OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3500 DEFENSE PENTAGON
WASHINGTON, DC 20301-3500

SUSTAINMENT

MEMORANDUM FOR FILE

FROM: Michelle Volkema, Deputy Federal Preservation Officer, ODASD(Env) MV

SUBJECT: Redaction of "Vietnam and the Home Front: Ground Combat Training, 1962–1975"

The following report, "Vietnam and the Home Front: Ground Combat Training, 1962-1975," was redacted on September 27, 2019, in accordance with 16 U.S.C. §§ 470aa–470mm, the Archaeological Resource Protection Act, pursuant to §470hh, "confidentiality of information concerning nature and location of archaeological resources." The redaction was performed by Ms. Courtney Williams, RPA, Staff Technical Specialist, Booz Allen Hamilton, as Cultural Resources Program support to OASD(S).

RECOMMENDATION: Affix this information memorandum as a cover sheet to the above-referenced report.

COORDINATION: None

Attachments: Redacted "Vietnam and the Home Front: Ground Combat Training, 1962–1975"

Prepared By: Courtney Williams, Booz Allen Hamilton, Support to OASD(S)/Env

ERDC/CERL TR-17-1

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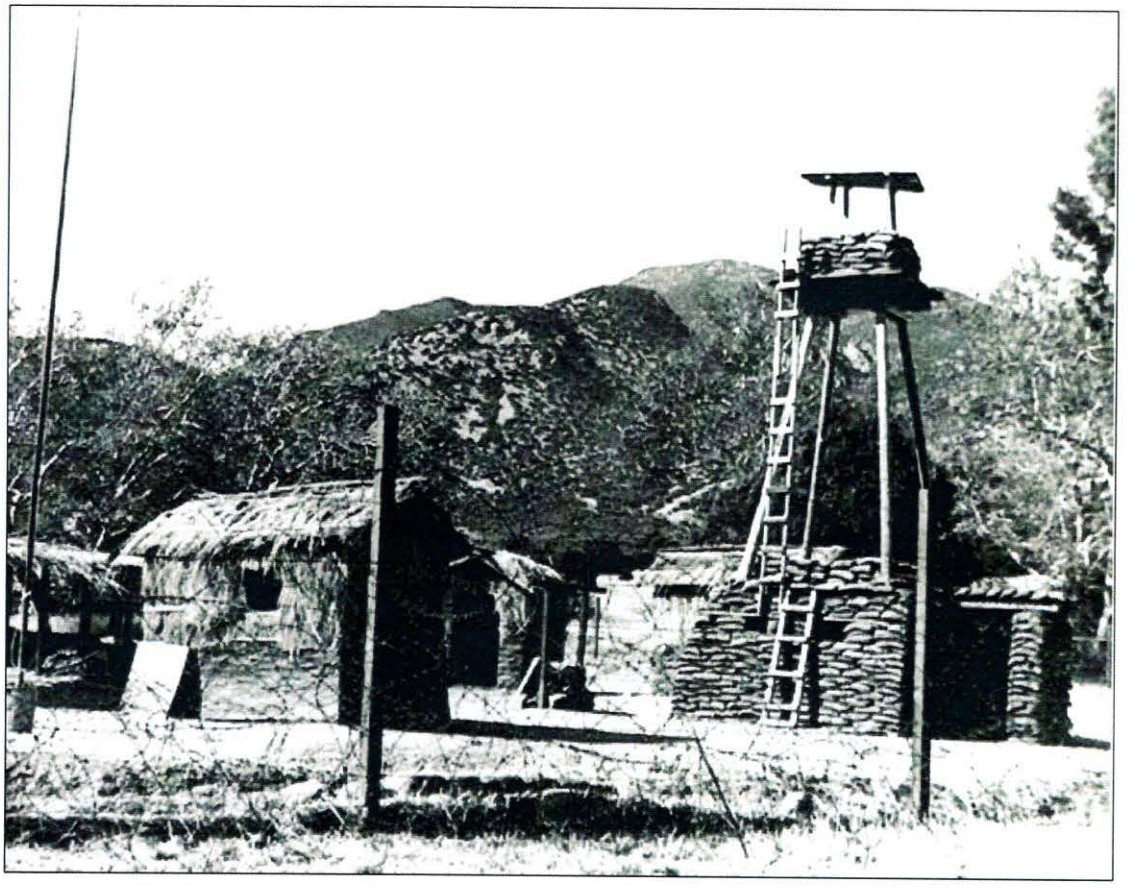
Department of Defense Legacy Resource Management Program

Vietnam and the Home Front: Ground Combat Training, 1962–1975

Ellen R. Hartman, Megan W. Tooker, Adam D. Smith, and
Susan I. Enscore

January 2017



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Cover Photo: A mock Vietnam training village used for a training site at Fort Huachuca in the 1960s. (Source: Fort Huachuca Museum).

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Vietnam and the Home Front: Ground Combat Training, 1962–1975

Ellen R. Hartman, Megan W. Tooker, Adam D. Smith, and Susan I. Enscore

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Final report

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Under Project 14-727, "Vietnam War-Era Ground Combat Training and Associated Facilities Historic Context Sub-Theme"

Abstract

The National Historic Preservation Act of 1966, as amended, requires federal agencies to inventory and evaluate their cultural resources as those resources near 50 years of age. Vietnam War-era buildings, structures, and sites in the United States are reaching the 50 years of age benchmark. This report focuses on resources built in the United States to support the Vietnam War (1962–1975) ground combat training efforts. This work supplements a previous report produced by ERDC-CERL in 2014, *Vietnam and the Home Front: How DoD Installations Adapted, 1962-1975,* that established the overarching historic context for Vietnam War-related construction on many U.S. installations. The previously published report provides the background and context for understanding the demand for construction to support operations in Vietnam. That report identified several Vietnam War-era thematic areas related to stateside construction as well as specific installations and resource types related to ground combat training activities to aid in evaluating the historic significance of related resources. This report expands on that information to address the role of ground combat training in preparing troops for fighting in Vietnam, and it can be used as a starting point for identifying and evaluating historic Vietnam War-related ground combat training resources.

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Preface

This study was conducted for and fully sponsored by the Legacy Resource Management Office under Project Number 14-727, "Vietnam War-Era Ground Combat Training and Associated Facilities" via Military Interdepartmental Purchase Request (MIPR) DSAM40430. The technical monitor for the project was provided by staff from the Legacy Resource Management Office.

The work was performed by the Land and Heritage Conservation Branch (CNC) of the Installations Division (CN), U.S. Army Engineer Research and Development Center, Construction Engineering Research Laboratory (ERDC-CERL). At the time of publication, Dr. Michael Hargrave was Chief, CEERD-CNC, and Ms. Michelle Hanson was Chief, CEERD-CN. The Deputy Director of ERDC-CERL was Dr. Kirankumar Topudurti, and the Director was Dr. Ilker Adiguzel.

COL Bryan S. Green was the Commander of ERDC, and Dr. Jeffery P. Holland was the Director.

Unit Conversion Factors

Multiply	By	To Obtain
acres	4,046.873	square meters
hectares	1.0 E+04	square meters
square feet	0.09290304	square meters
square inches	6.4516 E-04	square meters
square miles	2.589998 E+06	square meters
square yards	0.8361274	square meters
yards	0.9144	meters

Abbreviations

Term	Meaning
ACAV	Armored Cavalry Assault Vehicle
AFB	Air Force Base
AIT	Advanced Individual Training
AMTRAC	amphibious tractor
APC	armored personnel carrier
ARVN	Army of the Republic of Viet Nam
ATC	Army Training Center
AVLB	Armored Vehicle Launched Bridge
BARC	Barge, Amphibious Resupply, Cargo
BMT	Basic Military Training
CATCD or CAT Code	Category Code
CBRN	chemical, biological, radiological, and nuclear
CERL	Construction Engineering Research Laboratory
CIA	Central Intelligence Agency
COIN	Counter-insurgency
CONARC	Continental Army Command
CONUS	Continental United States
CRM	Cultural Resources Manager
DMR	Designated Marksman Rifle
DoD	Department of Defense
DPW	Directorate of Public Works
ERDC	Engineer Research and Development Center
FORSCOM	U.S. Army Forces Command
GPMG	general purpose machine gun
ITT	Individual Tactical Training
LARC	lighter amphibious resupply, cargo
LCM	landing craft, mechanized
LCVP	landing craft vehicle, personal
MACV	Military Assistance Command, Vietnam
MANPADS	Man Portable Air Defense System
MCRD	Marine Corps Recruit Depot
MIPR	Military Interdepartmental Purchase Request
MOS	Military Occupational Specialty
NARA	National Archives and Records Administration
NCO	Non-Commissioned Officer

Term	Meaning
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NVA	North Vietnamese Army
PBR	patrol boat, river
POW	prisoner of war
SAS	Special Air Service (Australia)
SEAL	Sea, Air, and Land Team
SERE	survival, evasion, resistance, and escape
SHPO	state historic preservation office
S&W	Smith & Wesson
TRADOC	U.S. Army Training and Doctrine Command
UIUC	University of Illinois at Urbana-Champaign
USAF	U.S. Air Force
VC	Viet Cong
WAC	Women's Army Corps
WWII	World War II

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1 Introduction

This report is a component of a larger series of documents on Vietnam War-era facilities, funded by the Department of Defense (DoD) Legacy Resource Management Program. The focus of this report is on the resources constructed to support ground combat training in the United States from 1962 through 1975. The information presented here contributes to the broader context of the Vietnam War and provides a framework for identifying and evaluating ground combat training resources on DoD installations. When identifying and evaluating ground combat training resources, this report should be supplemented with specific installation historic contexts, service branch histories, and other resources related to site-specific ground combat training.

1.1 Background

Because all services within the DoD must comply with federal laws, then military properties must be surveyed, documented, and managed according to the dictates of the National Historic Preservation Act (NHPA) of 1966, as amended. As such, many Vietnam War-era resources in the United States are turning 50 years old—the metric the NHPA sets forth at which time a resource should be evaluated for its historicity. To efficiently survey the many Vietnam War-era resources, a previous DoD Legacy Resource Management Program report, *Vietnam and the Home Front: How DoD Installations Adapted, 1962-1975*, was published by ERDC/CERL in 2014. It contains a broad overview of Vietnam-specific construction in the United States between 1962 and 1975.[1] The report identified Vietnam War-era property types that should be investigated further through more specific historic contexts that focus on those types. The property types identified in that report were ground training, air training, special warfare, schools, housing, medical facilities, and logistics facilities.

What the DoD constructed at U.S. installations for ground combat training prior to deployment to Vietnam has significance for the National Register

[1] Ellen R. Hartman, Susan I. Enscore, and Adam D. Smith. *Vietnam and the Home Front: How DoD Installations Adapted, 1962-1975,* ERDC/CERL TR-14-7, (Champaign, IL: ERDC/CERL with the Department of Defense Legacy Resource Management Program, December 2014).

of Historic Places (NRHP) at the national level. For all areas of significance identified for this particular Vietnam War-era property type, they would be significant under Criterion A and also have the potential for significance under Criterion C. For either criterion, the property must still retain its integrity from the period of significance, from 1962 through 1975. Properties constructed in the United States to support the Vietnam War-era ground combat training effort must still convey a sense of historic and architectural cohesiveness through their location, design, setting, materials, workmanship, feeling, and association.

1.2 Objective

The purpose of this report is to outline a historic context for Vietnam War-era ground combat training properties. Research on ground combat training establishes what training activities were conducted during the war as well as provides an in-theater context and typology of the Vietnam War from 1962 through 1975. As such, ground combat operations conducted in Vietnam are explored and connections are made between those operations and how training in the United States was adapted to meet the demands of the ever-changing battlefield. Nevertheless, this report does not entertain the details of Vietnam War combat through important battles and engagements, but provides a context of the war that supports developing military facilities in the United States to meet the unique demands of the war.

This report supplements the broad overview of the previous report by focusing on ground combat training facilities built in the United States to support the Vietnam War effort and provides a framework for identifying and evaluating ground combat training facilities, including their original uses, potential modifications over the last 50 years, and current general conditions. The following information is be used to supplement specific military installation historic contexts to identify, evaluate, and draw conclusions regarding the historic significance about specific ground combat training resources. Nevertheless, the information presented here is representative of ground combat training facilities, not exhaustive.

1.3 Approach

1.3.1 Project funding

Under a Military Interdepartmental Purchase Request (MIPR; DSAM40430), the Engineer Research and Development Center-

Construction Engineering Research Laboratory (ERDC-CERL) was retained by the Legacy Resource Management Program to complete a historic context for ground combat training facilities constructed in the United States during the Vietnam War years from 1962 through 1975.

1.3.2 Previous reports

While there are thousands of books, journal articles, and studies on what the United States did in Vietnam, very little has been written regarding how the DoD reacted to the conflict in terms of recruit training at its own installations in the United States. No previous reports or studies were found by other authors that discuss the construction programs in the United States related to Vietnam War-era ground combat training for the DoD during the period of significance from 1962 through 1975. In 2014, ERDC-CERL produced an overview history of Continental United States (CONUS) construction in support of the Vietnam War, *Vietnam and the Home Front: How DoD Installations Adapted, 1962-1975* (ERDC/CERL TR-14-7).

1.3.3 Research design

ERDC-CERL researchers developed a preliminary list of research questions that shaped initial investigations. The researchers developed these questions based on previous experience with similar historic contexts, and the information collected in production of the 2014 overview report. The primary focus of the research was to determine how the DoD's architectural legacy, resulting from personnel's ground combat training for the Vietnam War during the years of 1962 through 1975, impacted DoD installations across the United States. Another focus was to develop how NRHP eligibility criteria may be applied to the properties constructed during that time span. Research questions included the following: What role did each military service play in preparing personnel for ground combat during the Vietnam War era? What types of training did the recruits receive? What types of properties were necessary for this training? Which service designed and constructed the majority of the properties utilized for ground combat training? What was left of these facilities?

A historic context was created that provides information on the types of training facilities required to instruct recruits in ground combat and prepare them for deployment in Vietnam. Initial research identified the installations most likely to have had ground combat training facilities and

provided a basis for fieldwork locations. ERDC-CERL personnel visited four installations to gain a more complete understanding of the physical characteristics of the relevant property types and to determine the probable level of extant properties.

Literature review

Due to the lack of secondary sources and previous reports related to the DoD construction of ground combat training facilities during the period of significance, researchers initiated a literature review of books, archival repositories, and online resources related to the topic. The following places were visited, contacted, and/or searched:

- National Archives and Records Administration (NARA) in College Park, Maryland.
- University of Illinois at Urbana-Champaign (UIUC) Libraries
- ERDC-CERL Technical Library
- U.S. Army Heritage and Education Center at Carlisle Barracks, Carlisle, Pennsylvania
- U.S. Army Center of Military History at Collins Hall, Fort McNair, DC
- Vietnam Center and Archive at Texas Tech University, Lubbock, Texas
- Marine Corps History Office, Marine Corps Base Quantico, Virginia
- Archives and Special Collections Branch, Library of the Marine Corps, Marine Corps Base Quantico, Virginia
- Air Force Historical Research Agency, Maxwell Air Force Base, Alabama
- Naval History and Heritage Command (formerly Naval Historical Center), Washington Navy Yard, Washington, DC
- Individual military museums
- Individual military installations and bases
- General online searches

Sources

Once the literature review was completed, the researchers investigated primary and secondary sources to gather information about types of ground combat training conducted in the United States during the period under study, and what types of facilities were required by this training.

Primary sources

The main primary sources for discovering the history of what the DoD constructed for ground combat training on its installations in the United States during the period of significance were:

- DoD Annual Reports (digitized in the UIUC Library);
- Department of the Army Continental Army Command (CONARC) Annual Histories (U.S. Army Center of Military History at Fort McNair, DC);
- monographs related to the Army buildup for Vietnam (U.S. Army Center of Military History);
- oral interviews from Vietnam War veterans (Library of Congress);
- U.S. Congressional appropriation bills (digitized in the UIUC Library);
- photographs (National Archives in College Park, Maryland);
- Air Force Annual Reports (digitized at the Air Force Historical Studies Office in Washington, DC);
- Digitized items ranging from individual training certificates to interviews to government documents on training (The Vietnam Center and Archive at Texas Tech University in Lubbock, Texas).

Secondary sources

The researchers examined as many secondary sources as possible, including books on Vietnam War history, military history, and veterans' memoirs.

1.3.4 Site visits

Field investigations at four Army installations provided additional information regarding remaining physical resources. Researchers visited Fort Huachuca, Arizona (27 August 2014); Fort Polk, Louisiana (22–26 September 2014); Fort Gordon, Georgia (2 December 2014); and Fort Jackson, South Carolina (3 December 2014). Field investigations were also conducted at Marine Corps Base Camp Pendleton, California (20 October 2013). A site visit to Marine Corps Base Camp Lejeune, North Carolina, was scheduled, but it was called off due to range safety concerns and complete loss of the property types, and a site visit was called off to Marine Corps Base Quantico, Virginia, also due to complete loss of the property types.

Site visits were accompanied by the installation Cultural Resources Manager (CRM) and supplemented by additional installation Cultural Resources personnel.

1.4 Report organization

This report presents the historic context of Vietnam War-era ground combat training and its effects on the built environment of CONUS military installations. Chapter 1 introduces the project drivers and scope. Chapter 2 presents a summary of the Vietnam War and establishes the combat conditions that would eventually change the way ground combat training was conducted in the United States. Chapter 3 illustrates the overall situation of U.S. Army and U.S. Marine Corps ground combat training in the United States during the Vietnam War (1962–1975) and describes the types of resources that were constructed at U.S. installations in support of Vietnam War-era ground combat training. Chapter 4 provides an overview of how to evaluate remaining resources under the NHPA, including descriptions of criteria and integrity. Chapter 4 also contains conclusions drawn from the project, followed by the references used in this report. The report concludes with appendices that describe field survey results from selected sites around the United States.

1.5 Authors

This project was conducted by ERDC-CERL in Champaign, Illinois. The authors were Susan Enscore (Ph.D.), Project Manager with 24 years of experience in military history; Adam Smith (M. Arch), with 18 years of experience in military architectural history; Megan Tooker (M. Landscape Arch), with 18 years of experience in military landscape architectural history; and Ellen Hartman (M. Landscape Arch), with 6 years of experience in military landscape architectural history.

2 Brief History of the Vietnam War

The Vietnam War was a complicated geopolitical event, the entire scope of which cannot be covered in this report. This chapter outlines elements of the war as a way to contextualize the need to build ground combat training facilities in the United States. In Vietnam, the U.S. Army and U.S. Marine Corps conducted most of the ground combat. Consequently, ground combat training facilities were primarily constructed at Army and, to a lesser extent, at Marine Corps bases. While the Navy and Air Force provided some ground combat training, these military branches did not see widespread construction related to ground combat training and receive limited discussion in this report.

Although the United States had been financially and militarily involved in Vietnam since the early 1950s, it wasn't until early 1962 that the United States announced a formal program of economic and social aid to South Vietnam—with a simultaneous increase in military support. In February of that year, U.S. military strength in South Vietnam hovered around 4,000 personnel, the command of which was reorganized under the leadership of General Paul D. Harkins and formally named the U.S. Military Assistance Command, Vietnam, or MACV. In support of those changes, then Attorney General Robert F. Kennedy assured the public that U.S. troops would remain in Vietnam until the Viet Cong were defeated.[2] Military planners wasted no time in underscoring Kennedy's promise and within two months, U.S. military strength in South Vietnam had climbed to 5,400 personnel. Throughout the rest of 1962, optimism pervaded the dialog coming from South Vietnam with Secretary of Defense Robert S. McNamara conducting an inspection tour and declaring that U.S. aid would level off and that military forces would most likely not be increased. Months later, McNamara reiterated that U.S. military aid was paying off, along with the training U.S. forces were providing to the South Vietnamese military. Even with the positive news, the year ended with nearly a doubling of U.S. military personnel in South Vietnam, with the total eventually reaching 11,300 by December 1962.[3]

[2] Lawrence M. Connell, *Vietnam Chronology 1940–1973* (No publisher, November 1974), 29.

[3] ibid., 33.

The primary mission of the U.S. military in Vietnam was to train the South Vietnamese soldiers and protect villages but gradually, U.S. troops found themselves involved in border surveillance, control measures, and guerilla incursions. The military personnel stationed in South Vietnam were products of the geopolitical lull after World War II (WWII). Although military technological advances were ensuring the United States was a global superpower, the troops deployed to South Vietnam were trained according to standards established for WWII combat—a situation that assumed enemies would be engaged at moderately close range on terrain that was relatively flat, providing mostly unobstructed sight lines.

President John F. Kennedy supported the U.S. commitment in South Vietnam, but was reluctant to engage in a full-scale war. Throughout 1962 and 1963, the South Vietnamese government was spinning out of control. The Prime Minister, Ngo Dinh Diem, was refusing to cooperate with American demands for open elections and had lost the support of the South Vietnamese. Realizing the government's instability would impede U.S. military operations, Kennedy approved a plan to have the Central Intelligence Agency (CIA) overthrow Diem's South Vietnamese government. The presidentially authorized overthrow of Diem coincided with an actual coup which left Diem and his brother dead. The unfortunate result of the overthrow was increased chaos and instability throughout the South Vietnamese government, with five separate administrations being established and disbanded between November 1963 and June 1965. Unsurprisingly, during that time the Viet Cong capitalized on the disorganization, seeing it as an opportunity to overthrow the South Vietnamese government, as well as an opportunity to attract substantial support in South Vietnam of troops and supplies.

2.1 President Johnson's escalation, 1963–1969

After President Kennedy was assassinated in Dallas, Texas, on 22 November 1963, the former vice-president and now President Lyndon B. Johnson hesitated to expand U.S. involvement in Vietnam. In April 1963, U.S. military personnel in Vietnam numbered 12,000.[4] By late 1963, the United States had been economically and militarily involved in Vietnam fighting the Viet Cong and Viet Minh, creating a situation that President Johnson was reluctant to abandon. Fearing a loss against the perceived Communist

[4] Connell, *Vietnam Chronology 1940-1973*, 34.

aggression, President Johnson gradually directed more military aid to South Vietnam. By December 1964, military personnel in Vietnam numbered 23,300, and President Johnson's fear of appearing weak was entwined with his efforts to halt the spread of Communism.[5]

Military leadership responded to increased commitment to the conflict in Vietnam by expanding personnel strength while developing equipment and technology to meet the demands of fighting a ground war in Southeast Asia. Then on 2 August 1964, three North Vietnamese patrol boats opened fired on the U.S. destroyer USS *Maddox* in the Gulf of Tonkin. The resulting conflict became known as the "Gulf of Tonkin Incident" and served as a turning point for U.S. involvement in Vietnam. Although aspects of the event are debated as to whether they happened, President Johnson used the attack as justification for escalation. Retaliatory air strikes were ordered by the President to destroy North Vietnamese military bases and critical infrastructure. The air strikes proved effective and five days later, the U.S. Congress passed the Gulf of Tonkin Resolution. The resolution afforded President Johnson broad authority and "all necessary measures" to defend the United States and allied forces from further North Vietnamese attacks.[6] The conflict in Vietnam became a priority for President Johnson after his reelection in November 1964.

President Johnson and his advisors initiated a forceful military response by removing all restrictions on U.S. military actions. Now, the United States could actively engage in combat with the North Vietnamese without the limitations of merely training or advising the South Vietnamese military. In the spring of 1965, President Johnson redoubled the number of personnel in Vietnam, with the totals jumping from 27,000 in March to 46,500 in May. During that influx, the first combat troops from the Army and Marine Corps were deployed to Saigon and Da Nang. Throughout the summer of 1965, the U.S. military presence grew rapidly and by August, the United States launched its first major ground offensive, shifting the U.S. military strategy from defensive. On 14 October of that year, the DoD called for a military draft of 45,224 men by December, the largest call since the Korean War.[7] The U.S. Marine Corps worked with the South Vietnamese Army in an airmobile and amphibious assault on the Viet Cong

[5] Connell, *Vietnam Chronology 1940-1973*, 50.

[6] "Gulf of Tonkin Resolution," Public Law 88-408 (Washington, DC: 88th U.S. Congress, August 7, 1964).

[7] Connell, *Vietnam Chronology 1940-1973*, 59.

near Chu Lai. By the end of 1965, there were 175,000 U.S. military personnel in Vietnam, which included major U.S. Army divisions and units such as the 1st Cavalry Division, 1st Brigade, 101st Airborne Division, and the 1st Infantry Division, along with the U.S. Marine Corps Expeditionary Force. Large deployments continued throughout the late 1960s, ultimately increasing troop numbers to over 500,000.

President Johnson and his military advisors, including U.S. Army General William C. Westmoreland, developed a new operational plan for Vietnam. The plan was a departure from the previously held idea that the government of South Vietnam should be responsible for winning the war against the guerrillas. General Westmoreland was so confident that the U.S. military could defeat the North Vietnamese Army (NVA) and Viet Cong, he predicted a victory by the end of 1967. More troops were needed to meet the ever-growing ranks of the NVA and Viet Cong, locking the United States into a cycle of escalation. To meet personnel requirements, American soldiers deployed to Vietnam on one-year tours of duty. The high refresh rates meant that units were deprived of experienced leaders. As one observer noted "we were not in Vietnam for 10 years, but for one year 10 times."[8] The result was shortened training programs.

The United States was now committed to defeating the North Vietnamese through direct combat. Consequently, U.S. military aircraft flew almost 300,000 sorties, while ground forces conducted more than 550 battalion-size or larger operations and participated in more than 160 joint operations with allies. In particular, Marine units were conducting several hundred small unit actions during each 24-hour period to find and isolate the Viet Cong. By the end of 1967, there were nearly 490,000 U.S. troops in Vietnam including more than 260,000 Marines.

2.2 Khe Sanh and the Tet Offensive

In late 1967 and early 1968, the United States engaged in two major battles--Khe Sanh and the Tet Offensive. The battle at Khe Sanh occurred at the Khe Sanh Combat Base, a garrison of 6,000 Marines and South Vietnamese Rangers. By early 1968, the base was completely cut off by the NVA and Viet Cong, and was under constant attack for over five months.

[8] David T. Courtwright, *Sky as Frontier: Adventure, Aviation, and Empire.* (College Station, Texas: Texas A&M University Press, 2005).

Thousands died until an overland campaign to rescue the Marine base eventually broke through the NVA in March 1968, supported by aerial bombing by the U.S. Air Force that dropped over a 100,000 tons of bombs. The Tet Offensive consisted of simultaneous attacks on South Vietnamese cities and military installations by the NVA and Viet Cong in late January 1968. After heavy fighting, the U.S. and allied forces regained control of many sites. The Tet Offensive would be the largest battle of the war with both battles polarizing a moment when the American public's perception of the war shifted from support to opposition. Meanwhile, the President and his advisors continued authorizing increases in troop levels and providing equipment and training to the South Vietnamese military while the war raged on.

2.3 Vietnamization, 1969–1972

In 1968, President Johnson decided not to run for reelection, allowing the next president to take charge of the rapidly failing situation in Vietnam. After the election, in 1969, President Richard Nixon developed and announced his new plan for the conflict in Southeast Asia, calling it "Vietnamization." The plan consisted of a rapid drawdown of U.S. involvement while simultaneously strengthening the South Vietnamese defense capabilities through training and equipment. After the first year of Vietnamization, in-country U.S. troop levels had been cut nearly in half—down to 250,000 from 543,482. By the end of 1972, there were only 24,000 U.S. soldiers in Vietnam. Although troop levels were decreasing, overall, Vietnamization increased hostilities in Vietnam and a widening of the war. Secret bombings runs over Cambodia and Laos were approved as well as ground incursions in both countries.

In January 1973, the United States and North Vietnam agreed to a ceasefire. The remaining U.S. personnel rapidly departed the country and by March, the last U.S. combat soldiers had left. Although the withdrawal of U.S. troops resulted in greater instability, in June 1973, the U.S. Senate passed the Case-Church amendment, prohibiting further involvement in Vietnam.[9] Although U.S. involvement in Southeast Asia was greatly decreased, it took another two years for a complete exit of all personnel. Saigon was on the verge of collapsing in April 1975 after the NVA and Viet

[9] "Case-Church Amendment," Public Law 93-52 (Washington, DC: 93rd U.S. Congress, June 1973).

Cong had launched an offensive. The United States implemented an evacuation plan on 29 and 30 April, transporting over 1,300 Americans and nearly 6,000 Vietnamese and other foreigners from the country.

3 Ground Combat Training in the United States Military

Ground combat training instructs soldiers in how to conduct battle on the earth's surface by using a variety of techniques and weapons to span a range of distances, from direct contact to several miles. Ground combat training also acclimates soldiers to the unpredictable sights and sounds of battle.[10] Training for ground warfare is conducted in diverse terrains and through all types of weather. Training often takes place on ranges constructed to resemble the types of terrain soldiers' encounter during combat to enhance realism in training. Ground combat training sites include small arms ranges, hand-to-hand combat areas, obstacle courses, cavalry courses, bayonet courses, training villages, mock sites, close combat courses, infiltration courses, and large-scale operation areas. Land-based warfare is the dominant form of nearly all U.S. military campaigns, and all troops are trained in the fundamentals of ground combat standards during their basic training. The U.S. Army and the U.S. Marines are the service branches that conduct nearly all ground combat operations.

Ground warfare is also known as land warfare, and it engages large numbers of combat personnel and weapons systems to defend urban and rural interests. It is the primary means of war and so influences the study of war, policy planning, and financial considerations. Since WWII, ground warfare in the U.S. military is conducted by three types of combat units: infantry, armor, and artillery. The infantry is comprised of soldiers who fight on foot with small arms. Armor units consist of combat vehicles, such as tanks, that mobilize heavy firepower. The artillery augments the infantry with long-range munitions.

Although the U.S. military has advanced their fighting capabilities through technological and operational advances, the basics of ground combat training for the U.S. military have remained largely unchanged. Training for ground warfare encompasses the types of weapons being used in the type of terrain that soldiers will encounter. Realistic training prepares ground combat troops by introducing them to the sights and sounds of

[10] Dan Archibald, Adam Smith, Sunny Adams, and Manroop Chawla, *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas*. ERDC/CERL TR-10-10 (Champaign, IL: U.S. Army Engineer and Research Development Center, March 2010), 5.

battle while reducing uncertainties. In this regard, the ground combat training that prepared soldiers for fighting in Vietnam used, or adapted, existing techniques and facilities to expedite the flow of personnel into the conflict. During combat operations in Vietnam, ground combat troops were supported by the Air Force and the Navy.

This chapter briefly outlines the general types of ground combat training infrastructure used during the Vietnam War, the characteristics of ground combat in Vietnam, and then details how each service branch prepared and trained for its role in that fight.

3.1 General types of ground combat training infrastructure

There were three general categories of ground combat training facilities used: ranges, courses, and training villages. Infrastructure for those areas consisted of buildings, targets, obstacles, firing lines, and (in the case of training villages) other structures that conveyed the physical characteristics of the specific type of village.

