF THE WORKS AT WEST POINT"

West Side of the River

the Redoubt Number 1 and its two Batteries have been finished this Campaign.

the redoubt Number 2 is complete and its battery will be finished in three weeks time.

the Redoubt Number 3 is finished and wants two batteries, one of them is already begun but can't be complete this fall for want of hands.

the Redoubt Number 4 is finished and wants a battery.

each of those four above mentioned works ought to have a bombproof for its garrison, but the impossibility of keeping a Sufficient number of teams on the point will hinder from making them

fort wyllys is complete its bombproof and Battery shall be complete before the winter.

fort Putnam wants one bombproof more for an hundred and fifty men of its garrison, with a bombproof magazine for a part of the provisions, the third part of its walls are to be rebuilt with lime, being made with dry stones only, which are of short duration.

the alterations made in fort Webb are finished.

fort clinton is complete, its wants a stone powder magazine, the bombproof being not sufficient for the garrison, is to have an addition for an hundred and eighty men, four of the water Batteries are complete, there is one Begun for the defense of the chain, it is of great importance, but the strength of the garrison will not admit of having it finished before the winter.

Shelburns [Sherburne's] redoubt was built in fascines in beginning the works, and now falls down, but it is of so little consequence that it is not to be repaired—

there is one redoubt more proposed to be erected between number 3 and number 4 to deffend the road comming from the furnace

---

East Side of the River

the South [Middle] Redoubt is perfectly finished, its batteries and bomb-proof for the provisions and garrison are in the Best order

the North Redoubt is in the same condition with the South [Middle] Redoubt.

Constitution Island

the Redoubts Number 5 and 6 are finished they want each of them one bombproof.

the parapet of the Redoubt Number 7 is to be rised of one foot and half, and the fraizes to be placed, there is a bombproof wanting in that work

one of the water Batteries is finished, there is one begun for the deffense of the chain, and there is to be erected for the same object and to hinder the ennemy from getting in the upper part of the River by the way of the creek with small armed boats—

West point November 2^{d}, 1780

J. Gouvion
L^{t}. C^{ol}. of Eng$_{r}$

George Washington Papers, Series 4, General Correspondence: Jean B. Gouvion, November 2, 1780, West Point, New York, Works. November 2, 1780. Manuscript/Mixed Material. https://www.loc.gov/item/mgw426035/.

APPENDIX G

VILLEFRANCHE'S REPORT 15 APRIL 1782

West Point 15 April 1782.

A Report of the necessary work to be done in order to Complete the several redoubts and batteries at this post.

fort Clinton

The fascines which Constitute that work are so very dry that the least sparks of fire is sufficient to set the fort in a blaze; I think therefore that those old fascines ought to be taken away entirely and timber put in the place of them, or good masonry.

The Counterscarp must also be securd, and the Coverd way Continued all round the fort, and ought to be palissadoet.

a new Bomb proof should be built as large as the Fire plain will admit.

the half bastion of the old fort which faces the river ought to be finished and a battery established upon it, to Command the plain, and defend the river. this half bastion to be joind to the new fort by a branche.

the old fort ought to be demolished quite to the powder magazine.

A barbet Battery is to be Constructed under the protection of the fort for the defence of the chain.

fort putnam

half of the fort which is built with dry stone wall aught to be rebuilt in good Masonry. a new Magazine for powder, and barracks sufficient to quarter the troops of the garrison should be Built; the Cistern must be finished.

fort webb.

is abandond.

fort willys

the bomb proof should be Coverd with two feet of earth, the inside of the parapet is to be raised a little, so as to make it four feet four inches higher than the Banquet.

the south part of the wall must be rebuilt. the battery must be joind to the fort by two branches of palissadoes.

fort No. 1

there must be a bomb proof, a Magazine for powder, one for provisions, and Barracks for the Garrison. the two batteries are Compleate.

fort No. 2

there must be a bomb proof, a Magazine for powder, one for provisions, and Barracks for the garrison: three quarters of the Battery only is don, therefore ought to be finished.

fort No. 3

there ought to be a bomb proof, a Magazine for powder, one for provisions, and Barraks for the Garrison.

the battery newly began, must be finished, and an other established to defend the Valley towards the north.

fort No. 4

the new breast work, a quarter part of which is don must be finished, a powder Magazine one for provisions, and barraks for the garrison, must be built;

there ought also a battery to be Constructed north of the fort.

there must be a Block house Built between No. 3 and 4.