3.1.1 Ranges

Small arms ranges

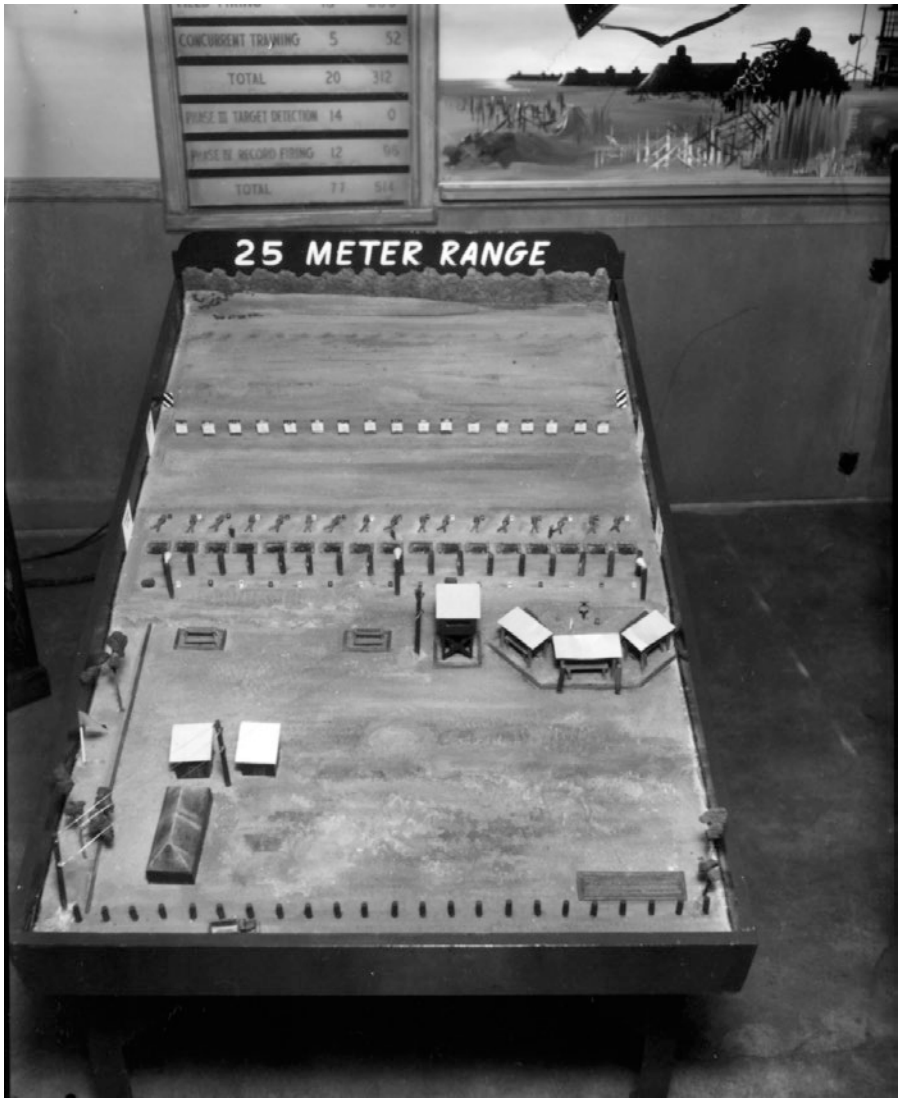
Small arms ranges are used for marksmanship training with a variety of weapons, including pistols, rifles, shotguns, machine guns, and grenades. At small arms ranges, soldiers learned and practiced how to fire weapons from stationary and moving positions at stationary and moving targets. Training also included munitions handling, first echelon (operator field maintenance), and range clearance.[11]

The typical layout for small arms ranges consisted of a set of firing points arranged as a firing line, firing lanes that soldiers traveled down as they fired, or sections of a course or road along which firing was completed. Although there was a wide variety of possible layouts, small arms ranges can be divided into four basic types: ranges with fixed firing points and fixed targets, ranges with fixed firing points and moving targets, ranges with moving firing points and fixed targets, and ranges with moving firing

[11] Dan Archibald, Adam Smith, Sunny Adams, and Manroop Chawla. *Military Training Lands Historic Context: Small Arms Ranges*. ERDC/CERL TR-10-11. (Champaign, IL: U.S. Army Engineer Research and Development Center, March 2010), 5.

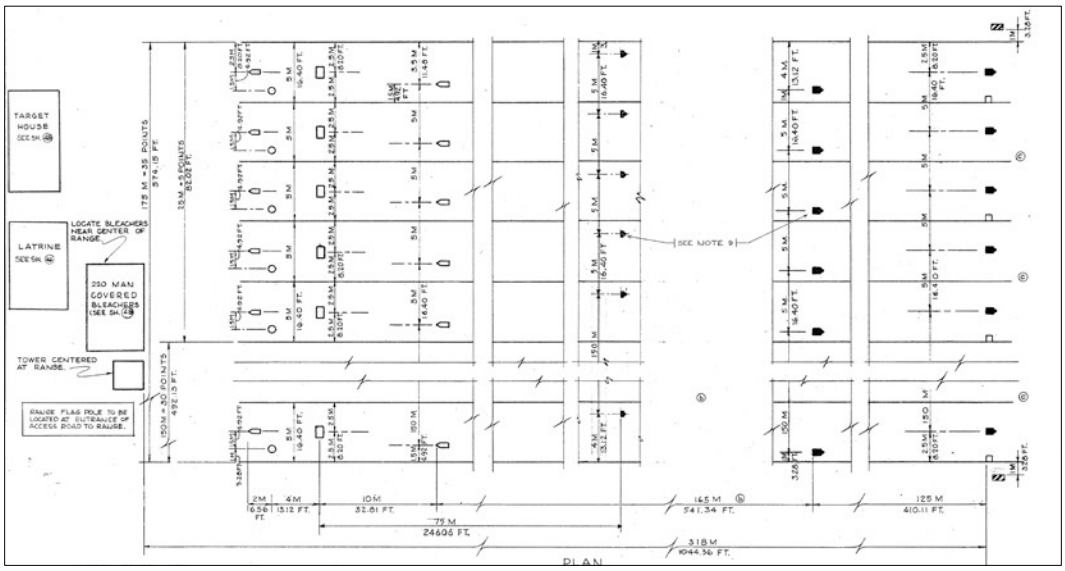
points and moving targets. Constructed features common among small arms ranges included firing lines, targets, safety fans and distances, embankments, trenches, and buildings/structures (Figure 1 and Figure 2). At each range, the buildings often consisted of a control or observation tower, bleachers for observers, latrines, target storage houses, ammunition storage buildings, and other general support buildings. Another organizational method was to combine several ranges into a larger installation range complex that shared similar support buildings.[12]

Figure 1. Mock-up of a 25-meter range at Fort Jackson, South Carolina, 10 March 1965 (NARA College Park).



[12] Archibald et al., *Military Training Lands Historic Context: Small Arms Ranges*, ERDC-CERL TR-10-11, 5.

Figure 2. Example of the layout of a field firing range at Fort Bragg, North Carolina, 17 August 1966 (Fort Bragg Cultural Resources Management Program).



Firing points were sometimes adapted with foxholes, trenches, or sandbags for positional support. Embankments or walls were constructed down range behind targets to catch ammunition, strategically placed in front of targets for concealment and protection, at firing lines to stabilize firing positions, or between ranges to protect personnel from stray fire. Range targeting systems were either stationary or moving. Infrastructure for moving targets included cables, pulleys, tracks, and realistic pop-up targets.[13]

The organization and layout of small arms ranges were varied and changed according to the unit training needs, terrain, and the technological advances in small arms weaponry.

Firing lines

Small arms ranges typically had firing points arrayed along a firing line from which solders would fire weapons at targets down range (Figure 3). Lines were designed to accommodate many firing positions from basic standing, kneeling, sitting, or lying. The construction of firing lines had many variations including being covered and having benches, stands, aiming devices, or stakes. More elaborate firing lines were constructed with

[13] ibid.

embankments, foxholes, trenches, swivel mounts, sandbags, window frames, logs, stumps, and craters.[14]

Figure 3. An example of a firing line from Fort Benning, GA, 1 August 1966 (NARA College Park).

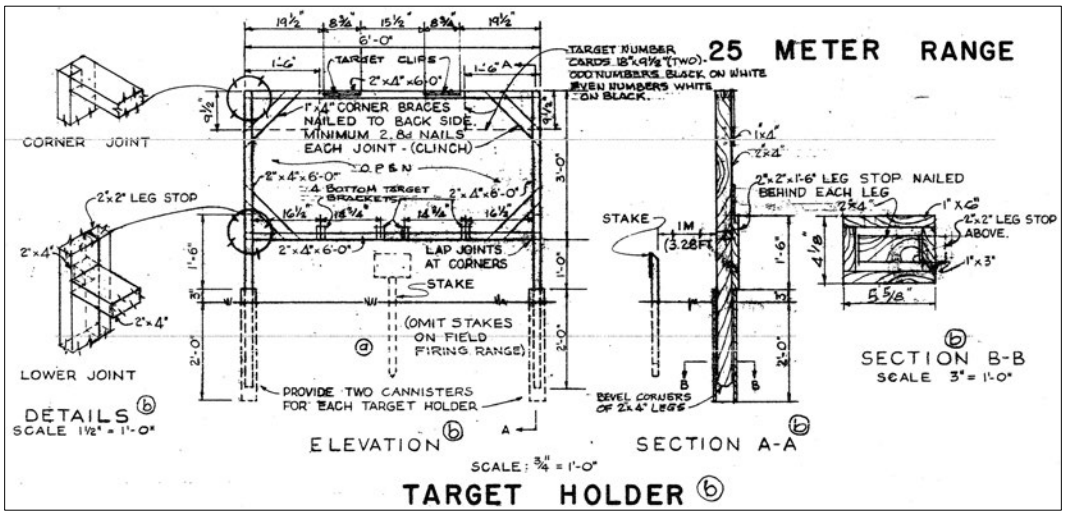
Targets

Many small arms ranges had stationary or moving target systems. Targets could be constructed with a variety of materials such as wood (Figure 4), paper, cloth, concrete, or metal, or from natural features in the landscape. Moving target systems included sleds and cars that were pulled with cables and pulleys over tracks. Eventually, plastic targets were constructed that provided more realistic depictions of opposing forces' weapons and personnel.[15]

[14] ibid., 13–14.

[15] Archibald et al., *Military Training Lands Historic Context: Small Arms Ranges*, ERDC-CERL TR-10-11, 21.

Figure 4. Drawing of a target holder for the 25-meter range at Fort Bragg, NC, 1 August 1967 (Fort Bragg Cultural Resources Management Program).



Embankments and trenches

Embankments and trenches were part of small arms ranges for protection and realism. Embankments and walls were often constructed for many reasons including behind targets to catch ammunition, in front of targets for concealment and protection, at firing lines for firing support and stabilization, or between ranges for protection against adjacent fire. Ranges could also feature trenches and foxholes (Figure 5) to teach concealment and rapid firing reactions. Embankments were commonly constructed from earth, concrete, or wood.[16]

[16] ibid., 43–62.

Figure 5. Example of foxholes on the M-14 rifle range at Fort Lewis, WA, 20 January 1967 (NARA College Park).

Buildings

The buildings at a small arms range could vary, but most often included a control tower (Figure 6 and Figure 7), latrine, target storage, ammunition storage, and bleachers along with other storage sheds, administrative, maintenance, and support buildings. On range complexes, building functions were frequently shared between ranges.[17]

[17] ibid., 62.

Figure 6. A control (observation) tower, storage building, and bleachers on a firing range at Fort Riley, KS, 12 June 1968 (NARA College Park).

Figure 7. A rifle range control tower allowed a full 180-degree field of vision for the new day and night fire ranges at Fort Jackson, SC, 14 January 1964 (NARA College Park).

Table 1 through Table 7 list the small arms weapons used by the U.S. military in the Vietnam War. Training with these weapons occurred on small arms ranges at many DoD facilities.

Table 1. Pistols and revolvers used by U.S. forces in Vietnam.[18]

Pistols and Revolvers	
Colt M1911A1	Standard U.S. Military sidearm.
Smith & Wesson Mark 22 Mod. 0 "Hush Puppy"	Suppressed pistol used by Navy Sea, Air, and Land Teams (SEALs) and other U.S. special operations forces.
Colt Model 1903 Pocket Hammerless	Carried by U.S. military officers. Replaced by the Colt Commander in the mid-1960s.
Colt Commander	Replaced the Colt M1903 as an officer's sidearm in the mid-1960s.
M1917 revolver	Used by the South Vietnamese and U.S. forces during the beginning of the war alongside the Smith & Wesson Model 10. Used rather prominently by “Tunnel Rat” units.
Smith & Wesson Model 10	Used concurrently with Colt and S&W M1917 Revolvers.
Smith & Wesson Model 12	Carried by U.S. Army and U.S. Air Force pilots.
Smith & Wesson Model 15	Carried by U.S. Air Force Security Police Units.
High Standard HDM	Integrally suppressed .22LR handgun, supplemented by the Mark 22 Mod 0 in the later stages of the war.

Table 2. Shotguns used by U.S. forces in Vietnam.[19]

Shotguns	
Winchester Model 1912	A pump-action shotgun was used by the Marines during the early stages of the war.
Ithaca 37	A pump-action shotgun used by Navy SEALS.

[18] Lists of weapons used by the U.S. and its allies were compiled from a Wikipedia page (https://en.wikipedia.org/wiki/Weapons_of_the_Vietnam_War) that utilized data from various sources, including those listed here. Bruce Canfield, *Complete Guide to U.S. Military Combat Shotguns* (Woonsocket, RI: Mowbray Publishers Inc., 2007), 163–164. Wiley Clapp, *The M14/M1A – Four Decades of Service* (accessed online: http://hunting.about.com/od/guns/l/aastm14_m1aa.htm). Kevin Dockery, *Weapons of the Navy SEALs* (New York City: Berkley Publishing Group, December 2004), 382. Jerry Gander, *Jane's Infantry Weapons 2002–2003* (Jane's Information Group, 2002), 214, 899–906. Martin K.A. Morgan, “U.S. M16.” *NRA American Rifleman* (accessed online: http://www.americanrifleman.org/articles/us-m16). Olive-Drab. “Vietnam War: Weapons & Equipment” (accessed online: http://www.olive-drab.com/od_history_vietnam_weapons_equipment.php). No author, “Weapons of the Vietnam War” (accessed online: http://www.173rdairborne.com/weapons.htm).

[19] ibid.

Shotguns	
Remington 7188	An experimental select fire shotgun. Withdrawn due to lack of reliability.
Remington Model 870	A pump-action shotgun primary shotgun used by Marines after 1966. Special Operations weapon was a modification for a Remington 1100, which made it fully automatic.
Remington 11-48	A semi-automatic shotgun used by the Marines in small quantities.
Winchester Model 1897	Was used by the Marines during the early stages of the war, but was later replaced by the Remington Model 870.
Winchester Model 1200	A pump-action shotgun used by the U.S. Army.
Stevens Model 520-30 and Model 620	
Stevens Model 77E	A pump-action shotgun used by Army and Marine forces in Southeast Asia. Almost 70,000 Model 77Es were procured by the military for use in Southeast Asia during the 1960s.

Table 3. Infantry rifles used by U.S. forces in Vietnam.[20]

Infantry rifles	
AR-10	Limited uses
M1 Garand	Used by the South Vietnamese, South Koreans and Laotians. Limited numbers were carried by early U.S. advisors and USMC troops.
M1, M1A1, & M2 Carbine	Used by the South Vietnamese Military, Police and Security Forces, U.S. Military, and Laotians supplied by the United States.
M1903A3 Springfield	Limited numbers were used by the South Vietnamese and USMC.
M14 rifle	Issued to most troops from the early stages of the war until 1967-68, when it was replaced by the M16.
M16, XM16E1, and M16A1	The M16 was issued in 1963, but due to reliability issues, it was replaced in 1967 by the M16A1, which added the forward assist and chrome-lined barrel to the rifle for increased reliability.
CAR-15	Carbine variant of the M16 produced in very limited numbers, fielded by special operations early on. Later supplemented by the improved XM177.

[20] ibid.

Infantry rifles	
XM177 (Colt Commando)	Further development of the CAR-15, used heavily by MACV-SOG, the U.S. Air Force, and U.S. Army.
Stoner 63	Used by U.S. Navy SEALs and USMC.
Heckler & Koch HK33	Used by Thai forces that were not armed by the United States. It was chambered for the same cartridge as the M16 assault rifle used by American troops.
T223	A copy of the Heckler & Koch HK33 Assault Rifle under license by Harrington & Richardson, used in small numbers by Navy SEAL teams. Even though the empty H&R T223 was 0.9 pounds (0.41 kg) heavier than an empty M16A1, the weapon had a forty-round magazine available for it and this made it attractive to the SEALS.

Table 4. Sniper/marksman rifles used by U.S. forces in Vietnam.[21]

Sniper/Marksman Rifles	
M1903A4 Springfield	Used by the USMC throughout the war, replaced by the M40.
M21 Sniper Weapon System	Designated Marksman Rifle (DMR) used by the U.S. Army.
M40	Bolt-action sniper rifle meant to replace the M1903 Springfield rifle; used by the USMC

Table 5. Submachine guns used by U.S. forces in Vietnam.[22]

Submachine guns	
Thompson submachine gun	Used often by South Vietnamese troops, and in small quantities by U.S. artillery and helicopter units.
M3 Grease gun	Standard U.S. Military submachine-gun, also used by the South Vietnamese[6]
Ingram MAC-10	Used by U.S. special operations forces.
Swedish K	Used by Navy SEALs in the beginning of the war, but later replaced by the Smith & Wesson M76. Used in the late 1960s. Significant numbers were also utilized by the South Vietnamese, and limited numbers were used in Laos by advisors, and Laotian fighters.

[21] ibid.

[22] ibid.

Submachine guns	
Smith & Wesson M76	A copy of the Swedish K, replacing it in 1967.
Madsen M-50	Large numbers utilized by South Vietnamese and U.S. forces, supplied from Denmark.
Sten submachine gun	Used by U.S. special operations forces, often with a suppressor mounted.
Uzi	Used by special operations forces, supplied from Israel.
Beretta M12	Limited numbers were used by U.S. embassy security units.
MAT-49	French submachine gun; captured models were used in limited numbers.
MP40	Limited numbers were used by MACV-SOG and other irregular forces.

Table 6. Machine guns used by U.S. forces in Vietnam.[23]

Machine guns	
Stoner M63a Commando & Mark 23 Mod.0	Used by U.S. Navy SEALs and tested by Force Recon
M60 machine gun	A standard general purpose machine gun (GPMG) for the U.S., Australian, New Zealand, and South Vietnamese forces.
M1918A2	Browning automatic rifle Issued to troops during the early stages of the war by the United States. Many were airdropped into Laos and used by Laotian fighters. Also used by South Vietnamese.
M1917 Browning machine gun	A .30cal heavy machine gun issued to some machine gunners in the South Vietnamese Army and also in limited use by the U.S. Army.
M1919 Browning machine gun	Vehicle and helicopter mounted machine gun. Also fitted to Australian M113 Light Reconnaissance Vehicles. Meanwhile, still of use by many South Vietnamese and Laotian infantry forces.
Colt CMG-2	An experimental light machinegun deployed by SEAL Team 2 in 1970.
Browning M2HB .50cal Heavy Machine Gun	

[23] ibid.

Table 7. Infantry support weapons used by U.S. forces in Vietnam.[24]

Infantry Support Weapons	
M18 recoilless rifle	57 mm
M20 recoilless rifle	75 mm
M67 recoilless rifle	Antitank 90 mm
M40 recoilless rifle	106 mm
M19 Mortar	60 mm
M29 Mortar	81 mm
4.2 inch mortar	107 mm, commonly referred to as the "four deuce"
M72 LAW	Light antitank weapon
M31 HEAT Rifle Grenade	Used primarily by the U.S. Army before the introduction of the M72 LAW. Fired from the M1 Garand and M14 Rifle.
M20 Super Bazooka	Used mainly by U.S. Marine Corps before the introduction of the M72 LAW,
FIM-43 Redeye MANPADS (Man-Portable Air-Defense System)	Shoulder-fired heat-seeking anti-air missile, used by the U.S. Army and U.SMC.

Bayonet assult courses and pugil stick training courts

Bayonets are knives attached to the muzzle of a rifle barrel and used as a close combat fighting weapon. Recruits were trained to affix and remove the bayonet, then how to perform drill motions as a group. After basic skills were learned, recruits ran a timed bayonet assault course that provided practice in moving with a bayonet, attacking targets, maneuvering around obstacles, and using offensive and defensive fighting techniques. Pugil sticks were incorporated into bayonet training for close combat experience.[25]

Bayonet assult courses were sited to take advantage of terrain features such as streams, ravines, ridges, and rough wooded areas to make recruit movements challenging. The courses were 200–300 meters and included multiple lanes of constructed obstacles and targets. Obstacles included wire entanglements, log walks, hurdles, fences, and horizontal ladders that were constructed of found materials such as old tires, canvas, and lumber.

[24] ibid.

[25] Archibald et al., *Military Training Lands Historic Context: Small Arms Ranges*, ERDC-CERL TR-10-11, 5–31.

Targets were shaped to resemple enemy combatants and also were constructed of found materials.[26]

Table 8 lists the types of bayonets used by U.S. forces during the Vietnam War.

Table 8. Types of bayonets used by U.S. forces in Vietnam.[27]

Bayonets	
M1 Bayonet	U.S. and Army of the Republic of Viet Nam (ARVN); used on M1 Garand.
M4 Bayonet	U.S. and ARVN; used on M1, M2 Carbine.
M5 Bayonet	U.S. and ARVN; used on M1 Garand.
M6 Bayonet	U.S. used on M14.
M7 Bayonet	U.S. and ARVN; used with M16.

Hand and rifle grenade ranges

Grenade ranges were located at installations where training ground forces was the primary mission. However, hand grenades were authorized for nearly all types of units. Nearly all recruits were trained to use hand grenades. In basic training, two hand grenade courses were used—one for practice with dummy grenades, and one for use with live grenades. Hand grenade training for the infantry required three practice courts and one live grenade court. A variety of courses also taught trainees how to use hand grenades in various situations. Hand grenade courses could be modified to support the unit mission essential task list, terrain, and commander's intent. Dummy and practice grenade courses were often located near or in cantonment areas, while live grenade ranges were located away

[26] U.S. Marine Corps, *FMFM1-1 Marine Bayonet Training,* 25 March 1965. Available online: https://archive.org/details/MarineBayonetTraining.

[27] Lists of weapons used by the U.S. and its allies were compiled from a Wikipedia page (https://en.wikipedia.org/wiki/Weapons_of_the_Vietnam_War) that utilized data from various sources, including those listed here. Bruce Canfield, *Complete Guide to U.S. Military Combat Shotguns* (Woonsocket, RI: Mowbray Publishers Inc., 2007), 163–164. Wiley Clapp, *The M14/M1A – Four Decades of Service* (accessed online: http://hunting.about.com/od/guns/l/aastm14_m1aa.htm). Kevin Dockery, *Weapons of the Navy SEALs* (New York City: Berkley Publishing Group, December 2004), 382. Jerry Gander, *Jane's Infantry Weapons 2002–2003* (Jane's Information Group, 2002), 214, 899–906. Martin K.A. Morgan, "U.S. M16." *NRA American Rifleman* (accessed online: http://www.americanrifleman.org/articles/us-m16). Olive-Drab. "Vietnam War: Weapons & Equipment" (accessed online: http://www.olive-drab.com/od_history_vietnam_weapons_equipment.php). No author, "Weapons of the Vietnam War" (accessed online: http://www.173rdairborne.com/weapons.htm).

from the main post areas.[28] Types of grenade courts used in training from 1962–1975 were: assault, live practice, and main.

The constructed elements of hand grenade ranges included firing lines, targets, embankments/trenches, and buildings. Firing positions were tape lines, foxholes, logs, stumps, bunkers, trenches, sandbag stations, concrete pits, or other types of throwing bays. Targets included silhouettes, tape or cloth circle outlines, craters, foxholes, trenches, mortar positions, wheeled-vehicle towed targets, and simulated windows. Embankments and trenches protected trainees from fragmentation and were constructed of steel, concrete, wood, sandbag revetments, walls, or earthen berms.[29]

Buildings associated with hand grenade ranges included a control tower, latrine, target storage building, ammunition storage building, other storage sheds, and administrative/maintenance buildings that supported general range functions. Those buildings also could have been shared with other ranges in a larger range complex.[30]

Rifle grenade ranges were similar to hand grenade ranges. Rifle grenade ranges were located at installations where training ground forces was the primary mission. Rifle grenade ranges could have been stand-alone or shared with other ranges. A typical rifle grenade range might have been integrated into a range layout at division training sites with overlapping cell boundaries with other ranges. Infantry division training required at least three practice grenade courts, a live grenade court, and one moving target range for antitank rifle grenades.[31]

There were three types of rifle grenade ranges. The antipersonnel marksmanship had stationary targets. The antitank marksmanship ranges had targets that were stationary and moving, and the antitank field firing court. One or all of those types could have been located on the rifle grenade range.[32] Embankments of sandbags could have been built around

[28] Archibald et al., *Military Training Lands Historic Context: Small Arms Ranges*, ERDC-CERL TR-10-11, 225–226.

[29] ibid., 240–243.

[30] ibid., 245.

[31] ibid., 246.

[32] ibid., 249.

some firing positions for protection, while other positions included foxholes, trenches, shell craters, and prone shelters (Figure 8).[33] Rifle grenade range buildings included a control/observation tower, latrine target storage, ammunition storage, general storage sheds, and an administrative/maintenance building to support general range functions.

Table 9 lists the types of hand grenades used by the U.S. military during the Vietnam War.

Table 9. Hand grenades used by the U.S. military in Vietnam.[34]

Grenades	
Mk 2 Fragmentation Hand/Rifle Grenade	A fragmentation anti-personnel hand grenade that was standard issue for U.S, troops from WWII into the Vietnam conflict. Its use was discontinued in 1969.
M61 Fragmentation Hand Grenade	A fragmentation grenade used throughout the Cold War. Was modified with a "jungle clip" that eliminated accidental detonations based on its use in Vietnam.
M34 white phosphorus grenade	A smoke grenade that uses white phosphorus, which, when in contact with air ignites and creates white smoke. The white phosphorus was also a useful way to dislodge the Viet Cong from tunnels or other enclosed spaces as the burning white phosphorus absorbs oxygen, causing the victims to suffocate or suffer serious burns.
M18 grenade	Smoke hand grenade

Table 10 lists the types of grenade launchers used by the U.S. forces during the Vietnam War.

[33] ibid., 262.

[34] Lists of weapons used by the U.S. and its allies were compiled from a Wikipedia page (https://en.wikipedia.org/wiki/Weapons_of_the_Vietnam_War) that utilized data from various sources, including those listed here. Bruce Canfield, *Complete Guide to U.S. Military Combat Shotguns* (Woonsocket, RI: Mowbray Publishers Inc., 2007), 163–164. Wiley Clapp, *The M14/M1A – Four Decades of Service* (accessed online: http://hunting.about.com/od/guns/l/aastm14_m1aa.htm). Kevin Dockery, *Weapons of the Navy SEALs* (New York City: Berkley Publishing Group, December 2004), 382. Jerry Gander, *Jane's Infantry Weapons 2002–2003* (Jane's Information Group, 2002), 214, 899–906. Martin K.A. Morgan, "U.S. M16." *NRA American Rifleman* (accessed online: http://www.americanrifleman.org/articles/us-m16). Olive-Drab. "Vietnam War: Weapons & Equipment" (accessed online: http://www.olive-drab.com/od_history_vietnam_weapons_equipment.php). No author, "Weapons of the Vietnam War" (accessed online: http://www.173rdairborne.com/weapons.htm).

Table 10. Grenade launchers used by the U.S. military in Vietnam.[35]

Grenade launchers	
M79 Grenade Launcher	The Primary U.S. grenade launcher of the Vietnam War. All branches of the U.S. military used it.
China Lake Grenade Launcher	A pump action weapon that was used in the Vietnam War in very small numbers.
XM148	An experimental under-barreled 40mm grenade launcher. Used by Navy SEALs and Australian Special Air Service (SAS). Withdrawn due to safety reasons.
M203 grenade launcher	A single shot 40mm under-slung grenade launcher designed to attach to a M16 rifle. First tested in combat April 1969.

Figure 8. The Remagen Hand Grenade Range at Fort Jackson, SC, featured periscopes, throwing bays, and targets in the impact area, 1 November 1961 (NARA College Park).

Hand-to-hand combat ranges

Recruits were taught close combat fighting techniques in struggle pits, hand-to-hand combat areas, and in open areas (Figure 9). Hand-to-hand

[35] ibid.

combat training included grappling, martial arts, and self-defense. Training areas were sand- or sawdust-filled circles, often with a viewing platform at the center.[36]

Figure 9. Hand-to-hand combat was taught in basic training. At Fort Jackson, SC, basic trainees learn how to disarm an opponent with a knife, 12 August 1962 (NARA College Park).

[36] Dan Archibald, Adam Smith, Sunny Adams, and Manroop Chawla. *Military Training Lands Historic Context: Miscellaneous Training Sites*, ERDC/CERL TR-10-9 (Champaign, IL: Engineer Research and Development Center), 73–78.

Table 11 lists hand combat weapons used by the U.S. military in Vietnam.

Table 11. Hand combat weapons used by U.S. forces in Vietnam.[37]

Hand-Combat Weapons	
M1 bayonet	U.S. and ARVN; used on M1 Garand.
M4 bayonet	U.S. and ARVN; used on M1, M2 carbine.
M5 bayonet	U.S. and ARVN; used on M1 Garand.
M6 bayonet	U.S.; used on M14.
M7 bayonet	U.S. and ARVN; used with the M16.
Ka-Bar utility/fighting knife	U.S. Navy & Marine Corps
Gerber Mark II	U.S. Armed Forces
Other types of knives, bayonets, and blades	

Bivouac

Bivouac areas allowed all types of units the space to gain practical experience in constructing temporary living quarters—generally tents—while training in the field (Figure 10).[38]

[37] Lists of weapons used by the U.S. and its allies were compiled from a Wikipedia page (https://en.wikipedia.org/wiki/Weapons_of_the_Vietnam_War) that utilized data from various sources, including those listed here. Bruce Canfield, *Complete Guide to U.S. Military Combat Shotguns* (Woonsocket, RI: Mowbray Publishers Inc., 2007), 163–164. Wiley Clapp, *The M14/M1A – Four Decades of Service* (accessed online: http://hunting.about.com/od/guns/l/aastm14_m1aa.htm). Kevin Dockery, *Weapons of the Navy SEALs* (New York City: Berkley Publishing Group, December 2004), 382. Jerry Gander, *Jane's Infantry Weapons 2002–2003* (Jane's Information Group, 2002), 214, 899–906. Martin K.A. Morgan, "U.S. M16." *NRA American Rifleman* (accessed online: http://www.americanrifleman.org/articles/us-m16). Olive-Drab. "Vietnam War: Weapons & Equipment" (accessed online: http://www.olive-drab.com/od_history_vietnam_weapons_equipment.php). No author, "Weapons of the Vietnam War" (accessed online: http://www.173rdairborne.com/weapons.htm).

[38] Archibald et al., *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas*, ERDC/CERL TR-10-10, 71.

Figure 10. Bivouac was an important part of basic training. Army trainees were taught the proper way to pitch a tent at Fort Jackson, SC, 16 August 1962 (NARA, College Park).

Fortified areas on ranges

Fortified areas were where units and individuals were trained in constructing, attacking, and defending field fortifications. Fortifications included bunkers, foxholes, and trenches. These structures were used to train soldiers in small arms fire, flamethrowers, shoulder-launched rockets, grenades, and demolition materials.[39]

Table 12 lists the flamethrowers used by U.S. personnel in Vietnam.

[39] Archibald et al. *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas,* ERDC/CERL TR-10-10, 83.

Table 12. Flamethrowers used by U.S. forces in Vietnam.[40]

Flamethrowers	
M2 flamethrower	A portable backpack flamethrower with a burn time of around 7 seconds with a reach of 20-40 meters.
M9 flamethrower	A portable backpack flamethrower that was lighter and easier to pack than the M2 series.

Machine gun emplacement mock-up

Machine gun emplacements were designed and constructed to train soldiers in the use of machine guns and introduce them to realistic combat conditions. Machine gun emplacement mock-ups generally consisted of dug pits with a cover of sandbags and other materials. Soldiers learned how to defend the emplacement by firing machine guns through openings in the fortification.[41]

Mines and booby trap ranges

Understanding how to identify mines and booby traps was as important as learning how to construct and deploy them. Training on how to avoid and deal with mines and booby traps was conducted on small ranges that consisted of a building placed in the center of a danger area.