Constitution Island

fort No. 5. and 6.

palissadoes are to be erected upon the parapets, bomb proofs Magazines for powder, and provisions, and Barracks for the garrisons, should be Constructed, and Batteries erected under the protection of the forts, for the defence of the back part of the island, and abatis put all round the forts.

fort No. 7.

A bomb proof, a Magazine for powder, one for provisions, and Barracks for the Garison are to be Built, and a battery is to be erected under the protection of the fort, to defend the Back part of the island; abatis are to be put alround the fort.

There is a battery begun for the defence of the chain which ought to be finished.

On the east side of the river, the north and south redoubt with their Batteries are Complited.

A report of the necessary works to be done, to put this post in an state of defence, together with an estimate of the materials requisite.

I don't think the embrasures in this fort, in there present situation, will beare the exercise of Cannon without the greatest danger of seting the whole on fire; it will therefore be necessary to pull down the fascines with which the faces of the embrasures are Constructed and to built them with timber. the necessary articles to make that reparation are the following. 24. pieces of timber 10 feet in lenght and 8 by 8.

12. pieces of Do 13 feet in lenght and 8 by 8.

12. pieces of Do 18 feet in lenght and 8 by 8.

108. four inch plank.

8 Carpenters and 16 fatigue men will accomplish it in 15 days.

as the Bomb proof in fort Clinton is half filled up with powder, the fascines with which it is surrounded should be replaced by a dry stone wall, the requisite assistance to accomplish it in 15 days are three teams 8 Masons, six miners 60 fatigue men, and 30 hand barrows.

the barbet Battery should also be Constructed for the defence of the chain, that work will require.

4. single teams.

12 Masons.

8. miners.

100 fatigue men.

20 wheel barrows.

30 hand barrows.

4 hand Carts.

will be sufficient to Compleate the breast work in 15 days.

the timber necessary for the platforme, and the top of the parapet is

450. feet of timber 10. by 10.

26. sleepers, 20 feet in length and 9 or10 inches

110. three inch plank.

8. Carpenters.

16. fatigue men.

will do it in 13 days.

the Courtin which Covers the powder Magazine is not defended, and is a shelter for the enemy to Come to the foot of the magazine; I think it would be proper to profit of the bastion which flanks that Courtin, and to make a redoubt with it; the gorge of which should be left open. a block house Could be erected in the tereplain of the said redoubt, which would answer both to

augment the defence, and Barrack the troops. a powder Magazine Could also be Constructed under the block house; if your excellency thinks proper to have that redoubt erected, I shall give an estimate of the materials.

fort putnam

the powder Magazine is not secure against the shells, Consequently a wall should be built allround it.

that part of the fort which faces the river is very easy to be stormd, a little breast work erected on the top of the parapet would add greatly to its defence, the assistance requisite to Complete these two works in 15 days are.

12. Masons.
8. Miners.
150. fatigue men.
40. forty hand barrows.

fort willys

the bomb proof should be Coverd with two feet of earth; the inside of the parapet raised a little. the south part of the wall must be rebuilt. the articles requisite to Complete there different repairs in 15 days are.

8. Masons.
3. Carpentors.
6. miners.
60. fatigue men.
20. hand Barrows.

fort No. 1-2-3. and 4.

a powder Magazines is very essentials in each of those forts. the articles requisite to complete them in 15 days are

6. double teams.
32. Carpenters with good sergants.
24. fatigue men.
200. 1 1/2 boards.

the abatis and the Battery at number 2 require some repair. one Mason, and 20 fatigue men accomplish it in 15 days.

the Battery which is merly begun at No. 3. should be erected, that battery is to be raised very high so as to Cover the fort, if your excellency thinks fit to have it done, I shal give an estimate of materials requisite.

the pickets and abatis want some repairs at No. 4. 2 Carpenters and 20 fatigue men will do it in 15 days.