[40] Lists of weapons used by the U.S. and its allies were compiled from a Wikipedia page (https://en.wikipedia.org/wiki/Weapons_of_the_Vietnam_War) that utilized data from various sources, including those listed here. Bruce Canfield, *Complete Guide to U.S. Military Combat Shotguns* (Woonsocket, RI: Mowbray Publishers Inc., 2007), 163–164. Wiley Clapp, *The M14/M1A – Four Decades of Service* (accessed online: http://hunting.about.com/od/guns/l/aastm14_m1aa.htm). Kevin Dockery, *Weapons of the Navy SEALs* (New York City: Berkley Publishing Group, December 2004), 382. Jerry Gander, *Jane's Infantry Weapons 2002–2003* (Jane's Information Group, 2002), 214, 899–906. Martin K.A. Morgan, "U.S. M16." *NRA American Rifleman* (accessed online: http://www.americanrifleman.org/articles/us-m16). Olive-Drab. "Vietnam War: Weapons & Equipment" (accessed online: http://www.olive-drab.com/od_history_vietnam_weapons_equipment.php). No author, "Weapons of the Vietnam War" (accessed online: http://www.173rdairborne.com/weapons.htm).

[41] Archibald et al.. *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas*, ERDC/CERL TR-10-10, 83.

Table 13 is a list of mines used by the United States during the Vietnam War.

Table 13. Mines used by U.S. forces in Vietnam.[42]

Mines	
Claymore M18A1	An anti-personnel mine
M16 Mine	A bounding anti-personnel mine
M14 Mine	Used by U.S. forces until 1973

Large arms ranges/Large-scale operation areas

Training exercises with large arms conducted as large-scale operations and maneuvers reinforced the necessity of personnel working together as combat teams and divisions. In these training scenarios, all aspects of combat were played out over time and in full with the utilization of armored vehicles, weapons systems, and survival skills. These maneuvers required enormous areas of land that was geographically suited to the types of training being conducted.[43]

[42] Lists of weapons used by the U.S. and its allies were compiled from a Wikipedia page (https://en.wikipedia.org/wiki/Weapons_of_the_Vietnam_War) that utilized data from various sources, including those listed here. Bruce Canfield, *Complete Guide to U.S. Military Combat Shotguns* (Woonsocket, RI: Mowbray Publishers Inc., 2007), 163–164. Wiley Clapp, *The M14/M1A – Four Decades of Service* (accessed online: http://hunting.about.com/od/guns/l/aastm14_m1aa.htm). Kevin Dockery, *Weapons of the Navy SEALs* (New York City: Berkley Publishing Group, December 2004), 382. Jerry Gander, *Jane's Infantry Weapons 2002–2003* (Jane's Information Group, 2002), 214, 899–906. Martin K.A. Morgan, "U.S. M16." *NRA American Rifleman* (accessed online: http://www.americanrifleman.org/articles/us-m16). Olive-Drab. "Vietnam War: Weapons & Equipment" (accessed online: http://www.olive-drab.com/od_history_vietnam_weapons_equipment.php). No author, "Weapons of the Vietnam War" (accessed online: http://www.173rdairborne.com/weapons.htm).

[43] Archibald et al., *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas*, ERDC/CERL TR-10-10, 127–128.

Table 14 lists the artillery weapons used by the United States during the Vietnam War.

Table 14. Artillery weapons used by U.S. forces in Vietnam.[44]

Artillery	
105 mm Howitzer M2A1	A standard light field howitzer used from WWII through the Vietnam War.
105 mm Howitzer M102	A light-weight towed Howitzer. The M102 was first used in 1966, issued to the 1st Battalion, 21st Field Artillery in Vietnam.
155 mm Howitzer M114	A towed Howitzer used by the U.S. Army during WWII through the Vietnam War.
M53	Self-propelled 155mm gun
M55	Self-propelled 8-inch howitzer
M107 Howitzer	Self-propelled 175 mm gun
M108	Self-propelled 105 mm howitzer
M109	Self-propelled 155 mm howitzer
M110	Self-propelled 8-inch howitzer
75mm Pack Howitzer M1	Redesignated as the M116 in 1962, the Pack Howitzer M1 was designed to be moved across difficult terrain. It was also designed to be broken down into several pieces so that it could be easily transported.

[44] Lists of weapons used by the U.S. and its allies were compiled from a Wikipedia page (https://en.wikipedia.org/wiki/Weapons_of_the_Vietnam_War) that utilized data from various sources, including those listed here. Bruce Canfield, *Complete Guide to U.S. Military Combat Shotguns* (Woonsocket, RI: Mowbray Publishers Inc., 2007), 163–164. Wiley Clapp, *The M14/M1A – Four Decades of Service* (accessed online: http://hunting.about.com/od/guns/l/aastm14_m1aa.htm). Kevin Dockery, *Weapons of the Navy SEALs* (New York City: Berkley Publishing Group, December 2004), 382. Jerry Gander, *Jane's Infantry Weapons 2002–2003* (Jane's Information Group, 2002), 214, 899–906. Martin K.A. Morgan, "U.S. M16." *NRA American Rifleman* (accessed online: http://www.americanrifleman.org/articles/us-m16). Olive-Drab. "Vietnam War: Weapons & Equipment" (accessed online: http://www.olive-drab.com/od_history_vietnam_weapons_equipment.php). No author, "Weapons of the Vietnam War" (accessed online: http://www.173rdairborne.com/weapons.htm).

Table 15 lists the types of artillery ammunition used by the United States during the Vietnam War.

Table 15. Artillery ammunition types used by U.S. forces in Vietnam.[45]

Artillery ammunition	
Beehive anti-personnel rounds	An anti-personnel round packed with pointed steel projectiles. The Beehive is named after the buzzing sound its darts made when flying through the air.
White phosphorus (marking round) "Willy Peter"	Fragmentation explosives that were filled with White phosphorus. Used to clear VC out of the jungle.
HE, general-purpose (High Explosive)	Thick-walled metal casing with explosive filler.
Canister	Used for tank and artillery guns.

Table 16 lists tanks used by the United States for ground combat in the Vietnam War.

Table 16. Tanks used by U.S. forces in Vietnam.[46]

Tanks	
M48 Patton medium tank	Main tank of the U.S. Army and Marines throughout the war, and also used by ARVN forces late-war.
M103 Heavy Tank	Heavy tank used by the U.S. Army and USMC. Deployed in Vietnam but never actually saw combat.
M67 "Zippo"	Flamethrower variant of the M48 Patton.
M551 Sheridan	Armored Reconnaissance Airborne Assault Vehicle/Light Tank. Used by the U.S. Army from 1969.

[45] ibid.

[46] ibid.

Table 17 lists armored vehicles used by U.S. forces in Vietnam.

Table 17. Armored vehicles used by U.S. forces in Vietnam.[47]

Armored Vehicles	
M113 APC	Armored Personnel Carrier
M113 ACAV	Armored Cavalry Assault Vehicle
M163 Vulcan	Self-propelled antiaircraft tank
M728 Combat Engineer Vehicle	Modified M60 Patton tank equipped with dozer blade, short-barreled 165mm M135 demolition gun, and A-frame crane.
M60 AVLB	Armored Vehicle Launched Bridge, M60 Patton chassis
M88 Recovery Vehicle	Armored recovery vehicle, M48 and M60 chassis based
LVTP5	Also known as AMTRAC (amphibious tractor) / landing craft used by U.S. Marine Corps
M50 Ontos	Self-propelled 106 mm recoilless rifle carrier used by the U.S. Marine Corps until 1969. Some were later transferred to ARVN forces
Cadillac Gage V-100 Commando	
Mark I PBRs	Patrol Boat River
LARC-LX	Lighter Amphibious Resupply, Cargo
BARC	Barge, Amphibious Resupply, Cargo
M114	Reconnaissance vehicle
M42 Duster	M41 light tank-based hull, with a twin 40 mm antiaircraft gun mounted on an open turret
LCVP	Landing Craft Vehicle Personal
LCM	Landing Craft Mechanized
M56 Scorpion	

3.1.2 Courses

Courses were designed as circuits, where recruits were trained how to react to a variety of conditions and obstacles. Soldiers learned how to maneuver, use their weapons, and fight efficiently and effectively.

[47] ibid.

Attack courses

Attack courses were designed for combined arms units to train on conducting attacks, retreats, and other tactical exercises. The available terrain and training objectives directed the layout of targets and other training aids, such as minefields or wire entanglements. The targets used on attack courses could include fixed personnel targets, simulated antitank gun targets, and towed armored vehicle targets. Remote-controlled simulators were used for antitank gunfire while silhouette targets represented enemy riflemen, gun crews, bazooka teams, and other combatant personnel. Machine guns, tanks, antitank guns, and emplacements were constructed as wooden models. Pits and other shelters lined the courses from which surprise targets could be operated. Attack course layout varied, based on the training unit's unique mission.[48]

Close-combat courses

Close-combat courses were designed to train soldiers to react accurately and quickly by firing small arms at surprise targets while navigating uneven terrain. Lanes were marked by colored posts or wires defined with rag streamers. Incorporated into the course were booby traps and realistic targets, and some moving targets.[49] For Vietnam, Trainfire was a similar type of instruction that was developed to accustom soldiers to react quickly with all types of small arms.

Infiltration course

Infiltration courses were part of the Individual Tactical Training (ITT) programs that were structured to teach individual battlefield skills, combat movement techniques, and procedures necessary for squad- and platoon-level tactical training. Directed unit replacement training centers, and unit training centers were all instructed to build infiltration courses by a 1943 letter from Headquarters, Army Ground Forces. Infiltration courses were integrated into training and consisted of obstacles and dummy targets. Soldiers were taught how to navigate terrain while firing and maneuvering

[48] Archibald et al., *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas*, ERDC/CERL TR-10-10, 108.

[49] Archibald et al., *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas*, ERDC/CERL TR-10-10, 115.

as a unit. Obstacles included shell holes, trenches, slit trenches, wire entanglements, logs, stumps, and brush. Machine guns were fired over the troops during training along with reduced charges of explosives that represented artillery fire, mines, and booby traps. Other infrastructure built to support infiltration courses were range lights, machine gun platforms, control towers, bleachers, latrines, and other range buildings.[50] Course training did not necessarily need to be on training lands (or be permanent/part of the built environment), but could be on available parks, such as Heard Park at Fort Knox (Figure 11). The training could utilize such features such as logs, stumps, signs or moving platforms which can be seen in Figure 11.

Figure 11. Heard Park (individual tactical training) fire and movement at Fort Knox, KY, 5 May 1966 (NARA College Park, RG 111-SC post 1955, box 400, photo SC628844).

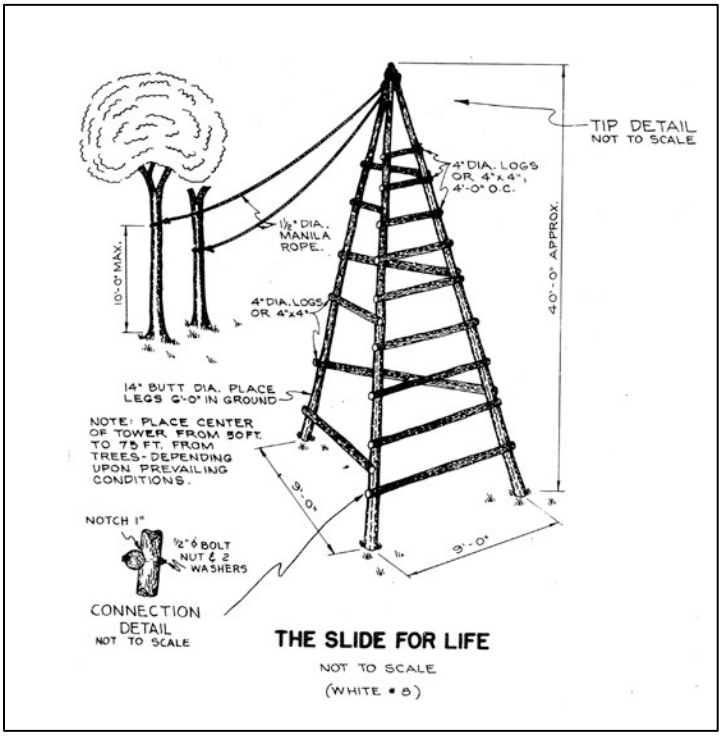
[50] Archibald et al., *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas*, ERDC/CERL TR-10-10, 119.

Obstacle courses

Obstacle courses were a standard component of the physical conditioning and maneuverability training of new recruits throughout all services. Courses were designed to prepare service members for battle by increasing their agility, speed, upper body strength, and maneuverability.[51]

Across services and training facilities, there were many types and variations in obstacle courses (Figure 12–Figure 15). General features included barbed wire that was either crawled under or over; tall walls and fences of wood, logs, or netting to teach climbing and jumping; overhead bars were used to increase upper body strength; rope bridges were for learning balance on ropes strung between elevated platforms or terrain and crossing techniques. Courses could also feature tunnels that recruits had to crawl through. A course could have some or all of the general features which recruits would have to navigate in sequence as quickly as possible.[52]

Figure 12. Plans for the "Slide for Life" part of an obstacle course, adapted from Army plans for Fort Bragg, NC, 1966 (Fort Bragg Directorate of Public Works [DPW]).



[51] Archibald et al., *Military Training Lands Historic Context: Miscellaneous Training Sites*, ERDC/CERL TR-10-9, 79.

[52] ibid., 79–95.

Figure 13. Plans for the "Dirty Name" part of an obstacle course, adapted from Army plans for Fort Bragg, NC, 1966 (Fort Bragg DPW).

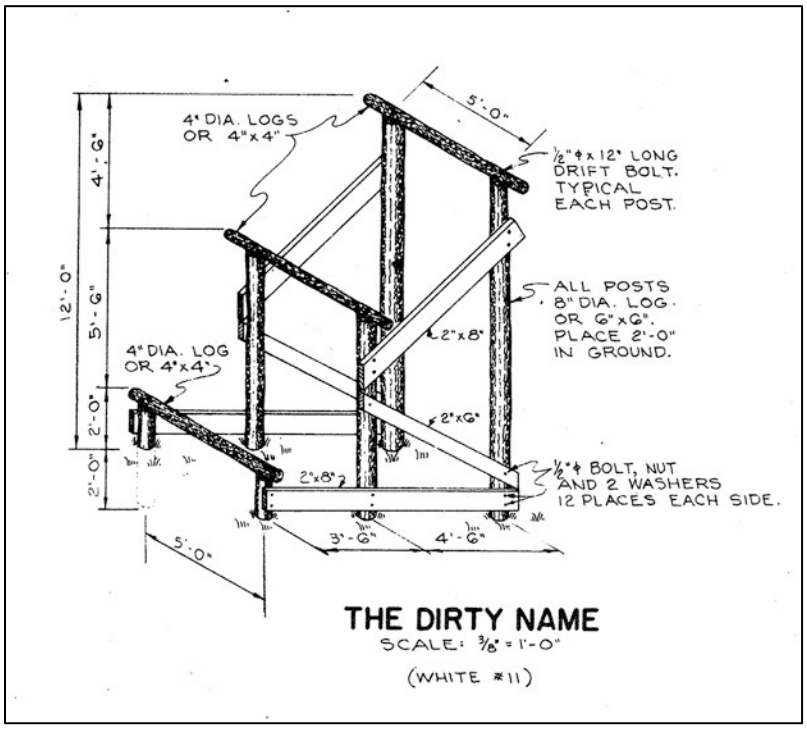


Figure 14. Plans for the "Inclining Wall" part of an obstacle course, adapted from Army plans for Fort Bragg, NC, 1966 (Fort Bragg DPW).

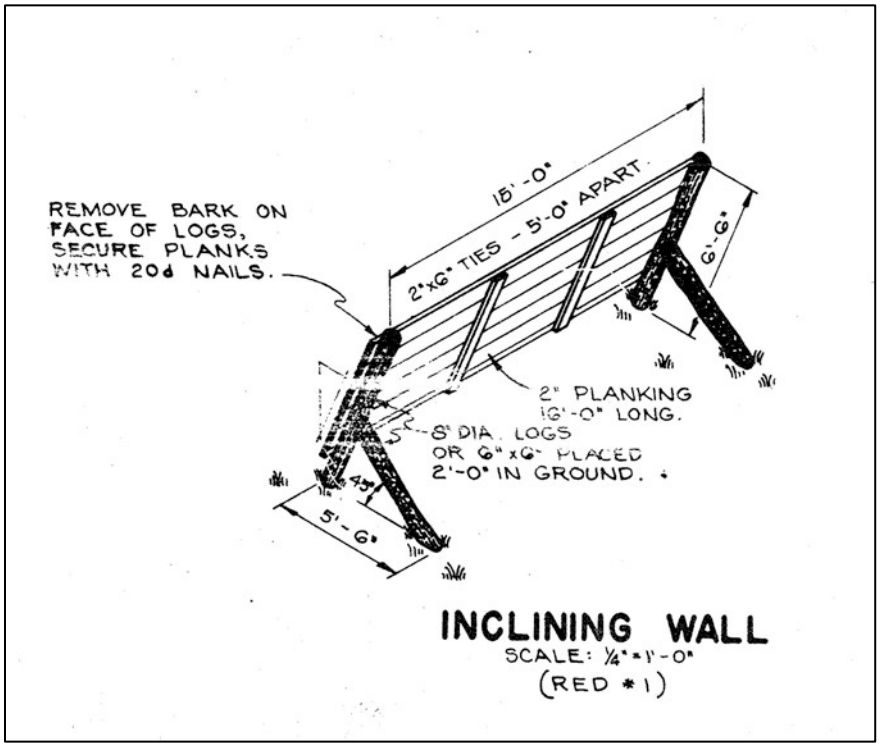


Figure 15. Negotiating the "Suspension Traverse" for training troops, Fort Bragg, NC, 1965 (NARA College Park, RG 111-SC post 1955, box 389, photo SC614386).

3.1.3 Training villages

During WWII, mock villages became a popular training tool that allowed soldiers to be immersed in realistic environments. WWII-era mock villages reflected the areas of conflict by either being built to resemble European or Japanese villages. During the Korean War, training took place in Korean village replicas and during the conflict in Vietnam, in Vietnam village replicas. So effective was training in mock villages, installations with one or two divisions generally would have one mock training village. These training villages were elaborately constructed courses consisting of groups of buildings constructed to resemble the housing, shops, and communal spaces of the cultures they represented. In addition to buildings, mock villages would often feature camouflaged elements, simulated enemy personnel, disappearing targets, booby traps, and landmines.[53]

During the Vietnam War, training villages were constructed at nearly all basic training facilities across all services. Bases in the southeastern United States were prioritized as sites for Vietnam villages because the

[53] Archibald et al., *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas*, ERDC/CERL TR-10-10, 7.

vegetation, terrain, and climate were most similar to Vietnam, thereby creating a realistic training environment for recruits.[54] As the war progressed, Vietnam training villages and mock prisoner of war (POW) camps were constructed at more facilities across the United States.

3.1.4 Summary of training infrastructures

During the Vietnam War, training methods were continually being modified to address the conditions of battle in theater. Training was mostly reactionary and based on returning personnel's input as to what was critically needed at the time. To accommodate the dramatic influx of troops being trained, the military branches reduced basic and specialized training times rather than building more training facilities to meet demand. Troops also received additional training once they arrived in Vietnam. Ground combat training for many troops occurred at Fort Sherman in Panama and in the Philippines.[55]

Basic training in all branches of the military introduced all personnel to the fundamentals of ground combat and included physical conditioning, firing small arms, hand-to-hand fighting, grenade launching, and obstacle course navigation. Army and Marine troops that went into infantry, artillery, and armor divisions received more training on weapons types, guerrilla warfare, ambushes, and other tactics and methods the Viet Cong employed against U.S. soldiers.

3.2 Ground warfare in the Vietnam War

The guerrilla combat in Vietnam placed U.S. forces in opposition with a loosely structured, yet highly effective Viet Cong (VC) and then later, the NVA. Although U.S. forces were trained in traditional warfare tactics—largely structured on WWII types of fighting—the enemy's guerrilla tactics enabled them to attack ground forces at any time or place, rendering U.S. soldiers ill prepared to fight effectively.[56] The U.S. forces worked in conjunction with the ARVN, which was primarily an infantry force. ARVN consisted of 10 infantry divisions plus "separate infantry, airborne, ranger

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[54] Richard P. Weinert, *The Role of USCONARC in the Army Buildup, FY 1966 (U)*. (Fort Monroe, VA: Headquarters United States Continental Army Command, 27 October 1967), 75.

[55] "Fort Sherman," GlobalSecurity.org, accessed August 2016, http://www.globalsecurity.org/military/facility/fort-sherman.htm.

[56] David Ewing Ott, *Field Artillery, 1954-1973*, (Washington, DC: Department of the Army, 1975), 7.

and armor units" that conducted search and destroy or clearing missions.[57] ARVN units also secured areas, and defended key installations or supply and communication routes.[58] MACV assisted in all levels of training and operations.

After operating in an advisory role, the United States began modifying training procedures at home in response to the fighting conditions encountered in-theater. This reactionary training regimen, along with one year rotations, left many ground combat troops to relearn how to conduct battle with the VC/NVA. The VC's theory of battle was summarized in a U.S. military pamphlet as "when the enemy advance, withdraw; when he defends, harass; when he is tired, attack; when he withdraws, pursue."[59] The VC exploited the weaknesses of their enemy, by emphasizing speed, security, surprise, and deception to conduct raids, ambushes, assassinations, and destruction missions.

The VC specialized in booby traps and deployed them across the country. Booby traps had many forms, and U.S. forces were trained to identify signs that booby traps had been constructed in an area. Booby traps could entail grenades, spike traps, poison arrows, trip wires, and maces. The only limitation of booby trap construction was the imagination of the VC.[60] Antipersonnel and antitank mines were also extensively used by the VC, often in conjunction with other methods such as diverting U.S. forces into the mined areas.[61]

The weapons used by the VC included small arms, machine guns, and recoilless rifles and mortars.[62] The defensive tactics used by the VC included elaborate ways to escape from ambushes, raids, meeting engagements, and surprise attacks. Ambushes were used frequently to slow their enemies while the main VC forces withdrew. The VC also evaded capture by hiding and blending in with the local populace. The hiding places the VC used were "almost limitless" and were a very effective tactic to disorient U.S. forces. Hiding underground, was most effective and the VC developed a

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[57] MACV, *Handbook for U.S. Forces in Vietnam*, 3.

[58] ibid.

[59] ibid., 14.

[60] ibid., 29.

[61] ibid., 40.

[62] ibid., 53–54.

tunnel system that spanned thousands of miles. The most simple element of the tunnel system were "spider holes"—camouflaged one-man foxhole used for observation and firing weapons at close range. More elaborate tunnels had reinforced rooms for storage, quarters, and clinics; multiple entrances, exits, and levels; and vents and water supplies. All aboveground elements of the tunnel systems were carefully concealed and difficult to find. Entrances could be found in gardens, animal pens, under piles of straw or dung, in or under structures, or in riverbanks.[63]

3.3 Ground combat training for Vietnam by military branch

Throughout nearly the entire war, the United States and its allies were reacting against the improvisations of the VC and the difficulties of engaging them in direct combat. Training U.S. forces for the unpredictable nature of the Vietnam War proved difficult. As the main ground force of the U.S. military, the Army provided the largest share of personnel fighting in ground combat roles. Second to the Army, thousands of Marines were trained and fought in ground combat roles during Vietnam. Navy and Air Force personnel encountered the fundamentals of ground combat during basic training, but because the Navy provided support from the sea and the Air Force provided air support, ground combat training was not a focus in those training methods.

3.3.1 U.S. Army

After WWII, the Army Ground Forces was retained through the reorganization of the War Department, with its name changed in 1948 to Army Field Forces. In 1955, the Army's ground forces were rebranded as the CONARC. During the military drawdown of Vietnam in 1973, CONARC was divided into the United States Army Forces Command (FORSCOM) and the United States Army Training and Doctrine Command (TRADOC).

Training for both the active Army and the Army Reserves was significantly impacted by the conflict in Vietnam. Overall, training programs were shortened so that more men could be trained and quickly deployed. However, Army training was modified to meet the unique demands of navigating Southeast Asia geography and guerilla warfare tactics of the NVA and the VC. Installations, such as Fort Bragg, Fort Campbell, and Fort

[63] MACV, *Handbook for U.S. Forces in Vietnam*, 18.

Lewis had training programs and expanded their ranges, training courses, and classrooms. The Army also added 15 entirely new training facilities at Forts Dix, Bliss, Polk, Knox, Jackson, Gordon, Benning, Leonard Wood, Ord, Sill, Sam Houston (medics), and McClellan (Women's Army Corps [WACs]).[64]

The construction at Fort Campbell, Kentucky, in the mid-1960s illustrates the development of bases for recruit training:

> Existing ranges also were expanded and renovated under this program. Ranges 4, 5, and 24 were expanded, and Ranges 8, 9, 25a, 26a, and 35 were renovated. Specifically constructed for training the cadres were the Ranges 11, 12, 19, 21, 23a, 36, 37, 38, and 39. Construction in the garrison area included physical training areas, test sites, a bayonet course, hand-to-hand pits, an obstacle course, drill fields, and confidence courses. All the construction and renovation, which cost an estimated $7.5 million, was completed in November 1966, two months after the graduation of the first group of new soldiers.[65]

In the early 1960s, Army basic training was still modeled on WWII-era requirements. Basic training consisted mainly of physical exercises and weapons instruction that lasted for eight weeks. Basic training was followed by Advanced Individual Training (AIT) where Military Occupational Specialty (MOS) duties were assigned. The length of AIT varied depending on the MOS, and individual installations were associated with training different specialties. At the peak of the Vietnam War in 1968, the Army converted all infantry AIT to Vietnam-oriented training, adding an additional week to prepare the trainees for the specific geographic and combat conditions of Vietnam.[66]

In 1962, Fort Polk was designated as a primary Infantry Training Center, and it eventually became where the largest proportion of enlisted men were trained for the Vietnam War. Consequently, the training areas were

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[64] DoD, *Department of Defense Annual Report for Fiscal Year 1966*, 217–218.

[65] Chanchani et al., *Historic Context for the Cold War at Ft. Campbell, Kentucky*, 59.

[66] DoD, *Department of Defense Annual Report for Fiscal Year 1968* (Washington, DC: Department of Defense), 174.

modified to orient the soldiers to the conditions in Vietnam. That orientation included a Vietnam-orientation facility, also known as a mock village. Basic infantry training also shifted toward Vietnam-specific requirements. At Fort Ord, California, rifle marksmanship training shifted toward a concept called "Quick Kill." Quick Kill techniques focused on developing reflexes to react and shoot quickly at targets in close proximity. This tactic was in response to the guerilla warfare of the VC, in which the enemy appeared suddenly and at close range.[67]

In the Army, most infantry AIT centers were adapted to reflect the ground conditions of Vietnam. To increase the realism of infantry training, installations built village replicas to introduce soldiers to Southeast Asian infrastructure as well as to illustrate how guerilla fighters used elements of a village to gain an advantage over U.S. troops. Training scenarios would include soldiers dressed up as villagers and as VC soldiers that the trainees would have to fight.

In the United States, mock village construction modified the existing terrain to replicate the geography of Southeast Asia. A site's topography and vegetation were enhanced to limit visibility and illustrate how the enemy could hide in close proximity. The villages featured typical arrangements of buildings found in Vietnam and included housing, communal buildings, and shrines. More elaborate mock villages also had replica rice paddies and livestock pens. Layered throughout the villages were booby traps, tunnel systems, and punji stakes.

Among the mock villages constructed during the Vietnam War era were those at Fort Devens, Fort Polk, Fort Gordon, Fort Bragg, Fort Jackson, Fort Riley, and Fort Ord. Tigerland, at Fort Polk, was one of the most elaborate mock villages constructed during the 1960s. Tigerland featured an elaborate tunnel system designed to replicate the tunnels used by the VC for hiding soldiers, weapons, ammunition, food, and supplies. Tunnels also provided spaces for command centers, aid stations, hospitals, and other support facilities. It was critical that soldiers deploying to Vietnam understand the risks of the tunnel systems they would encounter. Tunnels were a difficult obstacle in ground combat because the entrances were hard to find, they were often booby trapped, and they provided effective

[67] David F. Winkler. *Training to Fight: Training and Education during the Cold War*, Special Report 97/99 (Champaign, IL: U.S. Army Construction Engineering Research Laboratory, July 1997), 61.

protection and escape routes for VC guerrillas against U.S. search and destroy missions. If a tunnel entrance was found, a soldier had to crawl in to assess the function of the tunnel. If VC soldiers were hiding in the tunnel, the U.S. infantryman needed to know how to react appropriately in that kind of space.

Vietnam veteran Ron Milam recounts his experience at Tigerland, illustrating the effectiveness in the realism of mock village training scenarios:[68]

> And so we graduated in the morning, and we got on an airplane, and they flew us to Ft. Polk, Louisiana. Now when you got your orders for Ft. Polk, if you were at Ft. Dix, with the exception of those of us going on to OCS, if you got your orders for Polk, you knew where you were going next. Ft. Polk was Tigerland, and that meant Vietnam. And so you have this… all these guys that their next stop is going to be Vietnam, on their way to Ft. Polk.
>
> Morale was really low for them. Wasn't bad for me because again, I knew I was at least a year away from anything, and I knew, I was reasonably certain that I would get good training because all through basic training they'd say, 'If you get orders for Polk, you know you're going to Nam, and if you get orders for Polk, you'll get really good training. It's tough, man. Tigerland—next to Vietnam, Tigerland's the worst thing you'll ever go through.' And so you get this feeling that, wow, I'm really going someplace that's important, and it has this incredible reputation.

In addition to mock villages, some training sites featured POW camps, which were similar in layout and construction to the villages but were used to train soldiers in what to expect if taken prisoner.

Nearly all Army installations in the United States were affected by the demands of the Vietnam War. Nevertheless, ground combat training activities were concentrated at several facilities across the country. Important training facilities for ground combat included those that focused on infantry, artillery, and armor as well as basic and some advanced individual training.

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[68] Account of Ron Milam, Ohio, obtained via Vietnam Veterans History Project, Texas Tech University. Accessed online: http://www.vietnam.ttu.edu/oralhistory/interviews/.

Among the most significant locations for training were installations designated as Army Training Centers (ATCs), including Fort Campbell, Kentucky, and Fort Chaffee, Arkansas. Some installations were designated as a United States Training Center, Infantry including Fort Ord, California; Fort Benning, Georgia; Fort Polk, Louisiana; Fort Dix, New Jersey; Fort Jackson, South Carolina; and Fort Gordon, Georgia. Army Airborne training was conducted at Fort Benning and at Fort Bragg, North Carolina (also home to Special Forces training). Fort Knox, Kentucky, hosted an armored school, and Fort Sill, Oklahoma, was designated as the United States Field Artillery Center. Engineering training was accomplished at other installations, including Fort Irwin, California, and Fort Leonard Wood, Missouri.[69]

Quite often, installations provided several types of training, with basic training offered at many installations, and other more specialized training also occurring at the same post. For example, Fort Chaffee also had armor and artillery training, and Fort Irwin had artillery training as well. Communications and military police training were provided at Fort Gordon, and Fort Jackson also provided armored personnel carrier and helicopter training in addition to standard infantry training.[70]

Figure 16–Figure 51 show how Army ground combat training was conducted at several of these facilities.

[69] Winkler. *Training to Fight*, 56–57, 108, 111, 114–115, 136–138, 146, 156, 160, 169, 175.

[70] ibid., 108, 111, 137-138, 175.

Figure 16. Members of the 769th Sig Bn during field training, Fort Polk, LA, January 1962 (NARA College Park).

Figure 17. Hand-to-hand combat exhibition at the Army Training Center, Fort Polk, LA, July 1962 (NARA College Park).

Figure 18. An integral element of Vietnam War-era training was an explanation of the training course, as show here during a class held Fort Polk, LA, March 1965 (NARA College Park).

Figure 19. Recruits of Co D, 2nd Bn, 2nd Training Brigade use pugil sticks during training on the bayonet course, Fort Polk, LA, March 1965 (NARA College Park).

Figure 20. Men in advanced infantry training search the Tiger Ridge mock Vietnamese village for carefully planted booby traps as practice. Fort Polk, LA, January 1966 (NARA College Park).

Figure 21. Punji sticks and barbed wire surround the mock Vietnamese village at Tiger Ridge, where the trainees learn to seize and search Viet Cong villages, Fort Polk, LA, February 1966 (NARA College Park).

Figure 22. Officers use the M-60 machine gun during Active Duty Training with the Durham U.S. Army Ranger School at Fort Benning, GA, 17–30 July 1966 (NARA College Park).

Figure 23. Students of Infantry Career Officer Course fire AR-15s from foxhole using coach and pupil system at Roosevelt Range, Fort Benning, GA, 1 August 1966 (NARA College Park).

Figure 24. An infantry basic soldier observes the aggressor from concealed position in swamp, during escape and evasion training at Fort Gordon, GA, April 1965 (NARA College Park).

Figure 25. Range 24 at Fort Leonard Wood, MO, which is the 25-meter firing range where the basic solider is taught light combat firing, 27 April 1966 (NARA College Park).

Figure 26. Basic driver training on the light vehicle drivers course, Fourth Training Regiment, Fort Jackson, SC, at Area 023, October 1962 (NARA College Park).

Figure 27. Colonel Bruno Rainer, military attaché for Army/Air Force Austrian Embassy, observes the technique of fire training at Salerno Range, Fort Jackson, SC, 15 February 1963 (NARA College Park).

Figure 28. A mock-up model of a Trainfire range is shown to Lieutenant General Albert Watson, II, Commanding General, Third U.S. Army, Fort Jackson, SC, 21 February 1963 (NARA College Park).

Figure 29. Sergeant First Class Paul L. Werdt, of Headquarters and Headquarters Company, Third Training Regiment, Fort Jackson, provides a detailed explanation of the 3.5 inch rocket launcher to Sergeant First Class Donald W. Faucett, of the 423rd Regiment, 70th Infantry. Classes were a part of the summer training mission of reservists of the 423rd, 2 July 1963 (NARA College Park).

Figure 30. A 200-pound mace on display at Bau Bang's Vietnamese village replica. The mace is hung in a tree with a trip wire attached. It can knock out a squad of men. Fort Jackson, SC, April 1967 (NARA College Park).

Figure 31. A Vietnamese religious shrine is toured by members of the Royal Danish Army during a tour of Bau Bang—the replica of a Vietnamese hamlet at Fort Jackson, SC, 8 April 1967 (NARA College Park).

Figure 32. Site of Vietnamese Village being constructed in "H" Area of Fort Bragg, NC, by the 14th Engineering Battalion. View is from the lookout tower in the center of the compound, 8 April 1966 (NARA College Park).

Figure 33. Asian village search and seizure training, Fort Bragg, NC, 13 July 1966 (NARA College Park).

Figure 34. Non-Commissioned Officer (NCO) Academy students fire the record course with M-14 rifles on Range #42, lane #11, Fort Leonard Wood, MO, October 1962 (NARA College Park).

Figure 35. A view showing the firing line on Range #42 during record firing by students of the Fort Leonard Wood NCO Academy with M-14 rifles, Fort Leonard Wood, MO, October 1962 (NARA College Park).

Figure 36. Long view down range at Range #50 during familiarization firing of the M-60 machine gun by students in the NCO Academy, Fort Leonard Wood, MO, October 1962 (NARA College Park).

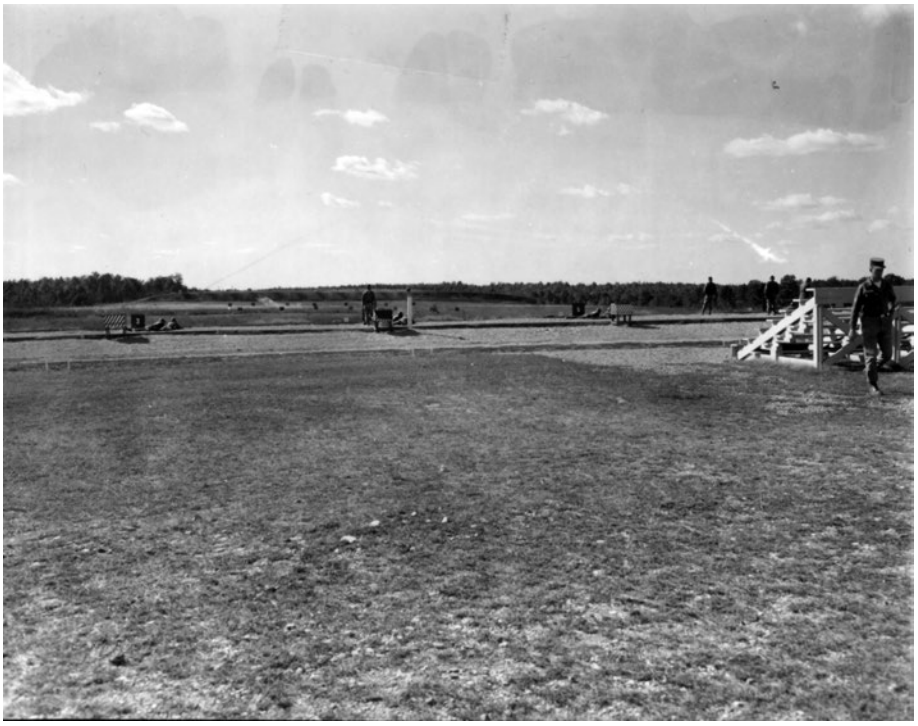

Figure 37. Long view down range at Range #50 showing the control tower during familiarization firing of the M-60 machine gun by students in the NCO Academy, Fort Leonard Wood, MO, October 1962 (NARA College Park).

Figure 38. Members of the 1st ABN Battle Group, 502nd Inf, crawl through the grass with their M-60 machine guns, during a field exercise at Fort Campbell, KY, August 1962 (NARA College Park).

Figure 39. Personnel of B Company, 501st Signal Battalion fire for record on the range, Fort Campbell, KY, 9 January 1963 (NARA College Park).

Figure 40. Initial firing of the new 5.56 mm M16 (AR-15) rifle, Fort Campbell, KY, 8 November 1963 (NARA College Park).

Figure 41. One of the mock Vietnamese villages that was set up during the Eagle Prey I operation, Fort Campbell, KY, 27 May 1966 (NARA College Park).

Figure 42. 4th Battalion 1st Infantry of the 6th Infantry Division gets orientation at the Viet Cong Village, Fort Campbell, KY, 20 February 1968 (NARA College Park).

Figure 43. 4th Battalion 1st Infantry of the 6th Infantry Division gets orientation at the Viet Cong Village, Fort Campbell, KY, 20 February 1968 (NARA College Park).

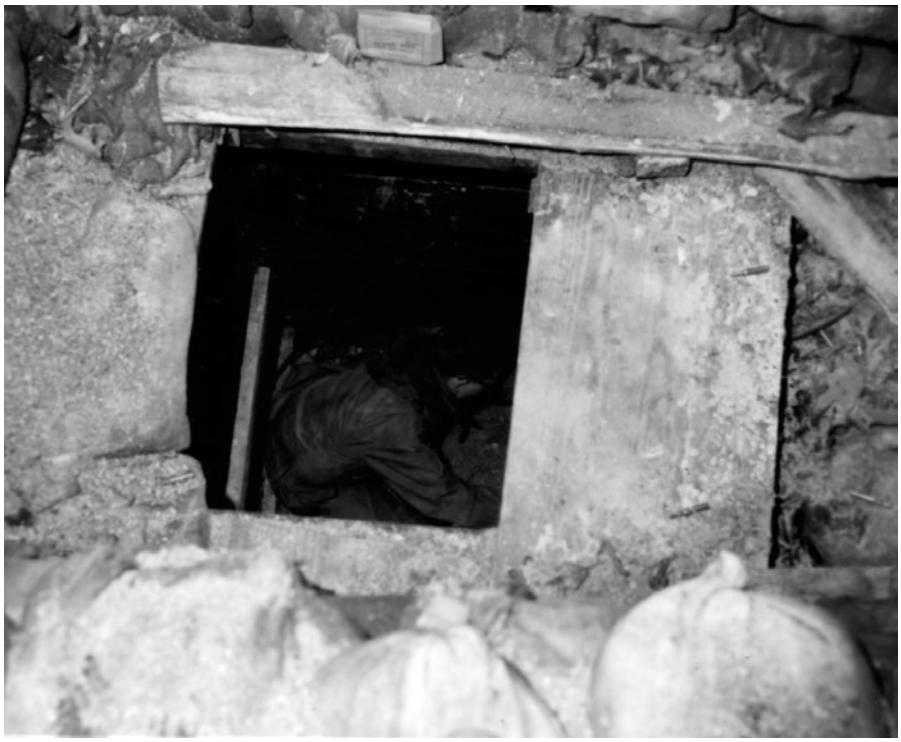

Figure 44. 4th Battalion 1st Infantry of the 6th Infantry Division gets orientation at the Viet Cong Village, Fort Campbell, KY, 20 February 1968 (NARA College Park).

Figure 45. 4th Battalion 1st Infantry of the 6th Infantry Division gets orientation at the Viet Cong Village, Fort Campbell, KY, 20 February 1968 (NARA College Park).

Figure 46. 4th Battalion 1st Infantry of the 6th Infantry Division gets orientation at the Viet Cong Village, Fort Campbell, KY, 20 February 1968 (NARA College Park).

Figure 47. Trainees are observed at Ditto Hill Trainfire Rifle Range, Fort Knox, KY, June 1963 (NARA College Park).

Figure 48. The Vietnam Village, located at 16th Armor Group's Irizarry Training Area, Fort Knox, KY, 2 May 1967 (NARA College Park).

Figure 49. Poorman Range, an infiltration course, at Fort Knox, KY, 5 May 1966 (NARA College Park).

Figure 50. The mock Vietnamese village at the Jungle & Guerilla Warfare Training Center at Schofield Barracks, HI, May 1962 (NARA College Park).

Figure 51. Trainees about to ambush the mock Vietnamese village at the Jungle & Guerilla Warfare Training Center at Schofield Barracks, HI, May 1962 (NARA College Park).

3.3.2 U.S. Marine Corps

Like the Army, the Marine Corps was heavily involved in ground combat in Vietnam. The Marine Corps was an early adopter of counter-guerrilla ground combat techniques, and had increased its counter-guerrilla warfare and counterinsurgency (COIN) operations emphasis in both individual and unit training by the early 1960s. The Marine Corps' schools system provided instruction in the theory and practices of both tactics, which required more space to train the ever-increasing troop levels. Eventually, the Marines would train 6,000 to 8,000 recruits a month for combat in Vietnam.

Marine Corps basic training was conducted at two Marine Corps Recruit Depots (MCRDs): Parris Island, South Carolina, and San Diego, California (one on each coast). In response to the need for more troops in Vietnam, basic training was cut from 11 weeks to 8 weeks, while the size of the recruit platoons was increased. In 1964, training was standardized through a training syllabus that was adopted at both recruit depots. Basic training involved physical fitness, team building exercises such as obstacle courses, and familiarization with weapons. At MCRD Parris Island in 1971, Individual Combat Training programs were added to a recruit's curriculum.[71]

After basic training, Marine recruits deploying to Vietnam were assigned to Camp Pendleton, California—the primary installation for Vietnam-based training. At Camp Pendleton, introductory training was conducted at Camp Las Pulgas and in the wooded terrain behind the Naval Hospital. At those locations, new recruit training consisted of 15 days of training in counter-guerilla warfare along with weapons training and physical conditioning. The emphasis on counter-guerilla warfare introduced trainees to mines, booby traps, and ambushes.[72] After the two weeks of intensive Vietnam-themed training, Marines deploying for Vietnam were transferred

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[71] Marine Corps Recruit Depot Parris Island, "Training: The Vietnam Era," Chapter 7 in *100 Years of Making Marines at Marine Corps Recruit Depot Parris Island, South Carolina*. (Parris Island, SC: U.S. Marine Corps, 2015), accessed online, http://www.mcrdpi.marines.mil/Portals/76/Docs/CentennialCelebrationBook/MCRDPI-history-book-7.pdf.

[72] JRP Historical Consulting, *Inventory and Evaluation of National Register Eligibility for Buildings and Structures at U.S. Marine Corps Base Joseph H. Pendleton*, (Davis, CA: JRP Historical Consulting Services, 2000), 75–76.

to Marine Corps Air Station, El Toro, or to Norton Air Force Base (AFB) for air transport to Vietnam.[73]

Overall, ground combat training in the Marine Corps was conducted at MCRD Parris Island, South Carolina; Marine Corps Base Camp Lejeune, North Carolina; Marine Corps Base Quantico, Virginia; Marine Corps Base Camp Pendleton, California; and MCRD San Diego, California. Camp Pendleton also offered COIN operations training, and Twentynine Palms Marine Corps Air Ground Combat Center, California, trained personnel in artillery. Camp Lejeune, North Carolina, provided guerilla warfare training at a specially designed training area, with courses lasting from one day to two weeks. This installation also provided Marines with specialized helicopter training. Marine Corps Base Quantico, Virginia, primarily served as a school for Marine Corp officers, but it did have a mock village for Vietnam-related training.[74]

The following images show how Marine Corps basic and ground combat training was conducted at many of these facilities (Figure 52–Figure 73).

[73] ibid.

[74] Allan R. Millet, "Marine Corps Base Camp Lejeune In The Vietnam Era," in *Semper Fidelis: The History of the United States Marine Corps,* (Florence, MA: Free Press, 1991), 71, Chapter accessed online, http://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Semper%20Fidelis%20Popular%20History%20Publication/13_Chapter%207.pdf; Charles A. Fleming, Robin L. Austin, and Charles A. Braley, *Quantico: Crossroads of the Marine Corps,* (Quantico, VA: History and Museums Division, Headquarters, U.S. Marine Corps), 1978, 95; Winkler, *Training to Fight*, 116-117, 120-121, 175.

Figure 52. Marine recruit using a rifle aiming device, MCRD Parris Island, SC, 1970 (NARA College Park).

Figure 53. One of the newer techniques in recruit rifle marksmanship training was the 900 inch firing line. The 900 inch line was designed to familiarize the recruit with the M-14 rifle and to give him the proper windage and elevation for the 200 yard line. The recruit fired this 900 inch line during their first week at the rifle range, and fired both slow and rapid. The target had a one-inch bullseye, MCRD Parris Island, SC, 1967 (NARA College Park).

Figure 54. A rifle range coach assists a recruit in marking a sighting change on the 500 yard range; MCRD Parris Island, SC, 1967 (NARA College Park).

Figure 55. Recruits went through a phase in bayonet training where they were taught basic fundamentals in offensive and defensive moves with a bayonet and rifle. Pugil sticks were used in place of rifles and were cushioned on the end. Helmets and gloves were worn for protection, MCRD Parris Island, SC, 1967 (NARA College Park).

Figure 56. A platoon of recruits snap in during their first week at the rifle range. The first week at the ranges was spent in learning position and snapping in, or dry firing on the school range. The Primary Marksmanship Instructor (foreground) teaches the positions and the basic fundamentals of rifle marksmanship. In the background, the Series Officer and the Series Gunnery Sergeant (in the tropical uniform) observe the snapping in position practice, MCRD Parris Island, SC, 1967 (NARA College Park).

Figure 57. One recruit is armed with a pugil stick, and the other is unarmed. This training was designed to teach the recruit to take advantage of his weapon or if the situation was reversed, to defend himself against his armed opponent, MCRD Parris Island, SC, 1967 (NARA College Park).

Figure 58. Platoons of recruits go through daily physical workouts at the obstacle course at MCRD Parris Island, SC. Physical training Instructors supervise while recruits run through the course, designed to build body stamina and quicken reflexes, 1967 (NARA College Park).

Figure 59. The control tower NCO tells the shooters how much time they have to finish their string of slow fire at the 300 yard line. The loud speaker system can be heard above the noise of firing, but coaches and PMIs make sure their shooters know how much time is left. The shooters have 12 minutes to fire 10 rounds of slow fire and 50 seconds for their 10 rounds of rapid fire. The tower NCO gives two and three minute warnings, MCRD Parris Island, SC, 1967 (NARA College Park).

Figure 60. A Platoon Instructor checking the scores on the new recruits firing on the 500 yard line, MCRD Parris Island, SC, 1967 (NARA College Park).

Figure 61. New recruits receiving their M-14 rifles, MCRD Parris Island, SC, 1967 (NARA College Park).

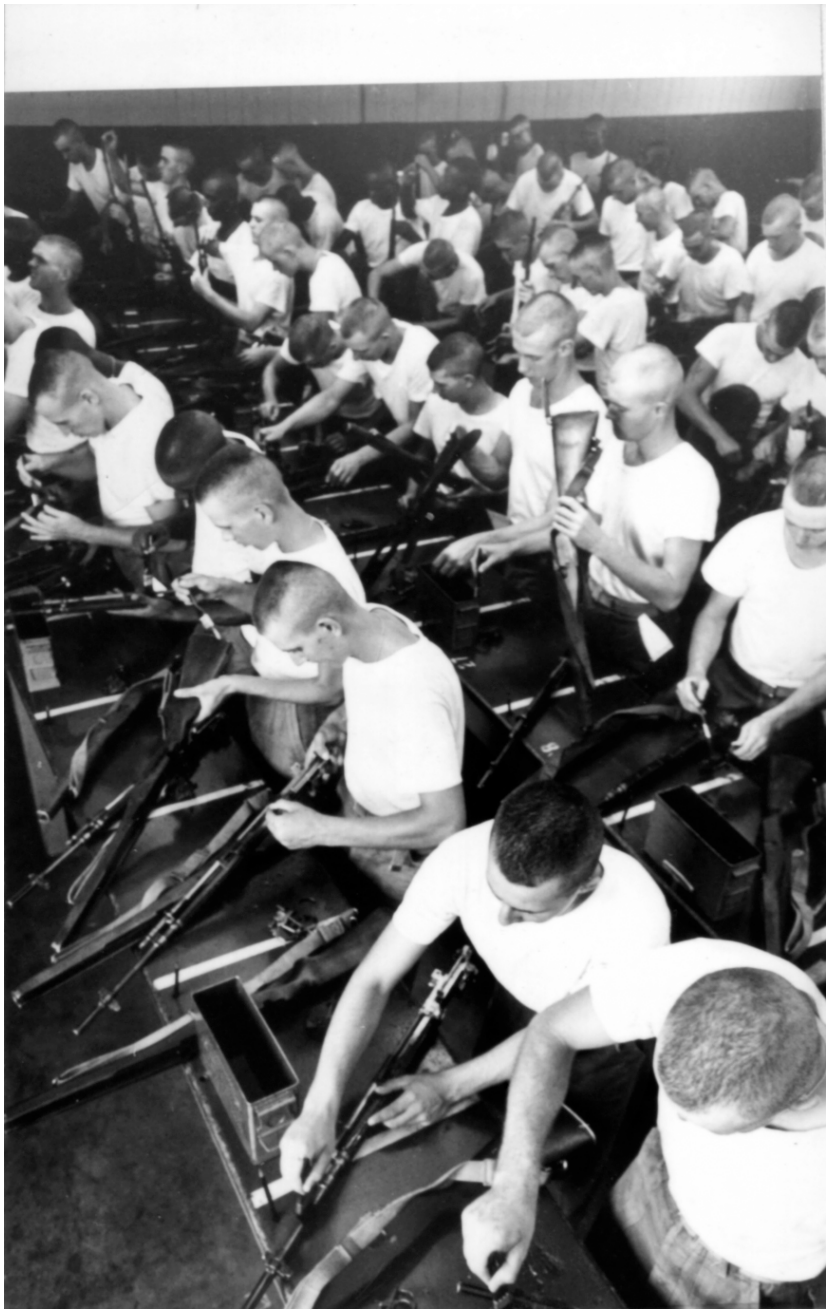

Figure 62. Marine Corps recruits develop combat readiness—an infantry trainee scores a direct hit on a tank target during his first firing of the rifle grenade at a First Infantry Training Regiment range, Camp Geiger, Camp Lejeune, NC. The recruits used dummy rounds before firing live grenades, 1966 (NARA College Park).

Figure 63. Troops from the 21 Marine Division wait for a flame-throwing tank to demolish a pillbox before moving in and "mopping up" during a demonstration for Secretary of Defense Robert McNamara, Camp Lejeune, NC, 12 May 1961 (NARA College Park).

Figure 64. Marine riflemen move in for the final phase of the assault demonstration, Camp Lejeune, NC, 21 May 1969 (NARA College Park).

Figure 65. A Reconnaissance element from "I" Company, Third Battalion, Sixth Marines crosses a stream on a raft constructed for recon-type training, Camp Lejeune, NC, NO DATE (NARA College Park).

Figure 66. Butt of X Courses target in the air, Camp Lejeune, NC, 1966 (NARA College Park).

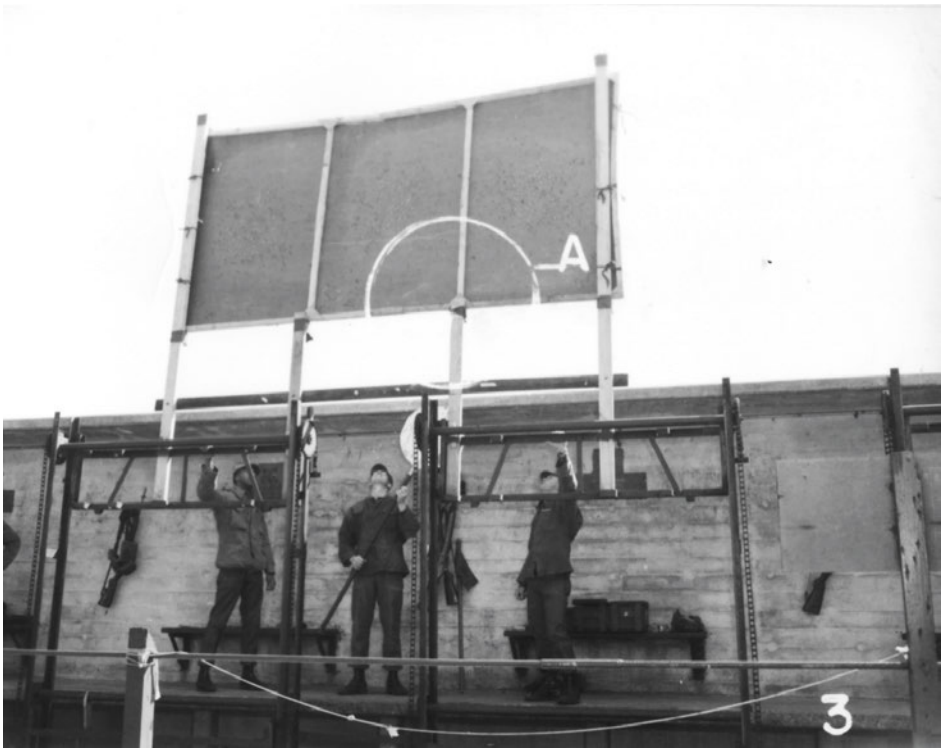

Figure 67. Overall view of the Southeast Asian Village constructed at the Basic School Marine Corps Station, Quantico, VA, 9 June 1966 (NARA College Park).

Figure 68. In a demonstration at Division Schools replica of an Asian village, Division Schools personnel pose as villagers and enemy aggressors, as men of the 1st Marine Division move through to clear and defend the village of enemy forces, Camp Pendleton, CA, 13 October 1964 (NARA College Park).

Figure 69. In a demonstration at Division Schools replica of an Asian village, Division Schools personnel pose as villagers and enemy aggressors, as men of the 1st Marine Division move through to clear and defend the village of enemy forces, Camp Pendleton, CA, 13 October 1964 (NARA College Park).

Figure 70. In a demonstration at Division Schools replica of an Asian village, Division Schools personnel pose as villagers and enemy aggressors, as men of the 1st Marine Division move through to clear and defend the village of enemy forces, Camp Pendleton, CA, 13 October 1964 (NARA College Park).

Figure 71. Tower #1 and bleachers at range 208 at the Combat Rifleman Environmental Range, Camp Pendleton, CA, 24 July 1962 (NARA College Park).

Figure 72. A Marine Corps drill instructor teaches recruits the proper method of firing from inside a building, MCRD San Diego, CA, December 1972 (NARA College Park).

Figure 73. Camouflaged Marine recruits from MCRD San Diego practice the Low Crawl with M-16 rifles during training at the Infantry School, Camp Pendleton, CA, 17 October 1974 (NARA College Park).

3.3.3 U.S. Navy

The Navy's primary involvement in Vietnam was providing sea support and transportation logistics. However, Navy basic training did expand to meet the demands of ground combat in Vietnam, and it taught them the fundamentals of fighting. In the Navy, basic training was followed by AIT. Naval training included weapons instruction (Figure 74–Figure 76), physical fitness, and hand-to-hand combat training.

Unlike the Army, the Navy used mock village scenarios for advanced training of Navy SEALs, rather than as a compliment to infantry training. The Navy had at least one mock village, located at Naval Air Base Coronado. There, the village lacked the realistic features found at other mock village sites, including heavy vegetation.

The Navy had three Naval Recruit Training Centers at Great Lakes, Illinois; San Diego, California; and Bainbridge, Maryland. During the 1960s, the increase in trainees required the development of a new facility. The new Naval Training Center was located in Orlando, Florida, and was built on the site of a former Air Force base.[75]

Naval Training Center Great Lakes, Illinois, was the primary recruit and technical training center during the Vietnam War. Component commands included the Recruit Training Command and Service Schools Command.[76] San Diego Naval Training Center and Commander Training Command Pacific, California, was designated a Recruit Training Command and Service School Command in the 1940s. The training center provided readiness training to thousands of fleet sailors annually in the areas of seamanship, gunnery, engineering, and other related skills.[77] The Bainbridge Naval Training Center at Port Deposit, Maryland, operated from 1942 to 1976, providing recruit training for the East Coast, and training for enlisted women. Bainbridge was also home to a variety of service schools and the Naval Academy Preparatory School.[78] The Naval Training Center Orlando,

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[75] Winkler, *Training to Fight: Training and Education during the Cold War*, 65.

[76] ibid, 141.

[77] ibid., 117.

[78] Janet L. Davis, "Bainbridge Naval Training Center," Maryland Historical Trust State Historic Sites Inventory Form, Survey No. CE-1284, (Annapolis, Maryland: Maryland Historical Trust), 1982, http://msa.maryland.gov/megafile/msa/stagsere/se1/se5/007000/007600/007638/pdf/msa_se5_7638.pdf.

Florida, opened in 1968 to provide "boot camp" for enlisted navy recruits. By 1973, there were two training camps on site with 8,000 recruits on-board. That same year, it became the sole recruit training center for enlisted women. The installation was closed in 1998.[79] Naval Air Base Little Creek, Virginia, was an amphibious training base during the Vietnam War, and there was a Naval Construction Training Center at Gulfport, Mississippi.[80]

Figure 74. Members of the U.S. Naval Mobile Construction Battalion 62 fire rifles on the rifle range during block military training, Gulfport, MS, 1970 (NARA College Park).

[79] Milton Smith, "RTC Orlando," last modified April 2016, http://rtcorlando.homestead.com/.

[80] Winkler, *Training to Fight*, 153, 192.

Figure 75. A view of the mock Vietnamese village (Dragon Village) at Naval Amphibious Base (NAB) Coronado, CA, used in SEAL team training exercises, 7 February 1968 (NARA College Park).

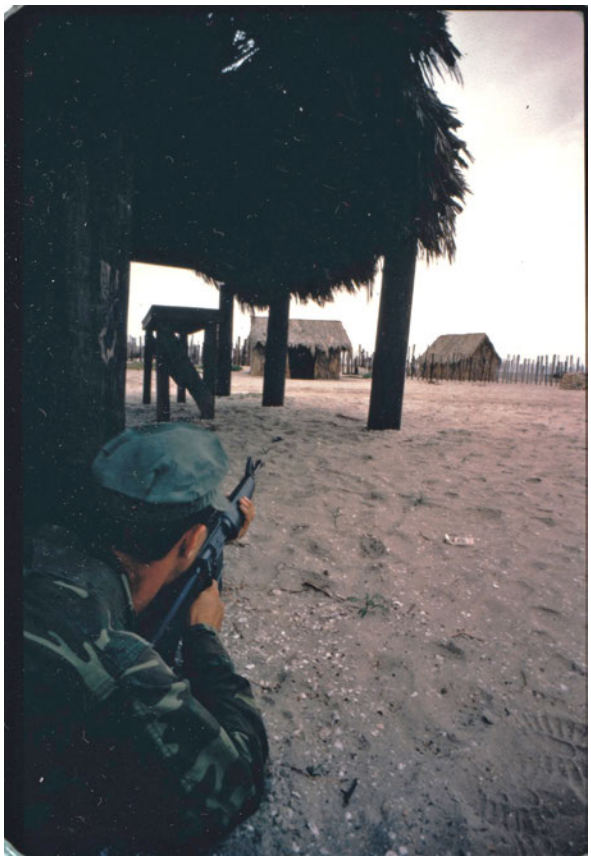

Figure 76. SEAL Team One trainees keep their M-16 rifles ready as they advance on the mock Vietnam village known as Dragon Village at Naval Amphibious Base (NAB) Coronado, CA, used in SEAL team training exercises, 7 February 1968 (NARA College Park).

3.3.4 U.S. Air Force

Like the Navy, the U.S. Air Force (USAF) played a supporting role for ground combat by conducting bombing missions, search and rescue operations, supply relief, and some medical evacuations. During Vietnam, the Army had developed a large helicopter contingency, reducing the Air Force's responsibilities. Air Force recruits did go through basic and survival training, which taught them the fundamentals of fighting. Basic training in the Air Force introduced airmen to the fundamentals of ground combat through small arms training, hand-to-hand combat, and methods on how to evade capture along with what to do if captured (Figure 77–Figure 92).

Lackland Air Force Base, Texas, was the primary location for Air Force enlisted recruit basic training during the Vietnam War. Air Force Basic Military Training (BMT) schedules reflected the need to more quickly train and deploy airmen to Vietnam. During November to December 1963, the Air Force moved from eight weeks of BMT to seven, and that was reduced to six weeks in October 1964. From August 1965 through April 1966 (the height of the troop buildup), a new training schedule was put in place. Instead of six weeks training at Lackland, recruits left after 22 days and then completed their training at a technical training school. In April 1966, this method was eliminated, and the recruits undertook a six-week "minimum essential" BMT training course.[81]

Amarillo Air Force Base, Texas, was reactivated in 1966 for basic training as a result of the rapid expansion of Air Force personnel (Figure 79). For another two years, Amarillo AFB continued to conduct BMT. Hurlburt Field, Florida, was home to the USAF Special Air Warfare Center and the Air Ground Operations School (Figure 92). Recruits were trained in unconventional warfare and COIN to support the military efforts in Southeast Asia.[82] Maxwell Air Force Base, Alabama, held a two-week COIN course in 1962. By 1963, the course had nearly 1,000 students enrolled.[83] Fairchild Air Force Base, Washington, became home to the USAF Survival

[81] U.S. Air Force, 737th Training Group, "Air Force Basic Military Training Fact Sheet," 2011, http://www.basictraining.af.mil/library/factsheets/factsheet.asp?id=15599.

[82] Winkler, *Training to Fight*, 130.

[83] ibid., 99.

School in 1966. Courses offered included combat survival training; survival, evasion, resistance and escape (SERE) training; and water survival training.[84]

Figure 77. Tactical Air Command's Composite Air Strike Force established a ground combat training course at Shaw Air Force Base, SC, to instruct personnel in hostile environment survival techniques. The curriculum included perimeter defense, hand-to-hand combat, escape and evasion, field sanitation, land navigation, physical training, and instruction in the use of small arms. Two students are shown firing on "aggressor troops," defending their position at the training camp, March 1962 (NARA College Park).

[84] Winkler, *Training to Fight,* 195.

Figure 78. Students at the Tactical Air Command's ground combat training course at Shaw Air Force Base, SC, learn the art of disarming an opponent in hand-to-hand combat, March 1962 (NARA College Park).

Figure 79. A basic airman crawls through a simulated mine field. To add realism, blasting caps are set off periodically to the sides of the course. In February 1966, the Air Training Command established a second Basic Military Training Center at Amarillo Air Force Base, TX, November 1966 (NARA College Park).