Constitution Island
forts No. 5-6. and 7.

a powder magazine should be made in eache of those forts. the articles wanted to Complite them in 15 days are.

27. pieces of timber 19 feet long, 12. by 10.
36 pieces of Do 20 feet long—12 by 12.
150. one inch and half boards.
20. Carpenters.
20. fatigue men, and a pair of small wheels.

banquetts are to be erected in the forts No. 6. and 7. and in part of No. 5. the articles to Complete them in 15 days are.

70. pieces of timber, 16 feet long, and 4 by 4.
47. pieces of Do 14 feet long and 4 by 6.
200. one inch and half boards.
16. Carpenters.
10. fatigue men.

palissadoes are to be erected, on the top of the parapet at No. 5 and 6.
1500 palissadoes 8 feet long and 6 inches through.
20 Carpenters and 12 fatigue men, will accomplish it in 15 days.

the battery which is begun on the island for the defence of the chain, ought to be finished.
12. masons.
80 fatigue men, with forty hand barrows will Complete the breast work in 15 days.
550. feet of timber 10 by 10.
140. three inch planks.
34. sleepers, 20 feet long and 9 inches through.
20. Carpenters, and 40 fatigue men will Complete the parapet, and the platforme in 15 days.

total of the articles to be fournished by the quarter master general.

pieces of timber	feet in length	depth
24	10	8 by 8
12	13	8 by 8
12	18	8 by 8
27	19	10 by 12
36	20	12 by 12
76	16	4 by 4
47	14	4 by 6

108 four inch oak planks.
250. three inch oak planks.
390. one inch and half Boards.
60. sleepers 20 feet long, 9 or 10 inches through.
1500 palissadoes, 8 feet long and 6 inch deameter
950. feet of timber 10 by 10.
2 single and 4 double teams for two months.
3 pair of wheels.
4 hand Carts.
30 wheel Barrows.
100. hand Barrows.
120. weight of 20d nails.
2000. spikes, 6 inches long.
a Complete assortment of tools for 36 Carpenters.
14. masons—8 miners.
50lb of english steel for drills.

the number of fatigue men and artificers required to Complete the above mentiond works in two months time are.

150 fatigue men.
32. good Carpenters with 4 good sergeants.
14 Masons.
8 Miners.
6. Blacksmiths.

Villefranche
Majr Commanding Engineer.

"To George Washington from Jean-Louis-Ambroise, chevalier de Villefranche de Genton, 15 April 1782," Founders Online, National Archives, https://founders.archives.gov/documents/Washington/99-01-02-08168.

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ACKNOWLEDGMENTS

Since the Department of History first printed the Miller, Lockey, and Visconti manuscript, "Highland Fortress," in 1979, instructors in the Department of History have used it as a resource to help them explain to cadets the significance of the fortifications of West Point to the winning of the American Revolution. I would like to acknowledge my debt of gratitude for the contributions of Joseph Visconti, Donald V. Lockey, and Charles E. Miller, Jr., to the history of West Point that inspired me to build on their study for my sabbatical project with the goal of publishing it as a book. I would also like to thank my fellow instructors from 1988, Tom Veleker and Larry Ghormley, for their editing of the manuscript to assist instructors with the West Point Staff Ride in the History of the Military Art course. The historical, archaeological, and artistic work of the late John H. (Jack) Mead were integral to my understanding of Fortress West Point and Forts Clinton and Montgomery.