Figure 80. Marines and Air Force pararescuemen attack “Viet Cong” village for guerilla warfare training, McCoy AFB, Orlando, FL, 1966 (NARA College Park).

Figure 81. U.S. Air Force students attending the M-16 Rifle Combat Orientation School fire the M-16 rifle at Hamilton Air Force Base, CA, July 1967 (NARA College Park).

Figure 82. Upon completing their M-16 rifle firing, U.S. Air Force student attending the Air Defense Command M-16 Rifle Combat Orientation School leave the rifle range at Hamilton Air Force Base, CA, July 1967 (NARA College Park).

Figure 83. Trainees demonstrate a bayonet attack at the combat preparedness course, Lackland Air Force Base, TX, March 1967 (NARA College Park).

Figure 84. U.S. Air Force students attending the M-16 Rifle Combat Orientation School throw practice grenades from a kneeling position at Hamilton Air Force Base, CA, July 1967 (NARA College Park).

Figure 85. U.S. Air Force students attending the M-16 Rifle Combat Orientation School fire the M-16 rifle in prone position at Hamilton Air Force Base, CA, July 1967 (NARA College Park).

Figure 86. U.S. Air Force students attending the M-16 Rifle Combat Orientation School fire the M-16 rifle at Hamilton Air Force Base, CA, July 1967 (NARA College Park).

Figure 87. U.S. Air Force basic airmen are briefed before they run the confidence course at Lackland Air Force Base, TX, January 1969 (NARA College Park).

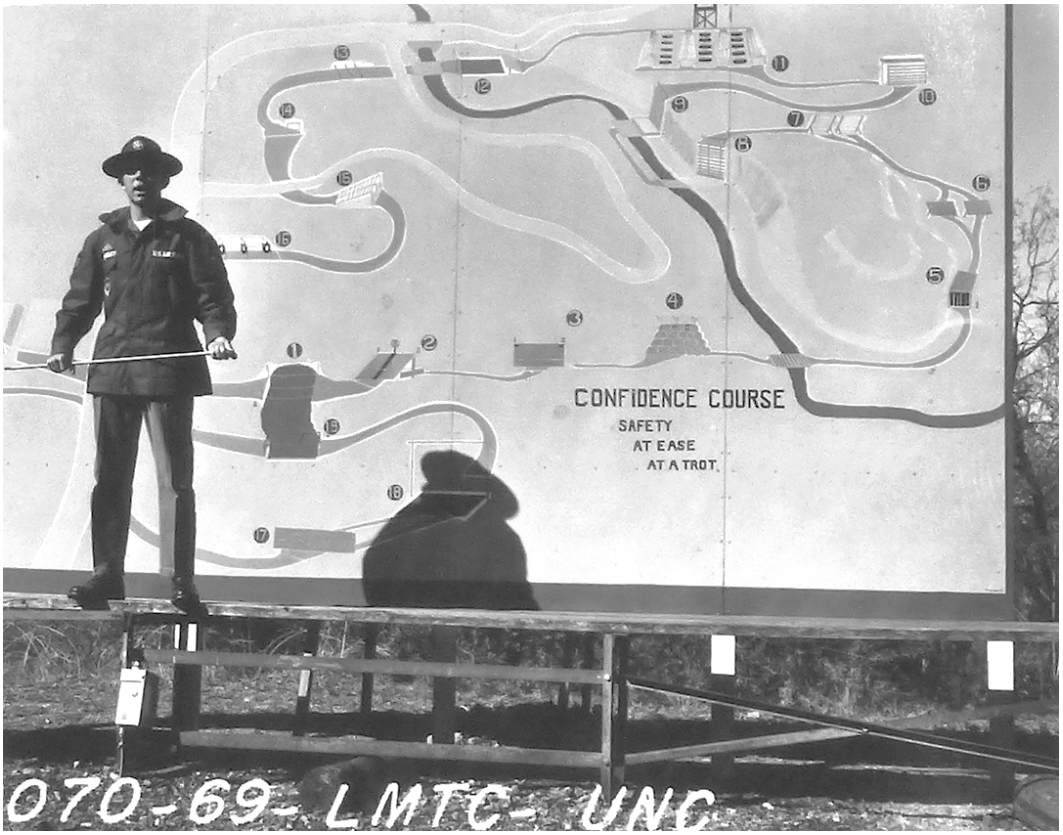

Figure 88. A U.S. Air Force basic trainee on the confidence course at Lackland Air Force Base, TX, January 1969 (NARA College Park).

Figure 89. U.S. Air Force basic airmen negotiate the confidence course at Lackland Air Force Base, TX, January 1969 (NARA College Park).

Figure 90. Airmen practice climbing on the barreled obstacle at the obstacle course site for basic military training, Amarillo Air Force Base, TX, October-–November 1966 (NARA College Park).

Figure 91. Airmen cross a rope on the confidence course site during basic training, Amarillo Air Force Base, TX, October-November 1966 (NARA College Park).

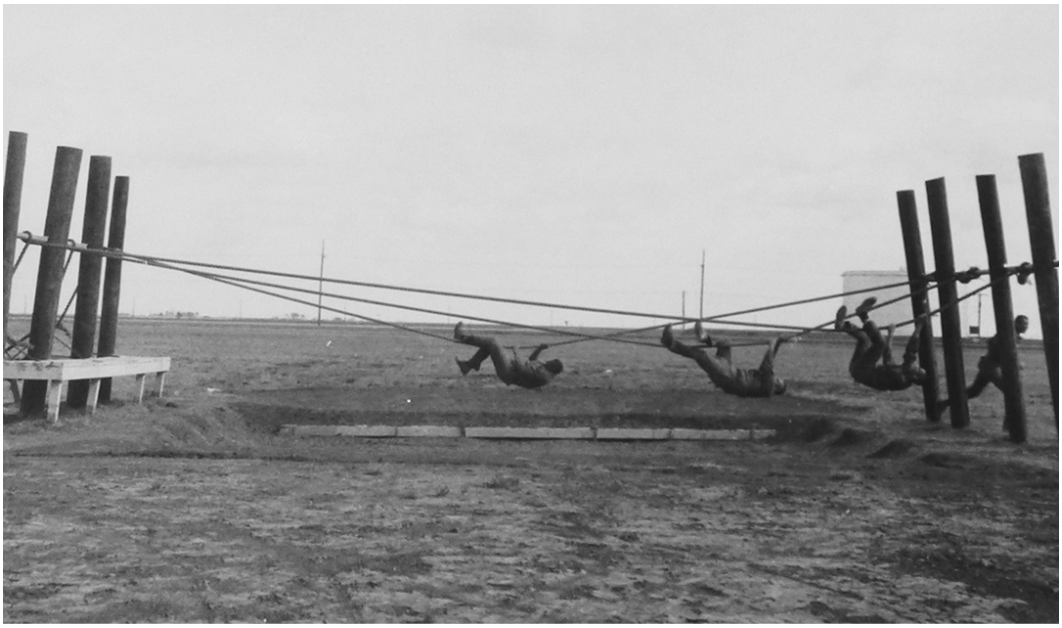

Figure 92. Troops wait for a UH-1P "Slick" to pick them up after completing their mission during COIN training, Hurlburt Field, FL, August 1969 (NARA College Park).

4 Evaluation and Identification

This chapter identifies property types found on U.S. military installations that can be associated with Vietnam War-related ground combat training operations. This chapter also outlines how to apply the Vietnam War-era ground combat training historic context to identify and evaluate those historic resources. The selection of property types is based on archival research and field investigations. Site visits identified real property associated with Vietnam War-era ground combat training.

There is minimal documentation of the impacts the Vietnam War had on the military's constructed environment in the United States. During the Vietnam War, many CONUS military bases were adapted to accommodate the dramatic increases in personnel—adaptations that included training large numbers of troops as well as changing training methods and facilities to meet the demands of fighting in Southeast Asia. To meet training demands, the Army, Navy, Marine Corps, and Air Force bases constructed new training facilities or adapted existing training resources. Updates to training facilities at various installations was done on an ad hoc basis, based on specific installation needs because of curtailed national funding. Nevertheless, there was no overarching congressionally authorized construction program that outlined specifications for building new or adapting existing ground combat training facilities.[85] During their site visits, ERDC-CERL researchers searched document repositories but found that very little remains on this topic. Because of the lack of documentation and a comprehensive construction program, identifying and evaluating historic ground combat training resources is difficult.

Vietnam War-era ground combat training resources must be evaluated by the requirements outlined in the NHPA of 1966 (as amended) and identified according to the NRHP nomination process. The NRHP is a list of buildings, structures, objects, sites, and districts that have been deemed significant to U.S. history in archaeology, architecture, engineering, or culture. Federal agencies are required by the NHPA to identify historically significant property that meets eligibility requirements for listing on the NRHP. Agencies must also manage NRHP-eligible or -listed resources to

[85] Hartman et al., *Vietnam and the Homefront*.

preserve their historic characteristics, and they must analyze the effects of any undertaking on those properties.

4.1 Categories of historic properties

The identification of historic ground combat training resources is achieved through an evaluation of their significance within a larger historic context.[86] According to the NRHP, historic contexts define the "…the patterns, themes, or trends in history by which a specific occurrence, property, or site is understood and its meaning (and ultimately its significance) within prehistory or history is made clear."[87] A property's significance, or lack of, is determined by applying the standardized National Register Criteria for Evaluation within the property's historic context. The NRHP categorizes and defines properties as:[88]

Building: A building is created principally to shelter any form of human activity. Examples of buildings include: administration building, house, barn, stable, train station, church, or shed.

Structure: Structures are distinguished from buildings by being functional constructions made for purposes other than creating human shelter. Examples of structures include: aircraft hangars, bandstands, bridges, canals, fences, kilns, or windmills.

Object: The term object is used to distinguish from buildings and structures those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed. Although it may be, by nature or design, movable, an object is associated with a specific setting or environment. Examples of objects include boundary markers, fountains, monuments, sculptures or statues.

Site: A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archeological value regardless of the value of any existing structure. Examples of sites include: battlefield, campsite, ceremonial site, designed landscape, rock shelter, or village site.

District: A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. A district can comprise both features that lack individual distinction and individually distinctive features that serve as focal points. A group of features lacking in individual distinction may even be considered eligible if the grouping achieves significance as a whole within its historic context. While a district derives its importance from being a unified

[86] As outlined in Hartman et al. *Vietnam and the Home Front*.

[87] National Park Service (NPS). *National Register Bulletin* #15: *How to Apply the National Register Criteria for Evaluation*. (Washington, DC: U.S. Department of the Interior, 1997), 7.

[88] ibid., 9.

> entity, it can contain buildings, structures, sites, objects, or open spaces that do not contribute to the significance of the district if these properties do not adversely affect the district's integrity.[89]

4.2 Criteria for NRHP evaluation

The National Register Criteria for Evaluation defines how historic properties are significant by categorizing a property's associations with important historic qualifiers. The *National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation* lists four major criteria to which a historic property can be associated:

> **A. Event** is associated with events that have made a significant contribution to the broad patterns of our history; or
>
> **B. Person is** associated with the lives of persons significant in our past; or
>
> **C. Design/Construction** embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> **D. Information Potential where the property has** yielded, or is likely to yield, information important in prehistory or history.[90]

Since the context in this report has established that all Vietnam War-era ground combat training areas from 1962–1975 are significant, these resources should all be treated as if they are all 50 years of age.

4.3 Aspects of historic integrity

In addition to possessing historical significance, to be eligible to the NRHP properties must also retain a sufficient amount of physical integrity of historic features in order to convey that significance.[91] Historic properties must retain integrity and convey significance, or they are not eligible for the NRHP. The National Register recognizes seven aspects or qualities of a property that define the concept of integrity. To retain historic integrity, a property must possess several, and usually most, of the seven aspects. The retention of specific aspects of historic integrity is paramount for a property to convey its significance. Determining which of these aspects are

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[89] National Park Service (NPS). *National Register Bulletin* #15, 12–24 (summarized).

[90] ibid.

[91] ibid., 44–45.

most important to a particular property requires knowing why, where, and when the property is significant. The seven aspects of integrity are listed in *National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation*:

Location

Location is the place where the historic property was constructed or the place where the historic event occurred.

Design

Design is the combination of elements that create the form, plan, space, structure, and style of a property. It results from conscious decisions made during the original conception and planning of a property (or its significant alteration) and applies to activities as diverse as community planning, engineering, architecture, and landscape architecture. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials.

Setting

Setting is the physical environment of a historic property. Setting refers to the character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its relationship to surrounding features and open space.

Materials

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form an historic property.

Workmanship

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

Feeling

Feeling is a property's expression of the aesthetic or historic sense of a particular time period.

Association

Association is the direct link between an important historic event or person and a historic property.

Integrity has very specific connotations in defining historic and cultural resources. Integrity is the authenticity of physical characteristics from which resources obtain their significance. Historic properties—districts and individual resources—physically convey their significance by retaining many of the seven aspects of integrity. Individual resources, like a building, structure, or object can be evaluated independent of their surroundings. However, all resources within sites or districts, must be evaluated and classified as either "contributing" or "noncontributing" resources.

Contributing resources date from the historic period of significance established for the district. They contribute to the significance and character of the district through their historical associations and/or architectural values. Noncontributing resources are those that, due to the date of construction, alterations, or other factors, do not contribute to the district's historic significance or character.

4.4 Vietnam War-era stateside ground combat training resources

Military training ranges need to be researched and evaluated as a whole landscape, including all the buildings or structures, firing lines, target mechanisms, etc., and not evaluated as individual elements that sit on the range. Military training ranges were originally designed and intended to be utilized as a whole complex. Each structure or element provides a vital role in the functioning of the range and the overall effectiveness of the training procedures for the soldiers.

From the previously published historic context,[92] archival records, and field surveys, the period of significance for ground combat training facilities is defined as 1962–1975. During that time, training facilities may have been constructed, enlarged, or modified. However, actions during the period of significance do not necessarily imply historic significance. The historic significance of ground combat training resources should be proved through construction or modification between 1962 and 1975, as well as the impact of the resource on soldiers in Vietnam. For example, training using Vietnam village reconstructions would significantly enhance the training of a soldier destined for Southeast Asia.

Some form of ground combat training was required for the majority of military personnel deploying to Vietnam. The increased demand for troops in Vietnam required military installations to adapt to the large influx of personnel. Buildings, structures, and training lands were modified and constructed to address the demands of the Vietnam War. Because ground combat training was a primary component of preparing a soldier to fight in Vietnam, several types of properties related to ground combat training are identified. Buildings and structures important in the Vietnam War effort were not necessarily constructed during the period of significance (1962–1975), but those buildings do need to have been repurposed to meet the

[92] Hartman et al., *Vietnam and the Home Front*.

demands of Vietnam in order to be significant. For WWII, the U.S. military built more facilities to accommodate the influx of soldiers, but for the Vietnam War, it shortened the training time to accommodate the influx. Due to these shortened training times, many soldiers were not properly trained and training continued after arrival in county. As a result, facilities were built there, not here.

Archival real property lists from this era are rare, so it is very difficult to know everything that was built on an installation during the period of significance—it is only known what is left today. This fact makes it difficult to evaluate the existing building within its historic context, unless maps or photos show the context in a spatial sense depicting the relationship of the building in terms of other buildings and ranges. It is unknown, for example, if the military repurposed groups of WWII temporary buildings during the period of significance and then demolished them. Again, one must only look at what remains. Therefore, the historic context is often incomplete.

Individual properties must be investigated at the installation level (refer to Section 4.6 for further discussion of evaluating property types and character-defining features). However, the omission of a ground combat training property type in this report does not automatically exclude that property type from having significance in this subtheme. Facilities that were constructed, underwent a major expansion, or were adapted and heavily used during 1962–1975 and directly related to providing Vietnam War-specialized ground training are listed below:

1. **Training ranges.** Ranges used during the Vietnam War included small arms ranges, pugil training courts, hand and rifle grenade ranges, hand-to-hand combat ranges, bivouac areas, fortified areas, machine gun emplacement mock-ups, mines and booby trap ranges, and large arms ranges. Large-scale operation areas were also utilized for realistic, multiple-day training exercises and maneuvers.

2. **Courses.** Courses were designed as timed circuits where recruits moved through space while encountering a variety of environmental conditions and obstacles. Courses provided training where soldiers learned how to maneuver over difficult terrain, use weapons under challenging circumstances, and react quickly and efficiently while under pressure. Examples of courses used in Vietnam training included attack, close-combat, infiltration, obstacle, and bayonet courses.

3. **Mock villages.** The U.S. military constructed a variety of training villages and mock sites (including POW camps) in an effort to create realistic combat environments for training. These villages were built by using materials that mimicked those found in Vietnam, such as thatched roofing. Villages included such details as intricate tunnel systems, mock wells, perimeter fencing, mock rice fields, and vegetation used as camouflage.

4.5 Evaluation process for ground combat training resources

Below are steps to evaluating Vietnam War-era ground combat training resources to see if they are eligible for the NRHP. This present report's historic context and others have determined that any resource constructed or heavily modified from 1962 to 1975 for ground combat training specifically for Vietnam is significant.

1. Look at the current real property list for properties constructed or modified for ground combat training during the years of 1962 through 1975. This current research effort determined these resources are significant under Criterion A for their contribution to the Vietnam War training effort. Each item of real property on the list will have a facility number assigned to it. Real property lists can be used in several ways to identify possible ground combat training facilities from the Vietnam era:

    a. If the real property list includes original name or original use for facilities, this can provide a solid starting point for resources constructed between 1962 and 1975. Look for "range," "course," "village," etc., and any mention of weapons types such as "M-1" or "rifle."

    b. In addition to original names or uses, look for the Basic Category Number and then the Category Code (CATCODE or CATCD) in the real property list. Military real property is categorized through these numerical codes. The three-digit Basic Category Number is a higher-level grouping for facilities with similar functions. The CATCODEs are composed of Basic Category Numbers and additional digits signifying more detailed categories. For example, the Basic Category Number for Impact, Maneuver, and Training Areas is 177, and an example of a CATCODE under that number is 17711 (Maneuver/Training Area, Amphibious Forces). If a facility still has

the same use as it did during the period of significance, the Basic Category Number or the CATCODE will show that association. Potentially useful Basic Category Numbers include:

- Training Buildings (171), with example CATCODES:
  - 17122 (Range Operations Building)
  - 17123 (Range Support Facility)

- Impact, Maneuver, and Training Areas (177), with example CATCODES:
  - 17710 (Maneuver/Training Area, Light Forces)
  - 17720 (Maneuver/Training Area, Heavy Forces)

- Training Ranges (178), with example CATCODES:
  - 17804 (Record Fire Range Nonautomated)
  - 17816 (Bayonet Assault Course)

- Training Facilities Other Than Buildings (179), with example CATCODES:
  - 17971 (Observation Tower)
  - 17950 (Confidence Course)

Note that there may be more generic Basic Category Numbers and CATCODES that may be assigned to facilities both related to and not related to Vietnam War-era ground combat training facilities, such as:

- Personnel Support and Service Facilities (730), with example CATCODES:
  - 73075 (Separate Toilet/Shower Building)
  - 73070 (Miscellaneous Shed)

- Installation and Organizational Covered Storage (442), with example CATCODES:
  - 44220 (Storage, Group Instruction)
  - 44224 (Organizational Storage Building)

The above lists are only provided as examples, and they should not be taken as a definitive list. Additionally, CATCODES change over time and real property lists usually don't contain previous iterations of

codes for facilities (the examples above are current CATCODES). There may, however, be a column on the real property list for "Design Use CATCODE" that may provide original use. Real property facilities files containing historical documentation, such as property cards produced when the facility was constructed, may contain old CATCODES or previous uses. Once potentially useful CATCODES have been located in the list, check for facilities within those CATCODES that were constructed during the period of significance, 1962–1975.

Note: The real property list may not accurately show if these properties were modified during the period of significance or subsequently, so property records or files, as well as any archival records, may need to be consulted. For example, historical maps may also show previous characteristics and uses for potentially significant facilities. Additionally, there may be facilities that no longer have a facility number due to the facility's disuse or disrepair. For example, facility numbers for the training villages could not be found during the team's various site visits.

2. Determine if there is a spatial linkage between those properties identified in Step 1. Or, are the properties dispersed, but all mission-related? If dispersed, the properties could be addressed together as a Vietnam War-era ground combat training district.

3. After identifying individual property(ies) and/or district(s), prepare a historic context that places the installation into the overall ground combat training history during the Vietnam War. It is possible that most missions or endeavors did not last the entire 1962–1975 period. Look at the mission specifically, and then look to see if there are any properties remaining that are significant under the property types outlined above (e.g.,. firing ranges, mock sites). **Note**: All ground combat training resources determined significant for the Vietnam War era can be evaluated regardless of their age (even if not yet 50 years of age) because of the historic context provided in *Vietnam and the Home Front: How DoD Installations Adapted, 1962-1975*.[93]

4. A list of character-defining features should be developed for any significant properties or resources. Character-defining features are physical

[93] Hartman et al. *Vietnam and the Home Front*.

elements that visually convey a resource's historic significance. Identifying character-defining features is made by visual inspection and a comparison with historical documents and photographs (See Section 4.6 for examples).

5. Decide if the property(ies) retains sufficient integrity to convey significance of Vietnam War-era ground combat training operations and determine if the resource(s) retain character-defining features.

6. Once a resource has been determined to have significance for Vietnam War-era ground combat training and has integrity, then the resource(s) can be recommended as eligible to the NRHP. The recommendations can then be submitted to the appropriate state historic preservation office (SHPO).

4.6 Guide for evaluating integrity

Construction for Vietnam was conducted by individual installations; thus it is not possible, in this report, to provide specific examples of all types of historic resources or their character-defining features. Nevertheless, key points for discussions on how to evaluate integrity are provided in this section along with property examples that illustrate the permutations of integrity that impact the evaluation process (see Appendix A for fieldwork examples). The following is a guide for CRMs when evaluating properties on their installations. Separate sections are provided for ranges (4.6.1), courses (4.6.2), and villages (4.6.3).

4.6.1 Integrity discussion of ranges

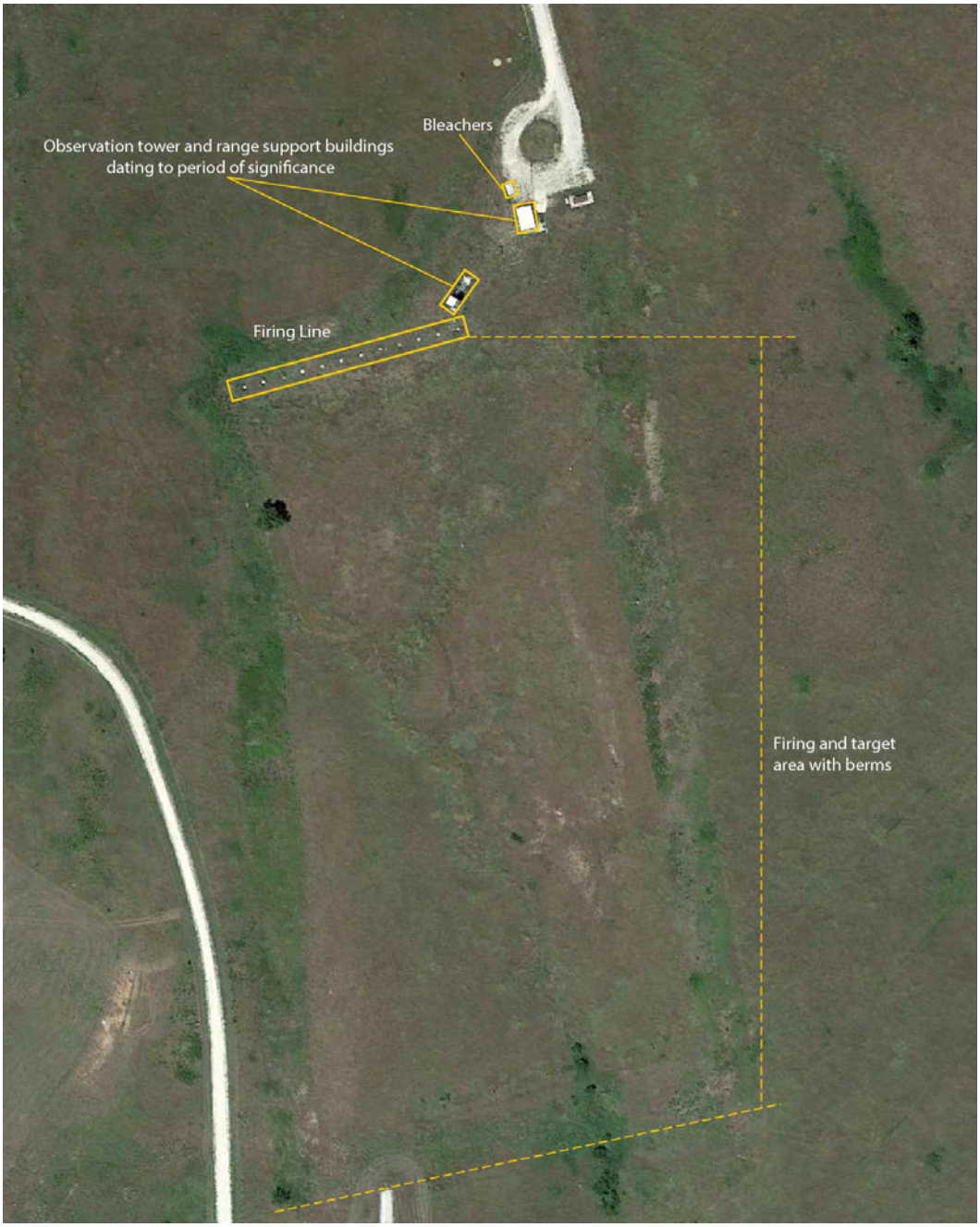
The resources for ground combat training during the Vietnam period typically were not constructed on an individual basis. Ranges were designed and constructed as a whole, with various parts (e.g., observation towers, latrines, bleachers). In general, the real property resources constructed or modified during this period have been significantly altered over time. As a result, it is highly unlikely for individual range's buildings, structures, or elements that possess significance under this context to be individually eligible to the NRHP. However, ground combat training ranges should be evaluated at the landscape level. Mission-critical ranges were important to the war effort and even though individual buildings might have lost integrity, the complex as a whole can retain integrity if many of the components remain intact. Evaluating the entire range—including observation towers,

latrines, firing lines and targets, berms, and support buildings—is a more accurate way of determining the range's final eligibility. The features identified as being component parts of Vietnam War-era ground combat training ranges would most likely comprise a site. The components will need to be looked at, both individually and as a group, to see if they retain sufficient integrity to convey the significance of the range.

Ranges constructed during the Vietnam War-era ground combat training period of significance (1962–1975) varied in design and construction, but they often included observation towers, latrines, support buildings such as gun and ammunition storage, bleachers, covered areas for weapons breakdown, firing points, clear target areas, and target butts or berms. For a range to retain its integrity and be recommended as eligible to the NRHP, the entire range's landscape should be intact. In addition to retaining its original features, the landscape must read as a training range from the Vietnam War era.

For instance, key to a firing range's landscape being intact is the open space—the accurate distance from the firing point to the target butt or berm. The landscape should have integrity (i.e., no trees or vegetation obscuring this open space). Of the buildings and structures that remain on the range, the majority of them should date to the period of significance. Figure 93 shows the typical spatial relationship of component parts of a range complex. These components can be arrayed differently at individual installations, and research needs to be completed to determine how an individual installation's ranges were designed and constructed.

Figure 93. Example of a Vietnam era Tactical Range complex depicting locations of original features, 2016 (Google Earth and ERDC-CERL).



Ranges have been continually updated and modified to meet the technological improvements in armor and weapons. As ranges have been updated over time, many have only latrines left from the Vietnam period of significance. In addition to physical components, the range should be still used for the same family of weapons and/or physical skills. If the landscape of any specific firing range does not convey significance related to Vietnam War-era ground combat training, there is no integrity.

The following are examples of buildings and structures constructed on Vietnam War-era ranges that would not be individually eligible, but could be constituting elements of a site from the period of significance. These sites (firing range, obstacle course, etc.) could be individually eligible for the Vietnam War and if there is enough of a concentration of these sites, there possibly could be a historic district.

Fort Gordon, Georgia

Basic training was activated at Fort Gordon in 1957. During the Vietnam War, infantry, military police, and signal soldiers trained at Fort Gordon. Fort Gordon and other southern installations were chosen for basic training because they most closely mimicked the environment in theater. The range maps and list of ranges from 1965 (Figure 94 and Figure 95) and 1968 (Figure 96 and Figure 97) depict some of the changes on the Fort Gordon ranges as the Vietnam War ramped up.

Figure 94. A 1965 map of Fort Gordon ranges (Fort Gordon DPW).

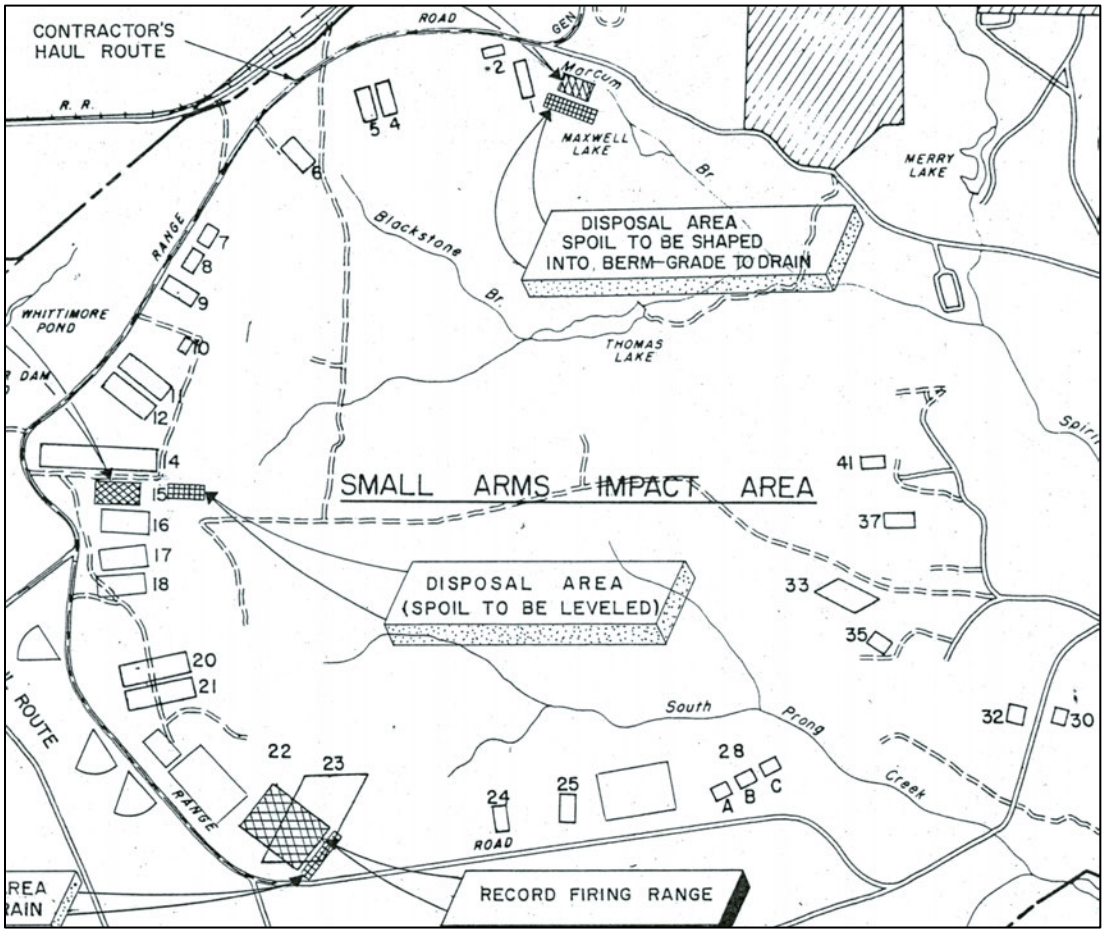
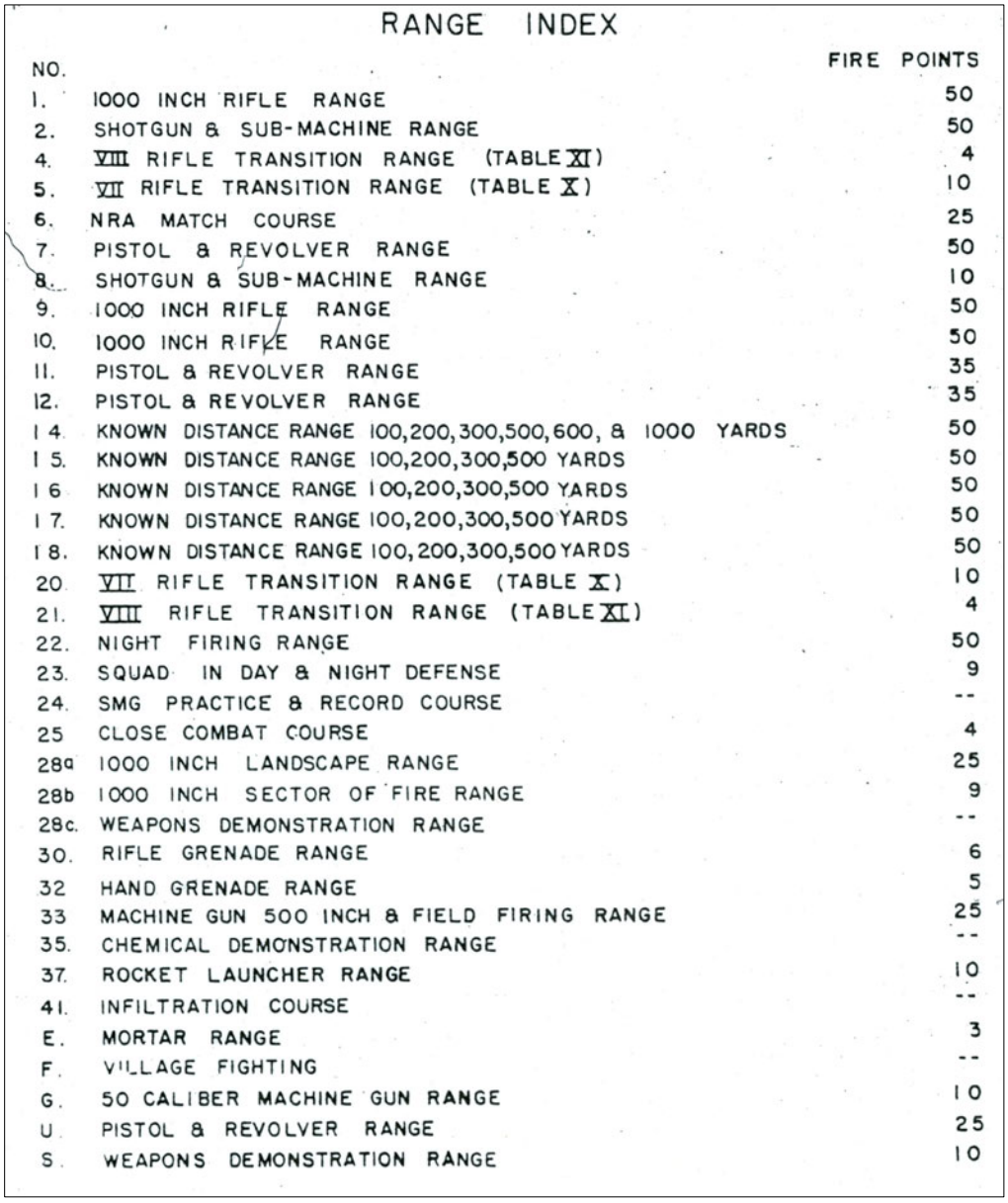


Figure 95. List of Vietnam era ranges at Fort Gordon, GA, 1965 (Fort Gordon DPW).



RANGE INDEX

NO.		FIRE POINTS
1.	1000 INCH RIFLE RANGE	50
2.	SHOTGUN & SUB-MACHINE RANGE	50
4.	VIII RIFLE TRANSITION RANGE (TABLE XI)	4
5.	VII RIFLE TRANSITION RANGE (TABLE X)	10
6.	NRA MATCH COURSE	25
7.	PISTOL & REVOLVER RANGE	50
8.	SHOTGUN & SUB-MACHINE RANGE	10
9.	1000 INCH RIFLE RANGE	50
10.	1000 INCH RIFLE RANGE	50
11.	PISTOL & REVOLVER RANGE	35
12.	PISTOL & REVOLVER RANGE	35
14.	KNOWN DISTANCE RANGE 100,200,300,500,600, & 1000 YARDS	50
15.	KNOWN DISTANCE RANGE 100,200,300,500 YARDS	50
16	KNOWN DISTANCE RANGE 100,200,300,500 YARDS	50
17.	KNOWN DISTANCE RANGE 100,200,300,500 YARDS	50
18.	KNOWN DISTANCE RANGE 100,200,300,500 YARDS	50
20	VII RIFLE TRANSITION RANGE (TABLE X)	10
21.	VIII RIFLE TRANSITION RANGE (TABLE XI)	4
22.	NIGHT FIRING RANGE	50
23.	SQUAD IN DAY & NIGHT DEFENSE	9
24.	SMG PRACTICE & RECORD COURSE	--
25	CLOSE COMBAT COURSE	4
28a	1000 INCH LANDSCAPE RANGE	25
28b	1000 INCH SECTOR OF FIRE RANGE	9
28c.	WEAPONS DEMONSTRATION RANGE	--
30.	RIFLE GRENADE RANGE	6
32	HAND GRENADE RANGE	5
33	MACHINE GUN 500 INCH & FIELD FIRING RANGE	25
35.	CHEMICAL DEMONSTRATION RANGE	--
37.	ROCKET LAUNCHER RANGE	10
41.	INFILTRATION COURSE	--
E.	MORTAR RANGE	3
F.	VILLAGE FIGHTING	--
G.	50 CALIBER MACHINE GUN RANGE	10
U.	PISTOL & REVOLVER RANGE	25
S.	WEAPONS DEMONSTRATION RANGE	10

Figure 96. A 1968 map of ranges at Fort Gordon, GA (Fort Gordon DPW).

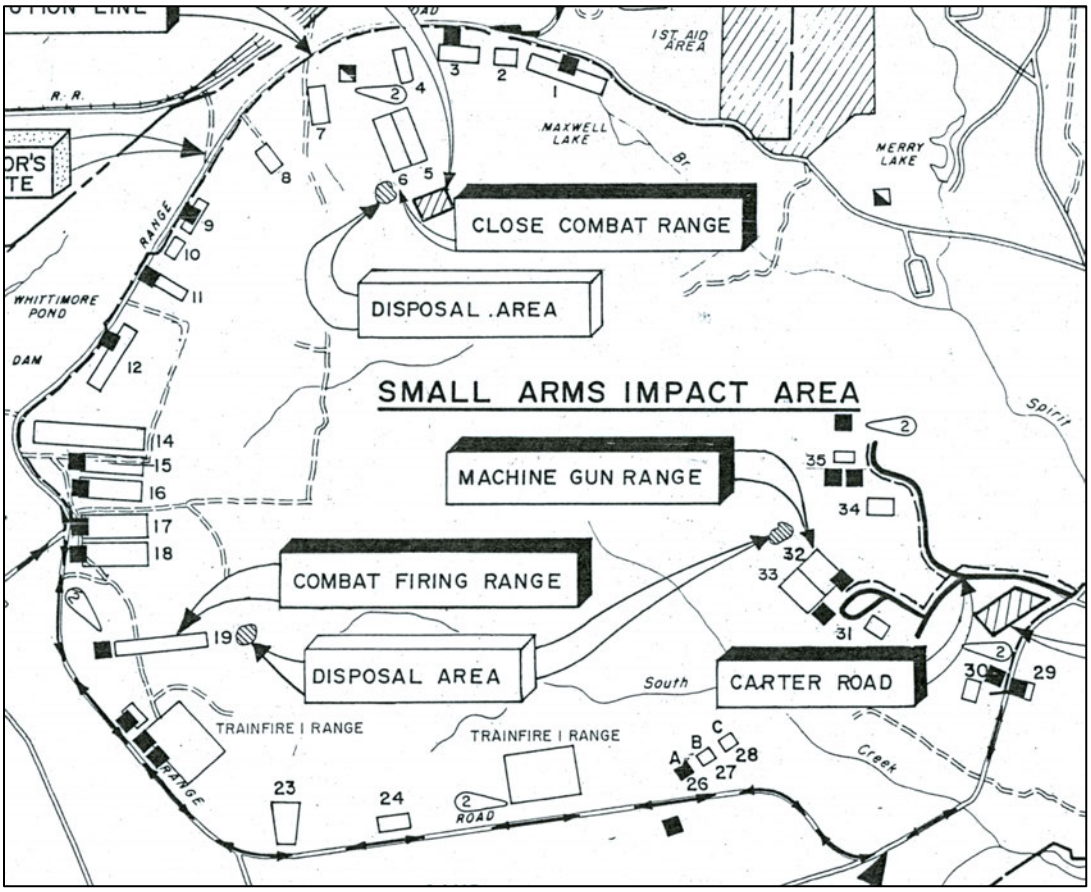
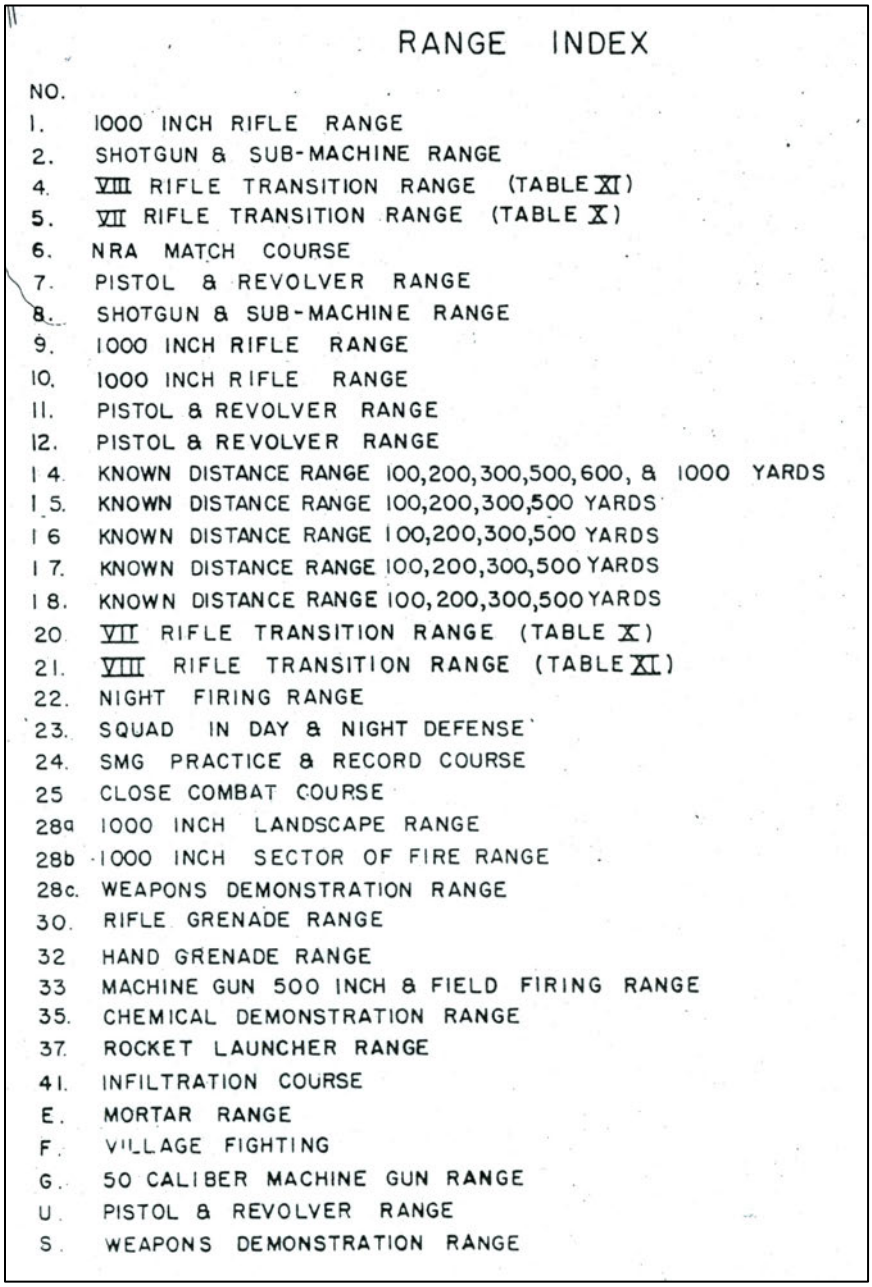


Figure 97. List of Vietnam War-era ranges at Fort Gordon, GA, 1968 (Fort Gordon DPW).



RANGE INDEX

NO.

1. 1000 INCH RIFLE RANGE
2. SHOTGUN & SUB-MACHINE RANGE
4. VIII RIFLE TRANSITION RANGE (TABLE XI)
5. VII RIFLE TRANSITION RANGE (TABLE X)
6. NRA MATCH COURSE
7. PISTOL & REVOLVER RANGE
8. SHOTGUN & SUB-MACHINE RANGE
9. 1000 INCH RIFLE RANGE
10. 1000 INCH RIFLE RANGE
11. PISTOL & REVOLVER RANGE
12. PISTOL & REVOLVER RANGE
14. KNOWN DISTANCE RANGE 100,200,300,500,600, & 1000 YARDS
15. KNOWN DISTANCE RANGE 100,200,300,500 YARDS
16 KNOWN DISTANCE RANGE 100,200,300,500 YARDS
17. KNOWN DISTANCE RANGE 100,200,300,500 YARDS
18. KNOWN DISTANCE RANGE 100,200,300,500 YARDS
20 VII RIFLE TRANSITION RANGE (TABLE X)
21. VIII RIFLE TRANSITION RANGE (TABLE XI)
22. NIGHT FIRING RANGE
23. SQUAD IN DAY & NIGHT DEFENSE
24. SMG PRACTICE & RECORD COURSE
25 CLOSE COMBAT COURSE
28a 1000 INCH LANDSCAPE RANGE
28b 1000 INCH SECTOR OF FIRE RANGE
28c. WEAPONS DEMONSTRATION RANGE
30. RIFLE GRENADE RANGE
32 HAND GRENADE RANGE
33 MACHINE GUN 500 INCH & FIELD FIRING RANGE
35. CHEMICAL DEMONSTRATION RANGE
37. ROCKET LAUNCHER RANGE
41. INFILTRATION COURSE
E. MORTAR RANGE
F. VILLAGE FIGHTING
G. 50 CALIBER MACHINE GUN RANGE
U. PISTOL & REVOLVER RANGE
S. WEAPONS DEMONSTRATION RANGE

At Range 27 (the 1,000-inch sector of fire range), two buildings remain from the Vietnam War-era ground combat training—a mess hall and a target storage building. The range mess hall (Building R277), was built in 1967 as the firing ranges were expanded to satisfy the need for an increase in troops going through basic training during the Vietnam War (Figure 98). The target storage building (R271) was also built in 1967 (Figure 99). While the building itself has integrity, the ranges as a whole have lost their

integrity due to the demolition of the observation towers and the firing lines. In addition, since these ranges were abandoned, the natural vegetation has obscured the landscape of the firing ranges (Figure 100–Figure 101.

Figure 98. Range mess hall (R277) on Range 27 at Fort Gordon, GA (ERDC-CERL, 2004).

Figure 99. Target storage building (R271) on Range 27 at Fort Gordon, GA (ERDC-CERL, 2004).

Figure 100. Range 27, noted with red shading on a 1968 map, at Fort Gordon, GA (Fort Gordon DPW).

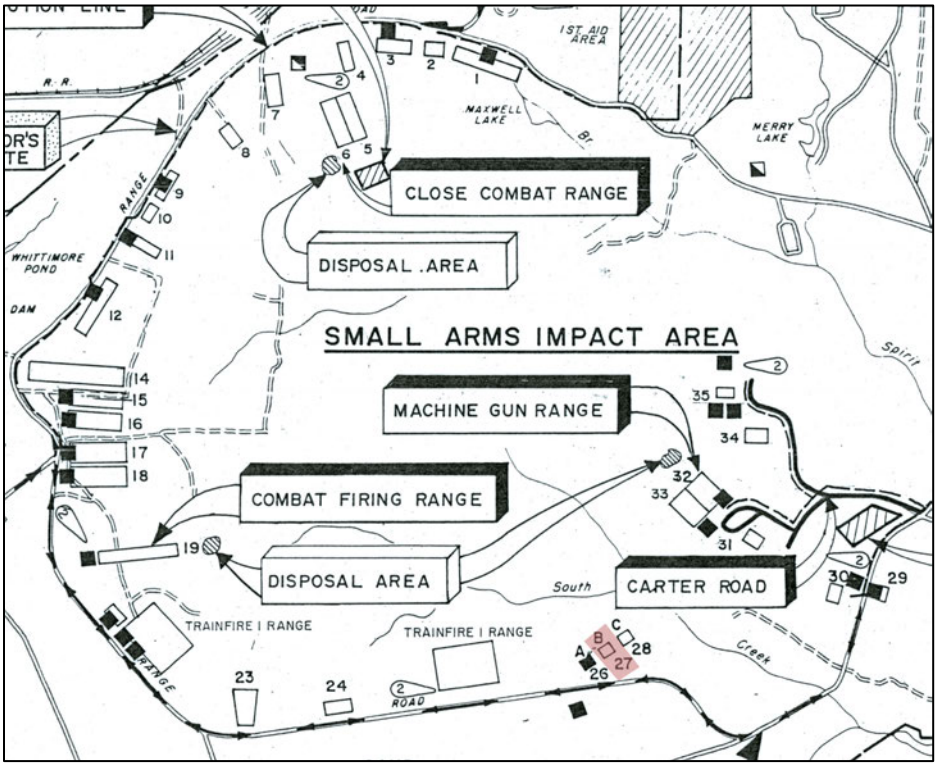


Figure 101. Current aerial of Range 27 (located in center of the image) at Fort Gordon, GA, showing that no original range components remain in 2016 (goodle.com maps).

The observation tower, built in 1968, is located near Range 19 (the Combat Firing Range) but is now abandoned (Figure 102). This observation tower design was utilized at basic training installations throughout the Army during the Vietnam War era; however, most of these towers have either been demolished or abandoned along with many of their associated firing ranges (e.g., Figure 107). There is no integrity of the landscape at Range 19, as it is heavily wooded now and only the observation tower remains.

Figure 102. Observation tower at Range 19, Fort Gordon, GA (ERDC-CERL, 2004).

Range 42 was located in the large-arms impact area at Fort Gordon (Figure 103). This firing range was used during the Vietnam War era for training on M-41, M-7 and M-60 tanks. Only a target storage building (421) and portions of an observation tower on its side remain today in the landscape (Figure 104–Figure 105). Range 42 no longer has integrity of the landscape as it is heavily covered with trees, and the firing area and associated open space is no longer visible (Figure 106).

Figure 103. Range 42 at Fort Gordon, GA, as depicted on 1965 map is noted here by red-shaded circle (Fort Gordon DPW).

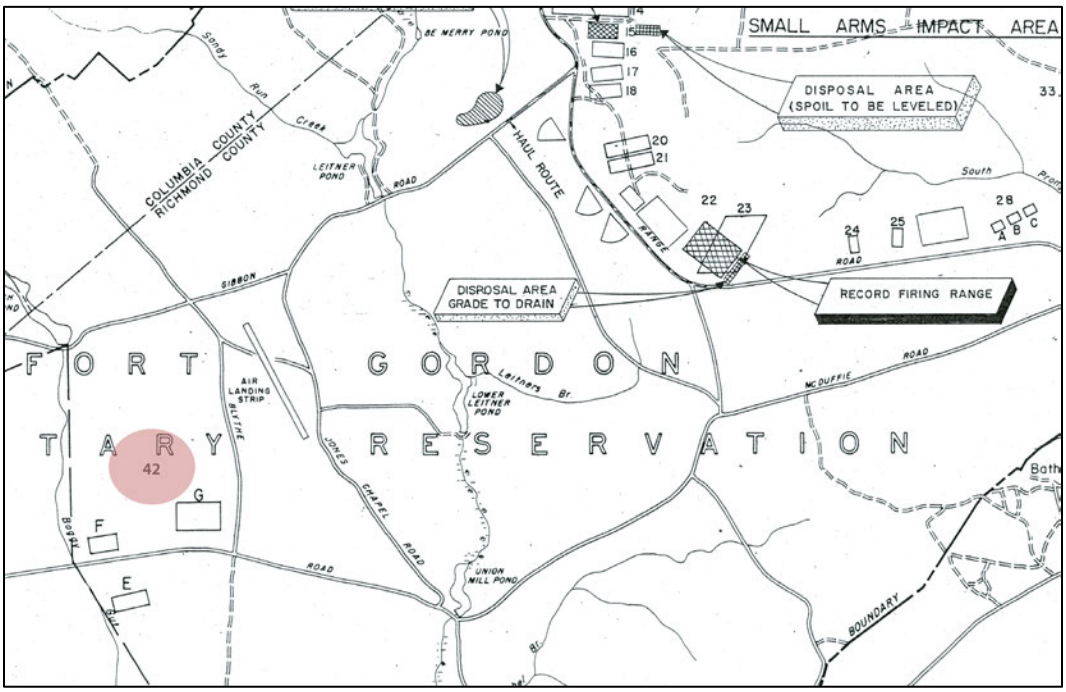


Figure 104. Rear of target storage building (421) at Range 42, Fort Gordon, GA (ERDC-CERL 2004).

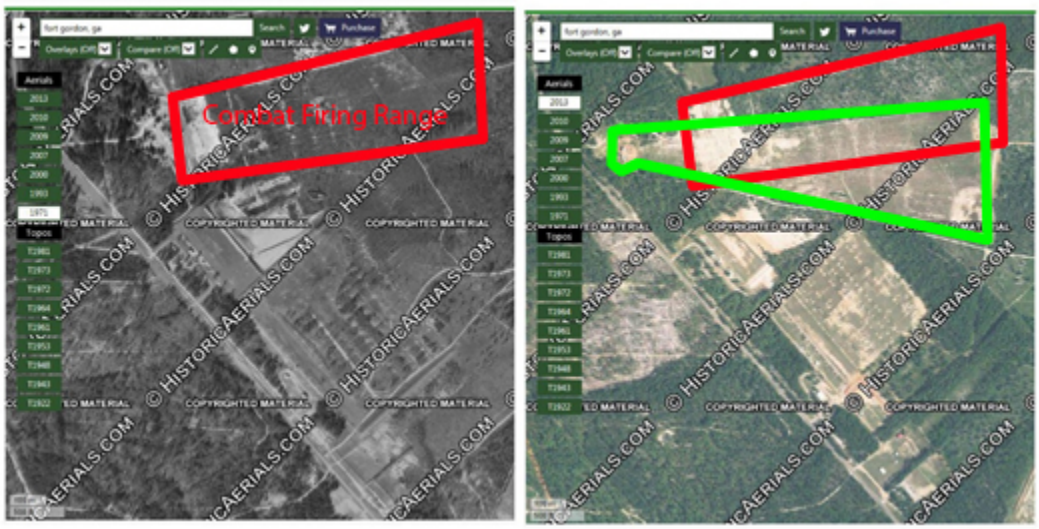
Figure 105. Remains of observation tower lying on its side at Range 42, Fort Gordon, GA (ERDC-CERL, 2004).

Figure 106. Current aerial of Range 42 at Fort Gordon, GA, in 2016, showing that no original range components remain (google.com).

These Vietnam War-era range landscapes do not exist anymore, as shown in Figure 107. The Combat Firing Range, constructed in 1968 (shown in red outline), does not exist in 2016 because a new range was constructed on part of it (shown in green outline). Other than the few remaining buildings and ruins,[94] the Vietnam War-era built environment is gone, and so is the original layout and orientation of its associated ranges. Thus, these ranges at Fort Gordon no longer have integrity for the Vietnam War period of significance.

[94] The Vietnam War-era buildings at Fort Gordon were surveyed in the *Fort Gordon Cold War Architectural Survey* in April 2005 and were found not to be eligible for the NRHP. The Georgia SHPO concurred with these findings.

Figure 107. Example of range landscape in 1971 on the left (red outline) and in 2016 (green outline) on the right (HistoricAerials.com, accessed August 2016).



Fort Leonard Wood, Missouri

Fort Leonard Wood was important for engineer training and basic training for the Vietnam War. In the example below, Range 51 was the Technique of Fire Range and Range 52 was the Defense Range. Both are visible on the 1968 map (Figure 108), and both have had their range number changed (Figure 109). Three buildings remaining on the range: the classroom (Building 5431; Figure 110), the temporary arms storage building (Building 5432; Figure 111), and the covered building/structure for training and personnel (Building 5434; Figure 111). All three buildings were built in 1968. While no buildings are visible on the 1968 map, it is likely that the site also contained a latrine and/or bleachers. Range 27 is a Multipurpose Range, currently used for 50 caliber weapons training, and Range 28 is currently used as the Engineer Working Dog Training Course.

Figure 108. Ranges 51 and 52, Fort Leonard Wood, 1968 (Fort Leonard Wood DPW).

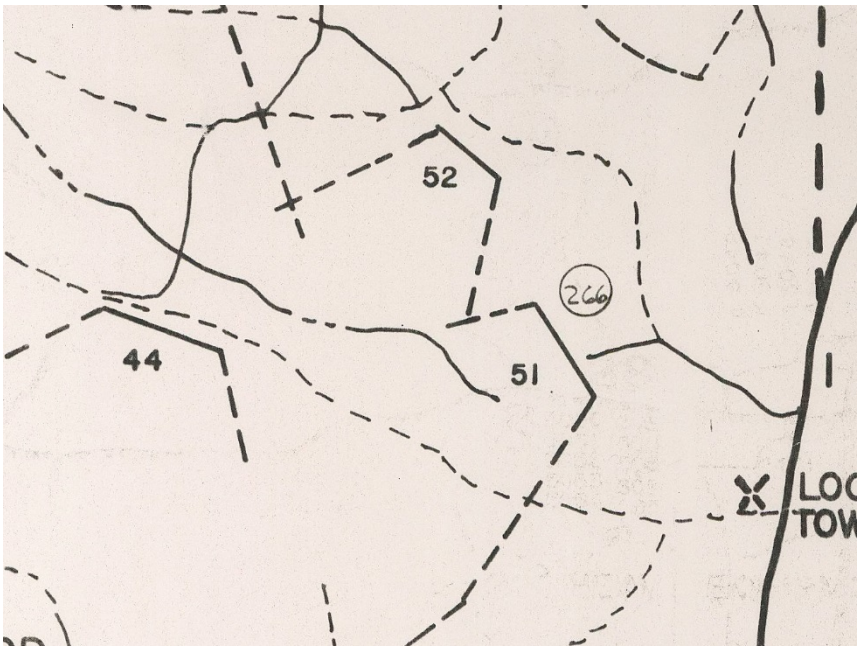


Figure 109. Formerly Ranges 51 and 52, now Ranges 27 and 28 at Fort Leonard Wood, MO, in 2016 (Fort Leonard Wood DPW).

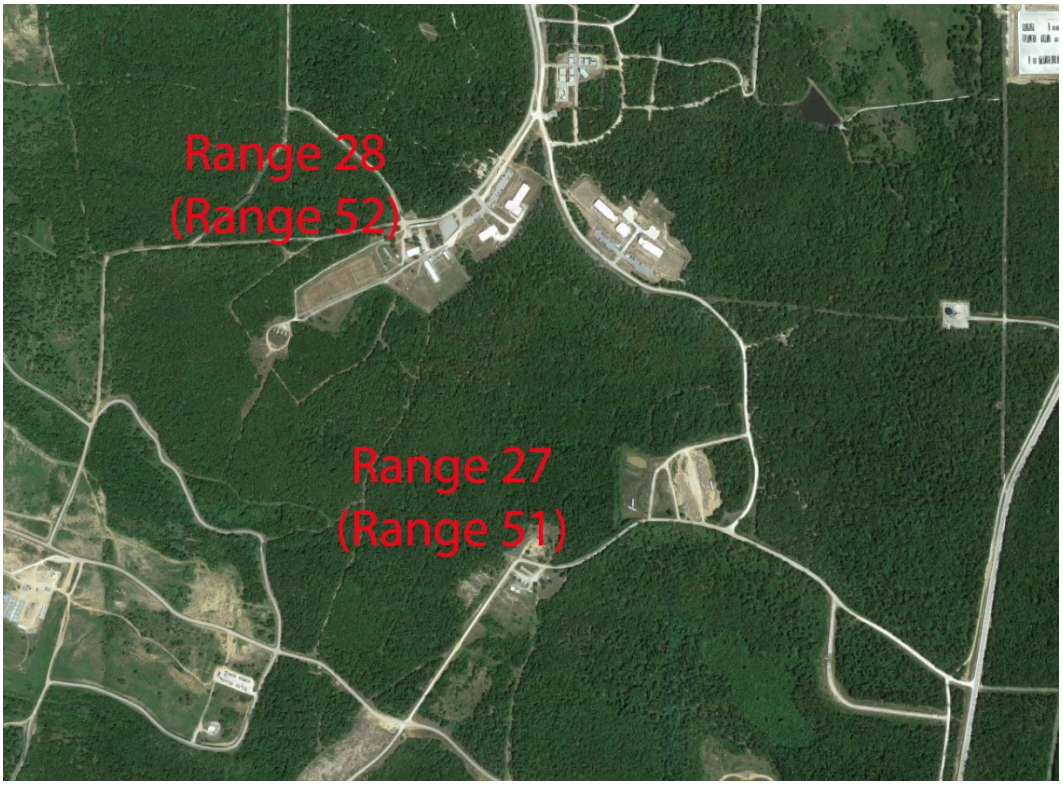


Figure 110. Building 5431 (classroom) at Fort Leonard Wood, MO (ERDC-CERL, 2016).

Figure 111. Building 5432 (temporary arms storage) in background, and 5434 (structure for training and personnel) in foreground, at Fort Leonard Wood, MO (ERDC-CERL, 2016).

Also at Fort Leonard Wood are two other 1968-era ranges, Range 53 and Range 54 (currently numbered 29 and 30) (Figure 112 and Figure 113). Range 53 was used as the Battle Duel and Assault Range, and Range 54 was the Attack Range. These ranges currently are used for U.S. Marine Corps CBRN (Chemical, Biological, Radiological, and Nuclear) Defense School and Robotics Systems Training. Today, two buildings remain: Building 5442 (Figure 114) and Building 5438 (Figure 115). There was also a latrine, but it was destroyed by a tornado in 2010.

Figure 112. Ranges 53 and 54, Fort Leonard Wood, 1968 (Fort Leonard Wood DPW).