I could not have done this project without the approval and support of then Colonels Robert A. Doughty, Professor and Head, and Charles Ford Brower IV, Professor and Acting Head, of the Department of History, Brigadier General Fletcher M. Lamkin, Jr., Dean of the Academic Board, and Lieutenant General Howard D. Graves, Superintendent of the Military Academy. I want to thank the West Point Press, particularly its Director, Dr. Colonel Jordon E. Swain, Executive Editor Lieutenant Colonel Ronald Alcala, Managing Editor Dr. Lynn Messina, Digital Director Matthew Merrill, and the Editorial Board for agreeing to publish *Key of America*, seeing its relevance to the coming 250th Anniversary of the American Revolution, and for their support during the process. I would also like to thank Copyeditor Allison Shurtz and Proofreader Christopher Mari, both of whom greatly improved the manuscript's readability. Thanks likewise go to Compositor Patricia Wallenburg for her elegant design and responsiveness throughout the production process, while Indexer Lisa Sorenson's careful attention to detail made a valuable contribution to the book's content. I want to thank W. Barnabas (Barney) McHenry for his inspiration and support as I have tried to bring the American Revolution to life in the Hudson

River Valley. Suzanne Christoff, Susan Lintelmann, and Casey Madrick of the USMA Library Archives & Special Collections provided advice and critical images for the book. Site Manager Grant Miller and Assistant Supervisor Peter Cutul of the Fort Montgomery State Historic Site, Office of Parks, Recreation and Historic Preservation, provided images and comments on the chapters pertaining to the chapters about the Twin Forts. I want to acknowledge the assistance of Katie Kneisley of the Boyle County Public Library in obtaining key books by interlibrary loan and the Library's Memory Story Team of Maggie McAdams, Jon Nicolson, and Sam Huber for their insights on images and scanning. I want to thank Jeffrey Goldberg, Cartographer in the USMA Department of History, for his work on key maps. The following individuals also assisted me with images and permissions for the book: Eric S. Bartelt, U.S. Military Academy Public Affairs Specialist; Grace Bichler and Elisha Neely, Division of Rare and Manuscript Collections, Cornell University Library; Maxim Bouchard, Independence National Historical Park; Tasha Caswell, Connecticut Museum of Culture and History; Marlana L. Cook and David Reel, West Point Museum; Hannah Elder, Massachusetts Historical Society; Eleanor Gillers and Henry Felix Raine, The New York Historical; James Ito, The Museums, Washington and Lee University; Julianna Monjeau, Public Design Commission of the City of New York; Terese M. Murphy, William L. Clements Library, University of Michigan; Kevin Reymond, Friends of the American Revolution at West Point; Mr. Christian Sabharwal, Fraunces Tavern Museum; Nicole Schnee, Winterthur Museum, Garden & Library; Colonel Seanegan Sculley of the USMA Digital History Center; and Jane Wooley, Dry Stone Conservancy, Inc. Don Troiani graciously provided the image of the 6th Connecticut and 5th New York Continentals. Jane Künstler and Linda Swanson of Künstler Enterprises, Ltd. allowed West Point Press to use the late Mort Künstler's painting *Washington's Watch Chain* for the front cover. Robert McDonald helped me understand the key camps and sites in Putnam and Westchester counties. Col. (Ret.) John Robertson provided me with valuable documents resulting from his work on the orderly books of Continental regiments.

My colleagues Dr. Thom Wermuth, Chris Pryslopski, Andy Villani, and Jason Schaaf at the Hudson River Valley Institute encouraged me to pursue this project. Finally, I could never have sustained my efforts over these many years without the love and support of my wife, Lois, and my children, Kristin and Adam. As West Point is a part of their legacy, I hope that my son-in-law, Corbett Foster (West Point class of 1994), my daughter-in-law, Amandalin

Ryan, and grandchildren, Caden (West Point class of 2022), Jackson Foster, and Campbell Johnson, will be inspired to read this story of a place that has been a significant part of America's history for the last 250 years.

I acknowledge my indebtedness to each of these people, the institutions that they represent, and the others whose contributions and encouragement made this endeavor possible.

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ISBN 978-1-959631-23-1

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