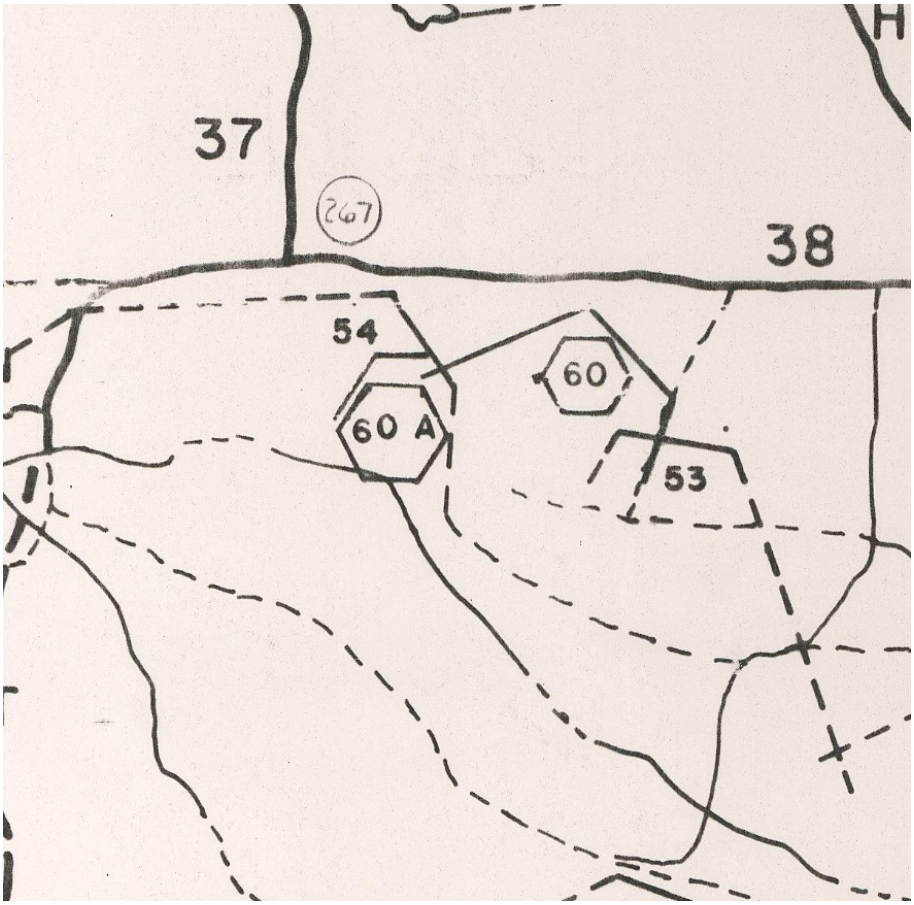


Figure 113. Ranges 53 and 54 (now Ranges 29 and 30) at Fort Leonard Wood, MO, in 2016 (Fort Leonard Wood DPW).

Figure 114. Arms Storage Building 5442, Fort Leonard Wood, MO (ERDC-CERL, 2016).

Figure 115. Cover (standardized plan), Building 5438, Fort Leonard Wood, MO (ERDC-CERL, 2016).

The Vietnam War-era range landscapes at Fort Leonard Wood no longer exist. Although there are a few remaining buildings, there are new buildings added to the north, the Vietnam War-era built environment is gone, and the original layout and orientation of the ranges are changed. In addition, the historic open space is now heavily wooded. Thus these ranges no longer have integrity.

Marine Corps Recruit Depot San Diego, California

Vietnam War era pugil stick training courts had little standardized infrastructure. The physical structure would have been a large sandy or grassy area surrounded by places to sit or stand to watch, which may have contained bleachers. These were ephemeral spaces, and any surviving examples most likely do not have the same location, materials, and layout as during the Vietnam War era. Many were under tree cover for shade, so no aerials were found during archival research. Courts may have been bounded by logs or lumber, which are materials that are not likely to re-

main intact, especially in humid climates. Pugil stick courts shared similarities in their physical layout to hand-to-hand or knife combat training areas.

Historically, pugil stick courts were surfaced with sand, sawdust, or mulch. These areas may still retain the use of sand or mulch but have likely incorporated updated surface materials such as shredded rubber mulch (Figure 116 and Figure 117). It is difficult to make a list of character-defining features, since little physical structure remains over time. While a CRM might find references to these sites during the period of significance, they are most likely not eligible due to loss of integrity.

Figure 116. Pugil stick training at MCRD San Diego, CA, showing shredded rubber mulch ground surface, 2014 (U.S. Marine Corps).

Figure 117. Pugil stick training at MCRD San Diego, CA, showing sand ground surface in 2016 (U.S. Marine Corps).

Marine Corps Recruit Depot Parris Island, South Carolina

Parris Island has been the site of Marine Corps recruit training since 1915 for the eastern region of the United States. More than 200,000 recruits trained at MCRD Parris Island during the Vietnam War era. During this era, training was cut from 12 to 10 weeks to accommodate the number of recruits. Historic images show pugil stick training on grassy open areas with little or no defining infrastructure (Figure 118). Current designs for pugil stick training courts can be mulch-covered circular areas that are edged with partially submerged tires (Figure 119). Due to the changes in location, building materials, and association, these sites likely do notretain integrity from the period of significance.

Figure 118. Recruits fight with pugil sticks at bayonet course on compacted soil, MCRD Parris Island, 1967 (NARA College Park).

Figure 119. Recruits train on shredded bark mulch with pugil sticks to simulate fighting with bayonet-affixed rifles, MCRD Parris Island, SC, 2014 (U.S. Marine Corps).

4.6.2 Integrity discussion of courses

Fort Knox, Kentucky;
Fort Bragg, South Carolina

Courses were designed as circuits, where soldiers maneuvered through a space and encountered a sequence of different challenges. Courses were often designed and constructed to take advantage of existing terrain and vegetation to provide a more realistic environment for trainees. Courses were generally grouped into attack, close-combat, and infiltration training areas. Characteristics common to all types of courses include borders to define and bound the space, paths to organize and direct progressive movement, targets, obstacles, and activity points.

Because courses were designed to incorporate the existing terrain and native vegetation, these elements should be considered as an integral part to the overall integrity of the course. Constructed elements such as paths, targets, obstacles, and activity points can retain their integrity if they remain located in the original course sequence.

Due to the ephemeral nature of course training and the use of movable organic features such as trenches, logs, stumps, and brush (Figure 120), it is difficult to assess integrity of courses. Some courses with elements constructed from materials such as concrete, treated lumber, or sand bags may remain today (Figure 121–Figure 125), but in general these ranges have been modified greatly over the years as training needs have changed and evolved due to new training methods or evolving tactics.

Figure 120. Heard Park (individual tactical training) fire and movement at Fort Knox, KY, 5 May 1966 (NARA College Park).

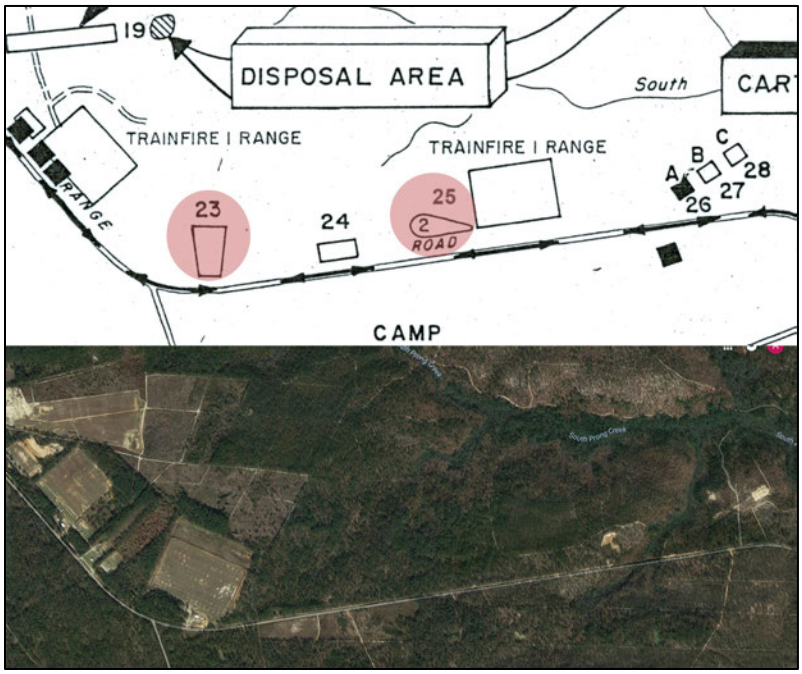
Figure 121. Basic combat training on Poorman Range Infiltration course, Fort Knox, KY (NARA College Park, RG 111-SC post 1955, box 400, photo SC628846).

Figure 122. Current aerial of Poorman Range, Fort Knox, KY, which is no longer used for training in 2016 (google.com.maps).

Figure 123. Remnants of pits for training at Fort Bragg, SC (ERDC-CERL, 2006).

Figure 124. Remnants of towers for training at Fort Bragg, SC (ERDC-CERL, 2006).

Figure 125. 1968 map (top image) and current aerial (bottom image), showing that Course 23, Squad in Day and Night Defense, and Course 25, Close Combat Course, no longer exist at Fort Gordon, SC. (Sources: Fort Gordon with ERDC-CERL highlights [top] and google.com.maps [bottom].)



4.6.3 Integrity discussion of mock villages

Vietnam War-era mock village sites may be eligible to the NRHP. These villages were constructed from a variety of different designs and materials. Typically they would have a number of huts, gates, mock wells, walls, moats, towers, and tunnel systems. The sites may be just ruins now, since the buildings and structures may have crumbled in place, but the sites still contain historic information that may remain on site such as the exact location of structures, type of structures, and materials used. There also may be the presence of underground tunnels or the materials used for underground tunnels, revealing the size and length of tunnels for training. Field visits to these sites should be made with an archaeologist and an architectural historian.

During fieldwork for the project, several mock village sites were visited with a variety of remaining features from the Vietnam War era. For example, Fort Gordon and Fort Jackson have intact perimeter fencing and intact tunnel systems and layouts. The structures are still visible in place, but they are in ruins. Fort Polk, however, no longer has tunnels or structures, and the village layout is no longer visible. At Fort Huachuca, only a few berms remain.

Many Vietnam War-era artifacts were found on these sites (e.g., spent munitions and empty C-ration cans) and dated from the period of significance. However, these artifacts did little other than indicate the area was used for Vietnam War-era training, and it is unlikely these artifacts will reveal much beyond the fact that training happened there.

Fort Gordon, Georgia

Fort Gordon had two training villages during the Vietnam War—the East Village and the West Village. The East Village (Figure 126–Figure 127) still contains four tunnel entrances outside the village perimeter; many of the posts for the huts are also standing and visible, as well as the tunnel entrances within the huts. Barbed-wire perimeter fencing is still in place along much of the perimeter.

At the West Village, one of the original entrance posts was standing, and the second post was lying on the ground next to it. At the West Village, many of the walls of the huts were still in place, illustrating the construction materials and methods (Figure 128). At this site, it was easy to see the

relationships between the huts, tunnels, and the village center. Tunnel entrances were visible outside the barbed-wire perimeter (Figure 129). No artifacts were uncovered at this village due to heavy leaf cover.

Both of these sites still have integrity and contain information about the village landscape: the entrance; the tunnel system; the spaces and distances between the buildings, huts, and features within the village; and the fencing and size of the village as a whole.

Figure 126. Plan of East Village, Fort Gordon, GA, 1966 (Fort Gordon DPW).

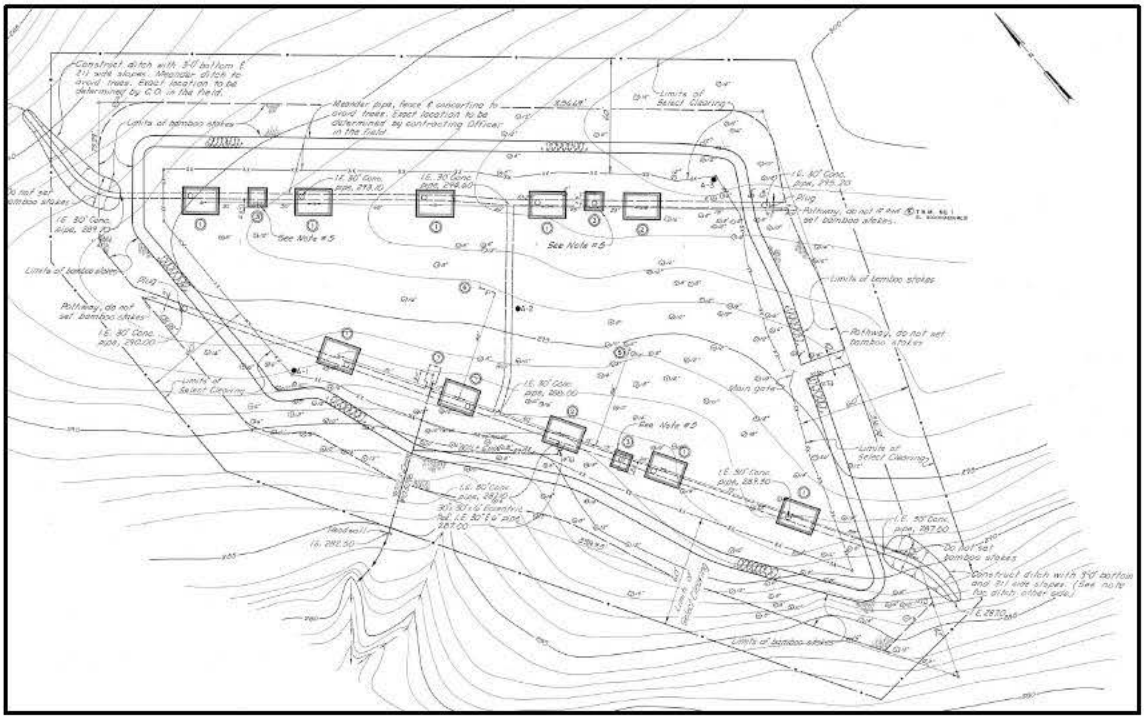


Figure 127. Entrance post at East Village, Fort Gordon (ERDC-CERL, 2014).

Figure 128. Remaining hut walls at West Village, Fort Gordon, GA (ERDC-CERL, 2014).

Figure 129. Remaining tunnel system (foreground), West Village at Fort Gordon, GA (ERDC-CERL, 2014).

Fort Polk, Louisiana

"Tigerland" was a Vietnam War-era mock village located at Fort Polk. The associated landscape included the mock village site, remnant road, the former cantonment site, demonstration area, and ambush/convoy training area (Figure 130). In a historic photograph of the Tigerland area during the Vietnam War (see Appendix A, photograph A18), a helicopter training area is visible in the upper right corner, and the demonstration area with bleachers is on the right. Today, the only visible remnants of the village include portions of the berm (Figure 131) and fire step, portions of steel culverts (Figure 132) which were used as tunnels under the village and brass. There is not enough integrity to read the village landscape, and the tunnel system has been dug up and broken apart. Remnants of the "Ambush Trail" included a spider hole, fake tunnel vent (Figure 133), and four Army trucks (M34s and M35s which were obsolete by Vietnam War; Figure 134).

Figure 130. Plan of the mock Vietnam village, surrounded by a berm and a moat, 1966. Note the tunnels outlined in dashed lines. (Fort Polk DPW).

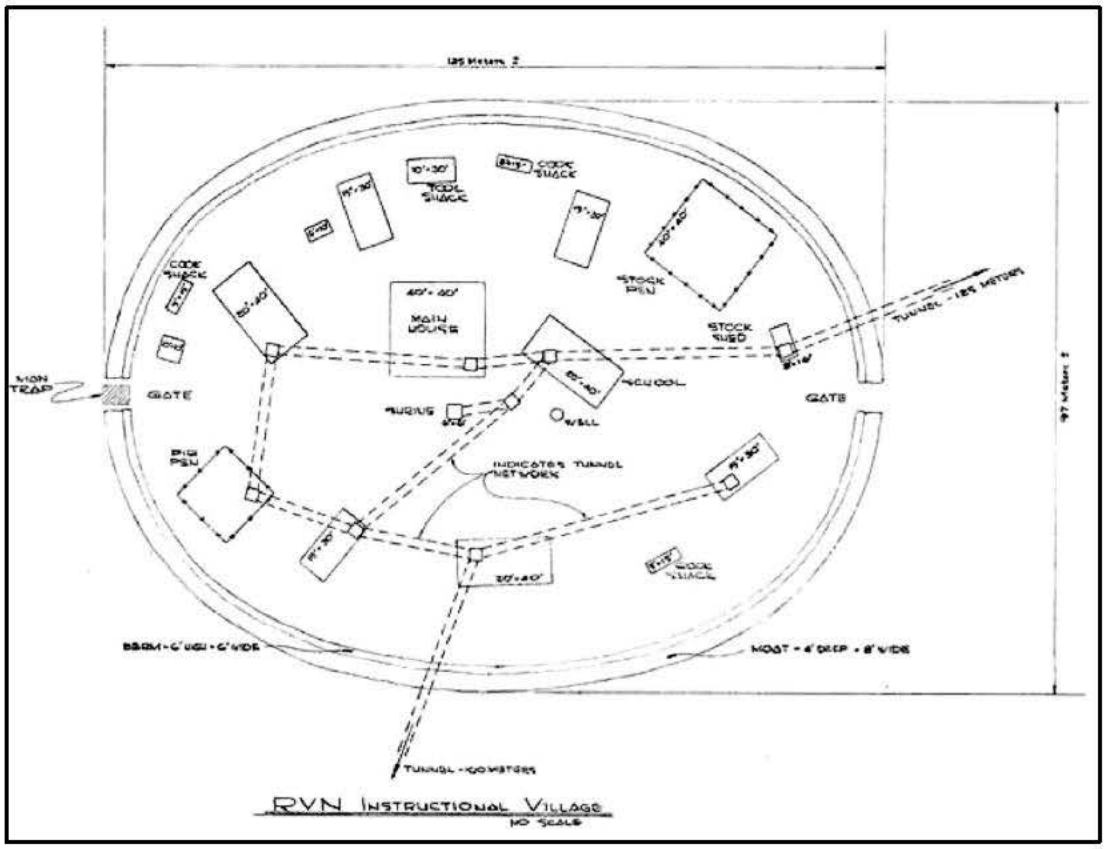


Figure 131. Remnant berm at the Tigerland village site (ERDC-CERL, 2014).

Figure 132. Remnant pieces of metal culvert used as underground tunnel system under the Tigerland village (ERDC-CERL, 2014).

Figure 133. Fake tunnel vent used for training along "Ambush Trail" at Tigerland (ERDC-CERL, 2014).

Figure 134. Obsolete truck used along "Ambush Trail," adjacent to the Tigerland village area (ERDC-CERL, 2014).

Camp Pendleton, California

"Combat Town" was a Cold War-era mock village was constructed in 1952 at Camp Pendleton, and it consisted of a variety of different mock cities such as those that would be found in Europe or Asia (Figure 135 and Figure 136). By 1968, the extremely detailed European portions had been stripped down to their structural elements and reutilized as a mock training village for Marines heading off to Vietnam (Figure 137). This "reuse" of existing infrastructure for Vietnam War training purposes is a repeated theme throughout the various services. By 1979, Combat Town had been reconstructed of concrete block (Figure 138).

Figure 135. Combat Town at Camp Pendleton, CA, was constructed in 1952; close-ups of buildings in red box are depicted in next two figures (NARA College Park and ERDC-CERL).

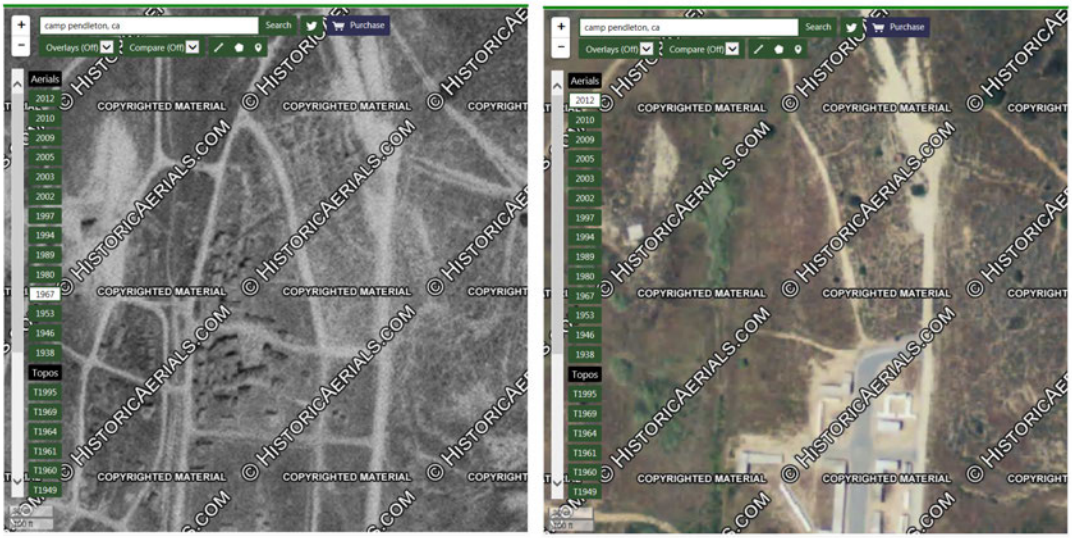
Figure 136. Close-up of buildings in Combat Town, constructed in 1952 at Camp Pendleton, CA (NARA College Park).

Figure 137. Combat Town at Camp Pendleton, CA, deconstructed down to its structure, 1968 (NARA College Park, RG 127-GG-603, box 24, photo A620114).

Figure 138. Combat Town at Camp Pendleton, CA, reconstructed in concrete block, 1979 (NARA College Park, RG 127-GG-603, box 24, photo A358416).

Unlike the mock village examples at Fort Gordon and Fort Polk, the modified mock village site at Camp Pendleton is still utilized in 2016 as a mock village (Military Operations Urban Terrain), although the concrete block village from the 1970s has been replaced with one consisting of shipping containers and arranged in a completely different configuration (Figure 139).

Figure 139. Combat Town aerial in 1967 (left) versus 2012 (HistoricAerials.com).



5 Quick Reference Guide to Significant Property Types

The following tables provide a "quick reference" for the property types significant under the theme of Ground Combat Training for the Vietnam War (Table 18–Table 20). The tables can serve as a stand-alone field site tool for a survey when searching for remaining facilities. The tables provide property types, sub-property types, and associated features. The tables do not comprise a definitive list, as construction was conducted by individual installations and details of the facilities varied widely in size, number of features, material used, etc. The features listed in the tables are generalized, and therefore cannot be taken as a set list of character-defining features. Such a list must be developed by expanding on the features provided here through investigation at each installation.

When using the tables, remember that these properties should be evaluated as a cultural landscape, or a site, with more than one component. Evaluating the entire range, course, or village is a more accurate way of determining the site's final eligibility. The components will need to be looked at, both individually and as a group, to see if they retain sufficient integrity to convey significance.

The tables are meant to assist in evaluating eligibility for the properties under NRHP Criteria A and C. This report has provided information useful in evaluating these properties as cultural landscapes, not as archeological sites. If an installation has one of these properties classified as an archeological site, it will need a different method of evaluation.

Table 18. Quick reference guide to the features and characteristics of significant property types on ranges, under the theme Ground Combat Training for the Vietnam War.

Ranges		
Sub-property types	**Features**	**Characteristics**
Small arms	Firing lines with firing points	• Fixed firing points and fixed targets • Fixed firing points and moving targets • Moving firing points and fixed targets • Moving firing points and moving targets

Ranges		
Sub-property types	**Features**	**Characteristics**
	Targets	• Stationary targets constructed of wood, paper, cloth, concrete, metal, or from natural features in the landscape • Moving targets using sleds or cars pulled by cables and pulleys over tracks
	Embankments and walls	• Behind targets to catch ammunition • In front of targets for concealment and protection • At firing lines for firing support and stabilization • Between ranges for adjacent fire protection • Commonly constructed of earth, concrete, or wood
	Trenches and foxholes	• At firing point to teach concealment • At firing point to teach rapid firing reactions
	Buildings (frequently shared between ranges within range complexes)	• Control/observation tower • Bleachers • Latrines • Target storage houses • Ammunition storage • Classrooms • General support buildings
Pugil stick training courts	Open areas	• Grassy, level surface • Free of obstructions
	Courts	• Circular with defined edges of court • Demonstration area in the center of the court • Soft surfaces—sand, sawdust, mulch, or grass • Observation areas with seating
Hand grenade courts and rifle grenade ranges	Dummy grenade practice	• Located in or near cantonment areas
	Live grenade practice	• Located away from main post areas

Ranges		
Sub-property types	**Features**	**Characteristics**
	Firing lines with firing points	• Tape lines • Foxholes • Logs • Stumps • Bunkers • Trenches • Sandbag stations • Concrete pits • Other types of throwing bays
	Targets	• Silhouettes • Tape or cloth circle outlines • Craters • Foxholes • Trenches • Mortar positions • Towed wheeled-vehicles • Simulated windows
	Embankments and trenches	• For protection • Constructed of steel, concrete, wood, sandbag revetments, walls, or earthen berms
	Buildings (frequently shared between ranges in range complexes)	• Control tower • Latrine • Target storage • Ammunition storage • Storage sheds • Administrative/maintenance
Hand-to-hand combat	Struggle pits	• Located in open areas • Sand- or sawdust-filled circles • Viewing platform
Bivouac	Areas on ranges that could accommodate the number of personnel training	• No physical infrastructure • Possible ground disturbance
Fortified areas	Field fortifications	• Bunkers • Foxholes • Trenches

Ranges		
Sub-property types	**Features**	**Characteristics**
Machine gun emplacement mock-up	Fortifications	• Pits with a cover of sandbags and other material
Mines and booby trap ranges	Small range	• Danger area with a building at the center • Viewing platform • Ground disturbance • Boundary • Signage • Equipment shed • Targets • Mines and booby trap examples used by the Viet Cong
Large arms ranges/Large-scale operation areas	Large areas on ranges that accommodated all aspects of combat— e.g., maneuvering armored vehicles, firing weapons systems, enacting survival skills	• Tank trails • Signage • Ground disturbance • Targets

Table 19. Quick reference guide to the features and characteristics of significant property types on training courses, under the theme Ground Combat Training for the Vietnam War.

Courses		
Sub-property types	**Features**	**Characteristics**
Attack courses	Circuit	• Boundary • Markers • Signage • Organizing path/sequenced movement • Checkpoints • Observation points
	Targets	• Fixed personnel silhouette • Simulated antitank gun • Towed armored vehicle
	Minefields	• Ground disturbance • Signage

Courses		
Sub-property types	**Features**	**Characteristics**
	Wire entanglements	• Barbed wire • Posts
	Pits and other shelters lining the circuit	• Ground disturbance • Pits/dug-out areas • Built-up areas • Logs and other found materials used to construct shelters
Close-combat courses	Lanes	• Marked by colored posts or wires with rag streamers
	Booby traps	• Ground disturbance • Examples among many others of booby traps used by the Viet Cong: trip wires, grenade launchers, punji stakes, pit traps, and spike log mace
	Targets	• Realistic two-dimensional and three-dimensional silhouettes
Infiltration courses	Course infrastructure	• Organizing path • Boundary • Machine gun platforms • Dummy targets • Control towers • Bleachers
	Obstacles	• Shell holes • Trenches • Slit trenches • Wire entanglements • Logs • Stumps • Brush
	Buildings	• Control towers • Latrines • Range buildings

Courses		
Sub-property types	**Features**	**Characteristics**
Obstacle courses	Obstacles	• Barbed wire • Tall walls • Fences of wood, logs, or netting • Overhead bars • Rope bridges • Elevated platforms • Tunnels
Bayonet assault courses	Course infrastructure	• 200–300 meters in length • Lanes of obstacles or targets set far enough apart to allow for maneuverability • Signage
	Constructed obstacles	• Materials: old auto tires, canvas, lumber • Wire entanglements • Log walks • Hurdles • Fences • Horizontal ladders
	Natural obstacles	• Streams • Ravines • Ridges • Rough and wooded areas
	Targets	• Materials: old auto tires, canvas, lumber • Silhouette • Large three-dimensional personnel shape • Small three-dimensional personnel shape

Table 20. Quick reference guide to the features and characteristics of significant property types in training villages, under the theme Ground Combat Training for the Vietnam War.

Training Villages		
Sub-property type	**Feature**	**Characteristics**
Mock village	Village infrastructure	• Corral for livestock • Haystacks • Signage • Water wells • Underground concrete rooms
	Buildings	• Housing • Shops • Religious/communal
	Tunnels	• Concrete pipe • Corrugated steel pipe
	Fencing	• Bamboo • Wood stakes • Vegetation
	Targets	• Pop up two-dimensional and three-dimensional silhouettes
	Booby traps	• Ground disturbance • Examples of booby traps used by the Viet Cong including: trip wires, grenade launchers, punji stakes, pit traps, spike log mace, among many others
	Landmines	• Ground disturbance • Examples of mines used by the Viet Cong
POW camp	Buildings	• Barracks • Confinement cells • "Headquarters" or administrative buildings
	Fencing	• Camp enclosure • Materials: wood stakes, bamboo, barbed wire

Training Villages		
Sub-property type	**Feature**	**Characteristics**
	Perimeter booby traps	• Outside the POW camp enclosure • Ground disturbance • Examples among many others of booby traps used by the Viet Cong: trip wires, grenade launchers, punji stakes, pit traps, spike log mace
	Perimeter landmines	• Outside the POW camp enclosure • Ground disturbance • Examples of mines used by the Viet Cong

6 Conclusion

Vietnam and the Home Front: How DoD Installations Adapted, 1962–1975, published by ERDC-CERL in 2014,[95] establishes the overarching historic context for Vietnam War era-related construction on many U.S. military installations. The report provides the background and context for understanding the demand for construction to support operations in Vietnam, and identifies several Vietnam War-era thematic areas related to stateside construction, one of which was ground combat training. *Vietnam and the Home Front* discusses specific installations and resource types related to ground combat training activities, to aid evaluations of the historic significance of related resources.

In this current subcontext report, previous information is expanded to further address the role of ground combat training in preparing troops for fighting in Vietnam, and specific information on DoD's ground combat training missions is provided. The information and guidance in this report provides a background and a framework for assisting installation cultural resources personnel to make standardized determinations of NRHP eligibility of Vietnam War-era ground combat training resources that are applicable to many military facilities. Standardizing determinations of NRHP eligibility allows comparisons between an installation's resources as well as between property types found at multiple installations.

Some form of ground combat training was required for nearly all U.S. military personnel deploying to Vietnam. The increased demand for troops in Vietnam required CONUS military installations to adapt to the large influx of personnel. Buildings, structures, and training lands were modified and constructed to address these demands. Because ground combat training was a primary component of preparing personnel to fight in Vietnam, several types of properties related to ground combat training are identified: training ranges (from hand-to-hand combat to large operations areas), courses (from remnant pits and towers to infiltration courses) and mock villages (from a few simple huts to entire towns with tunnels and POW

[95] Hartman et al., *Vietnam and the Home Front.*

compounds). A process is provided in this report for step-by-step evaluation of these resources, allowing for both new construction and modified facilities.

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Bibliography

References cited

Archibald, Dan, Adam Smith, Sunny Adams, and Manroop Chawla. *Military Training Lands Historic Context: Miscellaneous Training Sites*. ERDC/CERL TR-10-9. Champaign, IL: Engineer Research and Development Center, March 2010.

_____. *Military Training Lands Historic Context: Small Arms Ranges*. ERDC/CERL TR-10-11. Champaign, IL: Engineer Research and Development Center, March 2010.

_____. *Military Training Lands Historic Context: Training Village, Mock Sites, and Large Scale Operations Areas*. ERDC/CERL TR-10-10. Champaign, IL: Engineer Research and Development Center, March 2010.

Canfield, Bruce. *Complete Guide to U.S. Military Combat Shotguns* Woonsocket, RI: Mowbray Publishers Inc., 2007.

"Case-Church Amendment." Public Law 93-52. Washington, DC: 93rd U.S. Congress, 1 July 1973.

Chanchani, S., and C.G. Leary. *Historic Context for the Cold War at Ft. Campbell, Tennessee/Kentucky*. Cincinnati, OH: BHE Environmental, Inc. for the United States Army Corps of Engineers, Louisville District, 2006.

Clapp, Wiley. "The M14/M1A – Four Decades of Service." Accessed online: http://hunting.about.com/od/guns/l/aastm14_m1aa.htm, n.d.

Connell, Lawrence M. *Vietnam Chronology 1940–1973*. Fairfax, VA: CIA History Staff, November 1974.

Courtwright, David T. *Sky as Frontier: Adventure, Aviation, and Empire*. College Station, Texas: Texas A&M University Press, 2005.

Davis, Janet L. "Bainbridge Naval Training Center." Maryland Historical Trust State Historic Sites Inventory Form. Annapolis, Maryland: Maryland Historical Trust, 1982, http://msa.maryland.gov/megafile/msa/stagsere/se1/se5/007000/007600/007638/pdf/msa_se5_7638.pdf.

Dockery, Kevin. *Weapons of the Navy SEALs*. New York City: Berkley Publishing Group, December 2004.

DoD, *Department of Defense Annual Report for Fiscal Year 1966*. Washington, DC: Department of Defense, 1966.

DoD, *Department of Defense Annual Report for Fiscal Year 1968*. Washington, DC: Department of Defense, 1968.

Fleming, Charles A., Robin L. Austin, and Charles A. Braley. *Quantico: Crossroads of the Marine Corps*. Quantico, VA: History and Museums Division, Headquarters, U.S. Marine Corps, 1978.

Gander, Terry and Charles Q. Cutshaw, eds. *Jane's Infantry Weapons 2002–2003*, vol. 28. Jane's Information Group, 2002.

"Gulf of Tonkin Resolution." Public Law 88-408. Washington, DC: 88th Congress, 7 August 1964.

Hartman, Ellen R., Susan I. Enscore, and Adam D. Smith. *Vietnam and the Home Front: How DoD Installations Adapted, 1962-1975*. ERDC/CERL TR-14-7. Champaign, IL: ERDC/CERL with the Department of Defense Legacy Resource Management Program, December 2014.

JRP Historical Consulting, *Inventory and Evaluation of National Register Eligibility for Buildings and Structures at U.S. Marine Corps Base Joseph H. Pendleton*. Davis, CA: JRP Historical Consulting Services, April 2000.

MACV. *Handbook for U.S. Forces in Vietnam*. Washington, DC: Department of the Army, 1968.

Marine Corps Recruit Depot Parris Island, "Training: The Vietnam Era," Chapter 7 in *100 Years of Making Marines at Marine Corps Recruit Depot Parris Island, South Carolina*. Parris Island, SC: U.S. Marine Corps, 2015. Accessed online, http://www.mcrdpi.marines.mil/Portals/76/Docs/CentennialCelebrationBook/MCRDPI-history-book-7.pdf.

Millet, Allan R. "Marine Corps Base Camp Lejeune In The Vietnam Era," in *Semper Fidelis: The History of the United States Marine Corps*. Florence, MA: Free Press, 1991, 71. Chapter accessed online: http://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Semper%20Fidelis%20Popular%20History%20Publication/13_Chapter%207.pdf.

Morgan, Martin K.A. "U.S. M16." *NRA American Rifleman*. Online: http://www.americanrifleman.org/articles/us-m16, 22 June 2012.

National Park Service (NPS). *National Register Bulletin* #15: *How to Apply the National Register Criteria for Evaluation*. Washington, DC: U.S. Department of the Interior, 1997 (rev.).

Olive-Drab. "Vietnam War: Weapons & Equipment." Accessed online: http://www.olive-drab.com/od_history_vietnam_weapons_equipment.php.

Ott, David Ewing. *Field Artillery, 1954-1973*. Washington, DC: Department of the Army, 1975.

Smith, Milton. "RTC Orlando," last modified 25 April 2016, http://rtcorlando.homestead.com/.

U.S. Air Force, 737th Training Group. "Air Force Basic Military Training Fact Sheet." U.S. Air Force, 2011. Available online: http://www.basictraining.af.mil/library/factsheets/factsheet.asp?id=15599.

U.S. Marine Corps. *FMFM1-1 Marine Bayonet Training*. Alexandria, VA: Headquarters, U.S. Marine Corps, 25 March 1965. Available online: https://archive.org/details/MarineBayonetTraining.

"Weapons of the Vietnam War." Accessed online: http://www.173rdairborne.com/weapons.htm.

Weinert, Richard P. *The Role of USCONARC in the Army Buildup, FY 1966 (U)*. Fort Monroe, VA: United States Continental Army Command, 27 October 1967.

Winkler, David F. *Training to Fight: Training and Education during the Cold War*. USACERL Special Report 97/99. Champaign, IL: U.S. Army Construction Engineering Research Laboratory, July 1997.

Other resources reviewed

Ebert, James R. *A Life in a Year: The American Infantryman in Vietnam 1965–1972*. Novato, California: Presidio Press, 1993.

[96]

[96] From NARA archives, 111-CCS-CC61859 Box 92, recruits peace sign, 1969.

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Appendix A: Fort Huachuca and Fort Polk Field Surveys

The researchers submitted two trip reports as part of their deliverables to the Legacy Resources Management Program.[97]

Fort Huachuca, Arizona: 27 August 2014

During a site visit the week of 25 August 2014 to Fort Huachuca, Arizona, Adam Smith and Fort Huachuca personnel spent 27 August on the ranges, trying to locate the remnants of a mock Viet Cong village and a mock Viet Cong POW camp. No history could be found for these two mock Vietnam War-era training sites, but the researcher did find a few photographs in the museum archives (Figure A4). Through looking at old training maps, an approximate location was found for the mock Viet Cong POW camp. The researcher and the Fort Huachuca CRM found the actual site of the mock Viet Cong POW camp by matching the ridgelines of the mountains in the historic photo to the ridgelines in the fields. The berm that surrounded the mock camp was the only tangible ground evidence that was left in the landscape (Figures A1 and A2), although C-ration cans and period barbed wire were found as well (Figure A3). The researcher and the CRM were not able to locate the mock Viet Cong village.

[97] The trip reports in this appendix have been slightly modified from their original submittal to Legacy due to editing of this report.

Figure A1. Remnants of berm at Fort Huachuca training site (ERDC-CERL, 2014).

Figure A2. Remnants of berm at Fort Huachuca training site (ERDC-CERL, 2014).

Figure A3. Artifacts found at Fort Huachuca site included C-ration cans, lids, and clipboard top (ERDC-CERL, 2014).

Figure A4. Historic photographs of Vietnam War-era training area at Fort Huachuca (Fort Huachuca Museum archives).

Fort Polk, Louisiana: 22–26 September 2014

Adam Smith and Megan Tooker traveled to Fort Polk, Louisiana, from 22–26 September 2014. They surveyed two Vietnam War-era training areas, Horses Head and Tiger Ridge [the entire area at Fort Polk was nicknamed "Tigerland"]. The two researchers worked with Rickey Robinson, a local historian, and two Fort Polk archaeologists, Scott Faris and Brad Laffitte. Horses Head is a parcel of land owned by the U.S. Forest Service, and it was used under a special-use permit by the Army during the Vietnam War. The second training area, Tiger Ridge, is located on Fort Polk's Peason Ridge.

Horses Head site

At Horses Head, the researchers visited the sites of two training villages, the headquarters area, the supply area, Big Rock Hill, and a landing zone (Figure A5). During the Vietnam War, there were a total of five villages in this area (conversation with Ricky Robinson). While there are little to no landscape remnants of the villages (e.g., Figure A6, Figure A11, Figure A12, and Figure A17), artifacts found included brass that was date stamped from 1967 (Figure A7 and Figure A13), C-ration cans and spoons, concertina wire (Figure A9, Figure A14, and Figure A16), and charges (Figure A8 and Figure A15). Big Rock Hill was a site used for infiltration training, and artifacts at this site included rocks carved with soldiers' names (Figure A10) and remnant fox holes.

Figure A5. Map showing sites visited in Horses Head training area, Fort Polk, LA (ERDC-CERL, 2014).

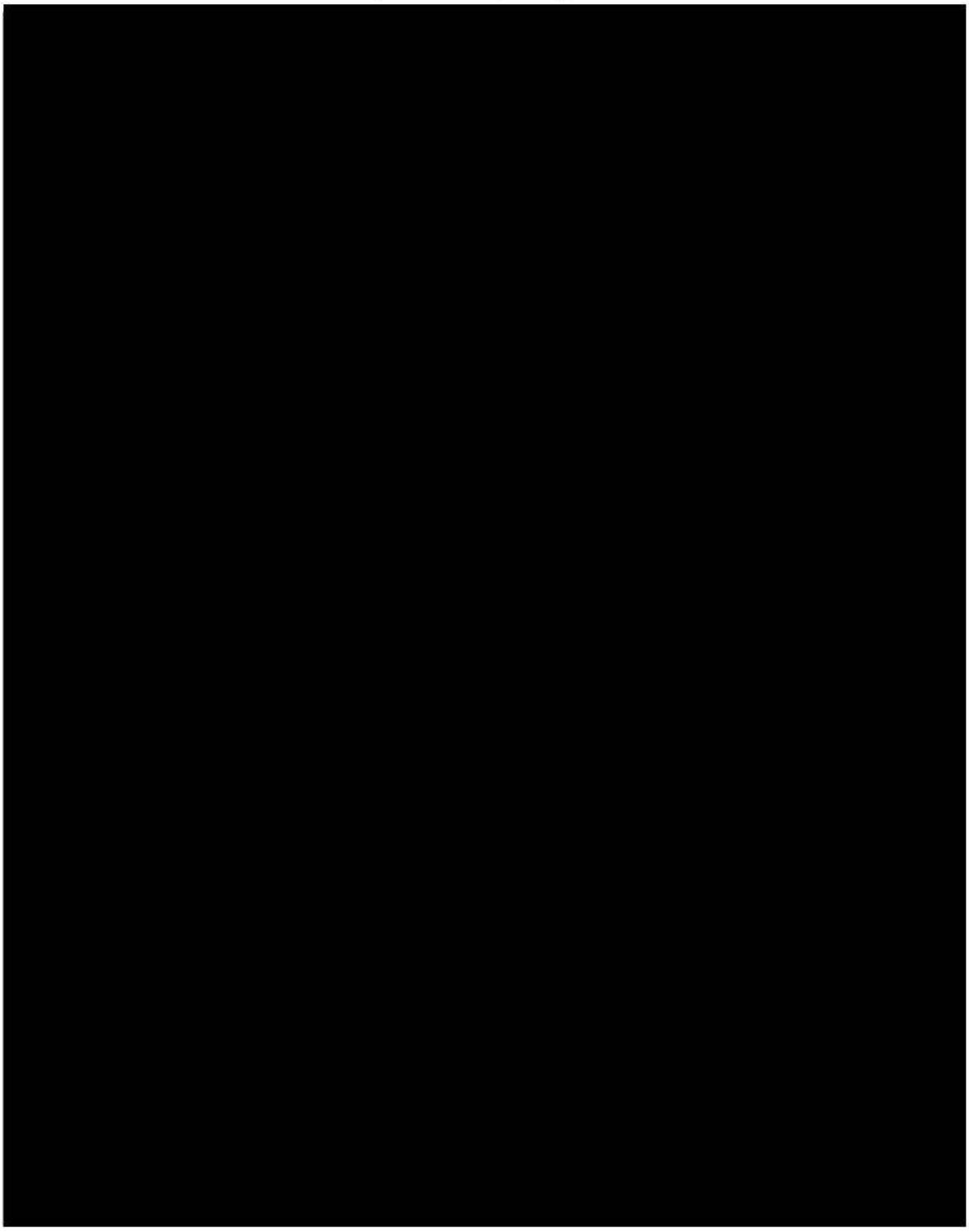

Figure A6. Site of northern training village at Horses Head training area, Fort Polk, LA (ERDC-CERL, 2014).

Figure A7. Brass artifact stamped with 1967 date from North Village site, Fort Polk, LA (ERDC-CERL, 2014).

Figure A8. Remnant of a flare from North Village site, Fort Polk, LA (ERDC-CERL, 2014).

Figure A9. Piece of barbed wire from North Village site, Fort Polk, LA (ERDC-CERL, 2014).

Figure A10. Rocks with carved soldiers' names at Big Rock Hill site, Fort Polk, LA (ERDC-CERL, 2014).

Figure A11. Supply site at Horses Head, Fort Polk, LA (ERDC-CERL, 2014).

Figure A12 South Village site at Horses Head, Fort Polk, LA (ERDC-CERL, 2014).

Figure A13. Brass remnant, also date stamped 1967, at south village site at Horses Head, Fort Polk, LA (ERDC-CERL, 2014).

Figure A14. Pull-tab style can top at south village site at Horses Head, Fort Polk, LA (ERDC-CERL, 2014).

Figure A15. Bottom of smoke grenade canister at South Village site, Fort Polk, LA (ERDC-CERL, 2014).

Figure A16. Barbed wire on trees at South Village site at Horses Head, Fort Polk, LA (ERDC-CERL, 2014).

Figure A17. Remnant fence post at landing zone at Horses Head, Fort Polk, LA (ERDC-CERL, 2014).

Tiger Ridge site

The researchers next visited the Tiger Ridge site. The associated landscape included the mock village site, remnant road, the former cantonment site, demonstration area, and ambush/convoy training area. In a historic photograph of the Tiger Ridge area during the Vietnam War, a helicopter training area is visible in the upper right corner, and the demonstration area with bleachers is on the right (Figure A18); a 1966 plan for the village also shows its features (Figure A19). Today, visible remnants of the village include portions of the berm (Figure A20) and fire step, portions of steel culverts (Figure A21) which were used as tunnels under the village (see

drawing of village Figure A19), and brass. Photographs also document a "Rice Paddy" area, although it was not evident in the landscape. Remnants of the "Ambush Trail" included four Army trucks (M-34 and M35s which were obsolete by Vietnam War; Figure A22), a fake tunnel vent (Figure A23), and a spider hole (Figure A24).

Figure A18. Historic photograph of the Tiger Ridge Training Area, Fort Polk, LA, circa late 1960s (Fort Polk Museum).

Figure A19. Plan of the mock Vietnam Village, surrounded by a berm and a moat, 1966 [note the tunnels outlined in dashed lines] (Fort Polk DPW).

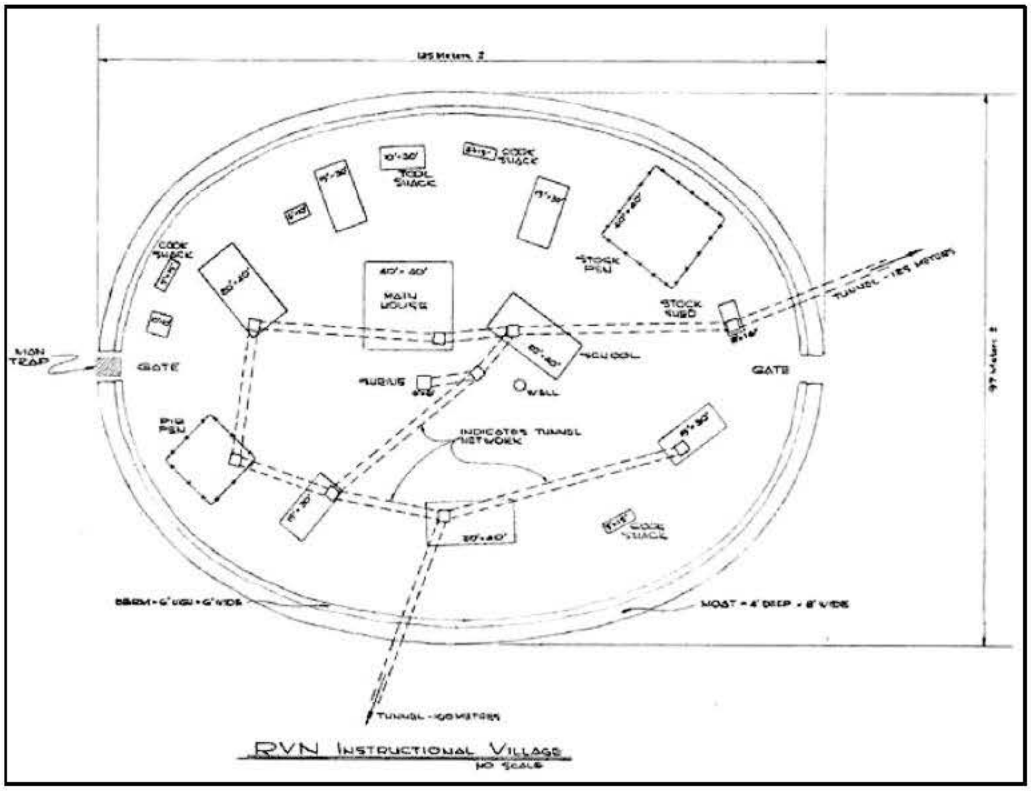

Figure A20. Remnant berm at the Tiger Ridge village site, Fort Polk, LA (ERDC-CERL, 2014).

Figure A21. Remnant metal culverts used as underground tunnel system under the Tiger Ridge village, Fort Polk, LA (ERDC-CERL, 2014).

Figure A22. Obsolete truck used along “Ambush Trail”, adjacent to the Tiger Ridge village area at Fort Polk, LA (ERDC-CERL, 2014).

Figure A23. Fake tunnel vent used for training along “Ambush Trail” at Tiger Ridge, Fort Polk, LA (ERDC-CERL, 2014).

Figure A24. Spider hole adjacent to fake tunnel vent along “Ambush Trail” at Tiger Ridge, Fort Polk, LA (ERDC-CERL, 2014).

In addition, ERDC-CERL personnel did archival research at the Fort Polk museum by looking through the training manuals, installation newspapers (Figure A25), historical maps and plans, displays of artifacts (Figure A26), and historic photographs from the Vietnam War era (Figure A27).

Figure A25. Newspaper article describing the introduction of the mock village training areas at Fort Polk, LA, in 1965 (Fort Polk Museum).

THE OUTPOST

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Volume 4 — Fort Polk, Louisiana, Friday, December 10, 1965 — Number 9

Polk Starts Vietnam Oriented AIT

Gen C. W. Abrams Tours Polk Training Sites

Gen Creighton W. Abrams Jr., Army vice chief of staff, toured training facilities and sites at Ft. Polk Tuesday.

During the tour he inspected a site at Peason Ridge being prepared for use in a five-day field exercise during the ninth week of a modified advanced individual training program begun here today.

Mock Villages

The new AIT places special emphasis on Vietnam, and the training site will have mock Vietnamese villages for realistic training. Ft. Polk and Ft. Gordon, Ga., are the only two

GREETING GEN CREIGHTON W. ABRAMS JR., Army vice chief of staff, during a reception in his honor at the Ft.

First Class of 227 In 9-Week Program

Department of the Army announced Monday it has begun advanced individual training (AIT) at Ft. Polk and Ft. Gordon, Ga., with instruction oriented toward Infantry assignments in the Republic of Vietnam.

The first class began here Monday with 227 enlisted men starting a modified training program for Infantry and Airborne Infantry personnel which will be nine weeks long instead of the normal eight weeks.

The extra week will allow time for a continuous, five-day field problem conducted in a simulated Vietnamese combat environment.

New Class Each Week

One new class of about 229 trainees will begin training each week at each of the two posts. Selection of individuals to receive the training will be made

lentation. In addition lesson learned in Vietnam are incorporated in basic combat training, advanced individual training and unit training at posts throughout the United States.

Many personnel will receive additional training at jungle warfare schools in Panama and Hawaii before being sent to Vietnam.

Figure A26. Fort Polk Museum display of Vietnam War-era C-rations (ERDC-CERL, 2014).

Figure A27. Photograph found in the Fort Polk Museum of hut in the mock village at Fort Polk (ERDC-CERL, 2014).

To date, the researchers at ERDC-CERL have visited two former Vietnam War-era training sites and found remnants of two training villages with artifacts, and large training area with headquarters site, bivouac sites, and a landing zone. Archival facilities visited proved to be fruitful with documentary evidence of Vietnam War-era training. The research team has plans to visit two more installations in December 2014.

Appendix B: Fort Gordon and Fort Jackson Field Surveys

Fort Gordon, Georgia: 2 December 2014

ERDC-CERL team members Megan Tooker and Adam Smith traveled to Fort Gordon to visit two of its remaining Vietnam War-era training facilities (Figure B1 shows overall plan): the East Village (Figure B2) and West Village (Figure B3). Researchers were escorted by Fort Gordon CRM, Renee Lewis.

The team first visited the East Village site, which was located on a fairly flat site (Figure B4 shows entrance). The four tunnel entrances outside the village perimeter were visible (Figure B6). Many of the posts for the huts were also standing and visible (the pressure-treated ones; Figure B5) as were the tunnel entrances within the huts. Barbed-wire perimeter fencing was still in place along much of the perimeter. A few artifacts such as cans (Figure B7) and C-ration tins (Figure B8) were located on site.

The West Village was located at the top of a hill. One of the original entrance posts was standing (Figure B9), and the second post was lying on the ground next to it. At the West Village, many of the walls of the huts were still in place (e.g., Figure B11), illustrating the construction materials and methods (Figure B12). At this site, it was easy to see the relationships between the huts, the tunnels, and the village center (Figure B13–Figure B15). Tunnel entrances were visible outside the barbed-wire perimeter (Figure B10 and Figure B16). No artifacts were uncovered at this village due to heavy leaf cover. Archival research found historical photos of a mock village model and training for Vietnam (Figure B17 and Figure B18).

Figure B1. Plan of Vietnam War-era resources at Fort Gordon, GA, 1966 (Fort Gordon DPW).

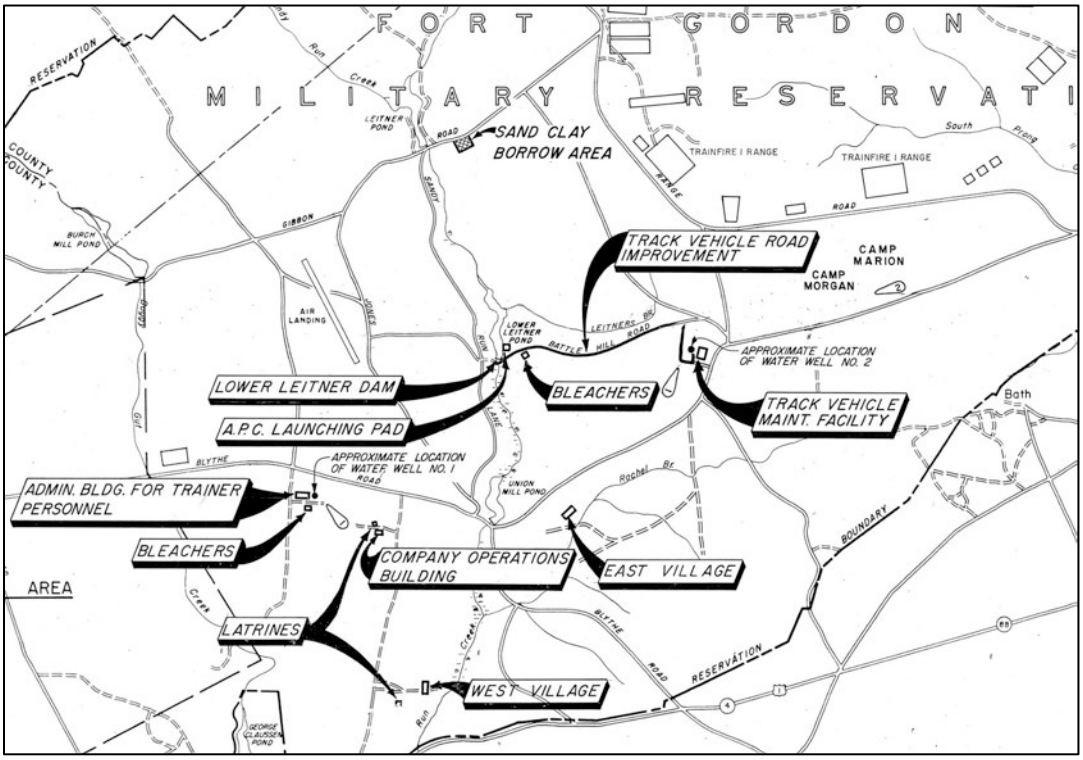

Figure B2. Plan of East Village at Fort Gordon, GA, 1966 (Fort Gordon DPW).

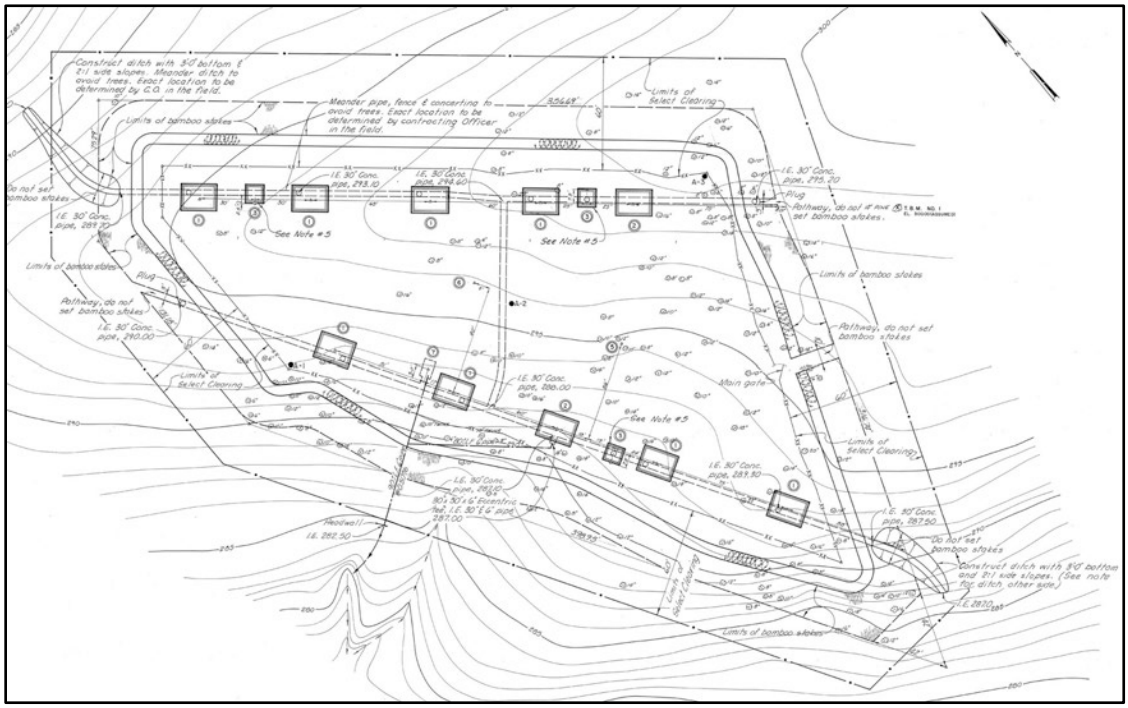

Figure B3. Plan of West Village at Fort Gordon, GA, 1966 (Fort Gordon DPW).

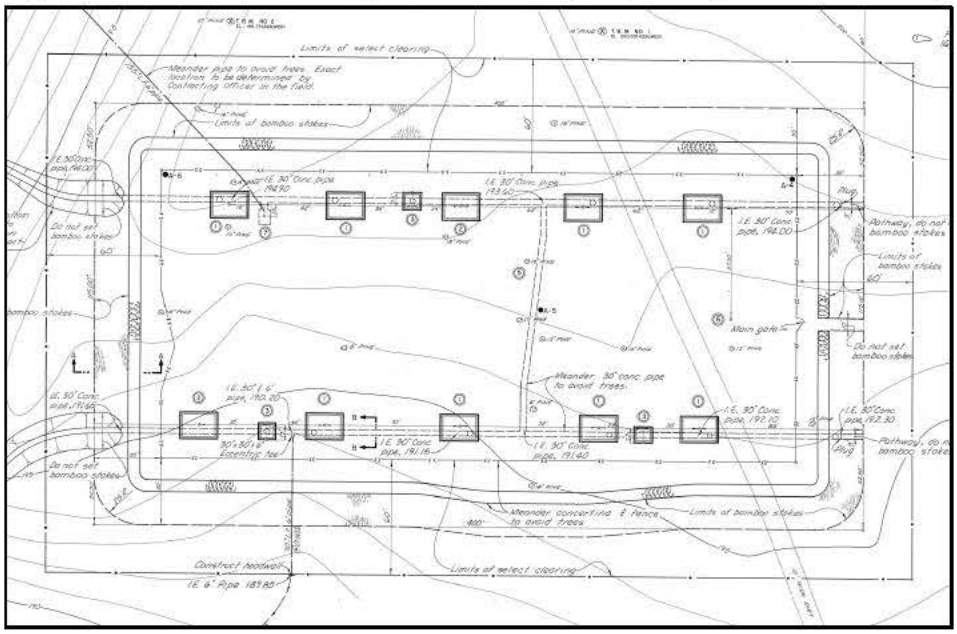

Figure B4. Remaining entrance post at East Village site, Fort Gordon, GA (ERDC-CERL, 2014).

Figure B5. Remaining posts for hut at East Village site at Fort Gordon, GA (ERDC-CERL, 2014).

Figure B6. Tunnel entrance outside perimeter of East Village at Fort Gordon, GA. Barbed-wire perimeter visible above tunnel entrance (ERDC-CERL, 2014).

Figure B7. Artifacts found at East Village site at Fort Gordon, GA, included cans (ERDC-CERL, 2014).

Figure B8. Artifacts found at East Village site at Fort Gordon, GA, also included C-ration cans (ERDC-CERL, 2014).

Figure B9. Remaining entrance post to West Village site, Fort Gordon, GA (ERDC-CERL, 2014).

Figure B10. Remnant perimeter wire at West Village site, Fort Gordon, GA (ERDC-CERL, 2014).

Figure B11. Remaining hut walls at West Village site, Fort Gordon, GA (ERDC-CERL, 2014).

Figure B12. Wall close–up showing construction materials and methods at West Village site, Fort Gordon, GA (ERDC-CERL, 2014).

Figure B13. Showing tunnel entrance inside hut at West Village site, Fort Gordon, GA (ERDC-CERL, 2014).

Figure B14. Covered tunnel system at West Village site, Fort Gordon, GA (ERDC-CERL, 2014).

Figure B15. Relationship of huts at West Village site, Fort Gordon, GA (ERDC-CERL, 2014).

Figure B16. One of the tunnel entrances outside the village perimeter at West Village site, Fort Gordon, GA (ERDC-CERL, 2014).

Figure B17. Photograph of village model at Fort Gordon, GA (NARA College Park).

Figure B18. Still image from movie on Vietnam War-era training at Fort Gordon, GA (NARA College Park).

Fort Jackson, South Carolina: 3 December 2014

Adam Smith and Megan Tooker traveled to Fort Jackson on 3 December 2014. They surveyed one Vietnam War-era training village with Fort Jackson CRM, Paul (Chan) Funk. The entrance to the village has been bulldozed, most likely during road realignment. The tower for the village still remains (Figure B19) as do the tunnel openings (Figure B22), outline of the huts (e.g., Figure B20), and barbed-wire fencing (Figure B21). It appears that the village was built on the same plan as the village from Fort Gordon.

No artifacts were uncovered at the site due to heavy leaf cover. A metal detector would be needed to see if any artifacts remain from the training era.

Figure B19. Remaining tower at Fort Jackson, SC, village (ERDC-CERL, 2014).

Figure B20. Remnant steps to a raised hut at Fort Jackson, SC; hut supports are visible on left, behind steps (ERDC-CERL, 2014).

Figure B21. Remnant perimeter fencing at Fort Jackson, SC (ERDC-CERL, 2014).

Figure B22. Remnant tunnel entrance from village site at Fort Jackson, SC (ERDC-CERL, 2014).

To date, the researchers at ERDC-CERL have visited four installations with former Vietnam War-era training sites, and they found plans for two of these sites at Fort Gordon. The remaining villages match closely to the plans and provide a clear representation of the tunnel systems, perimeter fencing, hut construction and layout, towers, and entrances.

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14. ABSTRACT

The National Historic Preservation Act of 1966, as amended, requires federal agencies to inventory and evaluate their cultural resources as those resources near 50 years of age. Vietnam War-era buildings, structures, and sites in the United States are reaching the 50 years of age benchmark. This report focuses on resources built in the United States to support the Vietnam War (1962–1975) ground combat training efforts. This work supplements a previous report produced by ERDC-CERL in 2014, *Vietnam and the Home Front: How DoD Installations Adapted, 1962-1975*, that established the overarching historic context for Vietnam War-related construction on many U.S. installations. The previously published report provides the background and context for understanding the demand for construction to support operations in Vietnam. That re-port identified several Vietnam War-era thematic areas related to state-side construction as well as specific installations and resource types related to ground combat training activities to aid in evaluating the historic significance of related resources. This report expands on that information to address the role of ground combat training in preparing troops for fighting in Vietnam, and it can be used as a starting point for identifying and evaluating historic Vietnam War-related ground combat training resources.

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