

DRAFT

**ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED
INFANTRY PLATOON BATTLE COURSE**

**U. S. Army, Fort A. P. Hill
Bowling Green, Virginia**



November 2008



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Environmental Assessment

U.S. Army Garrison Fort A.P. Hill

Construction and Operation of an Infantry Platoon Battle Course

November 2008

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Finding of No Significant Impact
Infantry Platoon Battle Course
U. S. Army Garrison, Fort A.P. Hill, Virginia

The U. S. Army Garrison, Fort A. P. Hill in Caroline County, Virginia, proposes to construct, operate and maintain an Infantry Platoon Battle Course (IPBC). The IPBC would meet critical live-fire training needs for both active and reserve component units that train on the installation. The purpose of the proposed IPBC is to provide year-round, comprehensive and realistic live-fire training and a range facility for the training of infantry platoons. The IPBC would support the collective live-fire training of active and reserve component infantry platoons assigned to or that regularly train at the installation. The range would train the infantry platoons to meet mission-essential live-fire training tasks while simultaneously providing the best possible training for current threats the Army encounters during combat operations in the contemporary operating environment. This range would be an essential element of infantry platoon training and readiness requirements prior to deployment into a theater of operations. There is not an IPBC at Fort A. P. Hill to support the live-fire training of infantry platoons assigned to active component units stationed there or those units that regularly train on the installation. Units supported include MDW Senior Command Units, assigned habitual training unit organizations and supported commands, the 58th IBCT, 56th SBCT, 29th ID and other organizations within the Area of Responsibility for Training Resource Oversight.

The proposed action is the construction, operation and maintenance of a standard IPBC range to support military infantry platoon live-fire collective training. This complex would be used to train and test infantry platoons, either mounted or dismounted, on the skills necessary to conduct tactical movement techniques, and detect, identify, engage, and defeat stationary and moving infantry and armor targets in a tactical array. In addition to live fire, this range would also be used for training with sub-caliber weapons systems and/or laser training devices. All targets would be fully automated and the event specific target scenarios would be computer driven and scored from the range operations center on the range. The range operating system would be fully capable of providing immediate performance feedback to the using units. Primary facilities would include two 800-square-foot buildings, an dry-vaulted latrine facility, an ammo breakdown area, a range tower, enclosed bleachers, and a covered mess facility. Supporting facilities would include electric service, transformers and lighting, gravel surfaced maintenance roads and tank trails, parking, and drainage ditches. Range facilities would include electronic targets, helicopter landing zones and an assault house. The IPBC would be capable of handling company size units which typically consist of 80-150 soldiers and would be used up to 285 days per year.

The Preferred Alternative and the No Action Alternative are the only alternatives to the proposed action described in detail within the Environmental Assessment (EA). The Preferred Alternative was the only one which met the screening criteria established by Fort A. P. Hill.

Consideration was given to constructing the IPBC on Ranges 24, 25 and 28. Range 24 was not large enough to meet military standards and design requirements. Training at the other two ranges would conflict with aviation gunnery training or Combined Arms Support Command (CASCOM) convoy live fire training. None of these alternatives met the screening criteria and were not considered viable alternatives.

The No Action Alternative would mean continuation of existing conditions. Under the No Action Alternative, no new land use practices would be implemented and the proposed IPBC site would continue to be used as a live-fire military training range. The No Action Alternative was not considered reasonable and viable.

Overall, implementation of the proposed action would have no significant impact on the resources evaluated. Best management practices implemented for the site would minimize or prevent significant impact to environmental resources. Temporary air emissions would be controlled during construction with operational procedures such as dust wetting and use of designated construction entrances. Some noise impacts would occur during training operations; however, noise on the proposed site falls within noise levels currently experienced by training ranges in this portion of Fort A. P. Hill. Existing topography would be followed wherever possible so that impacts from excavation and grading would be minimal. Stormwater management practices required by the Virginia Stormwater Management Program (VSMP) would be implemented, and Fort A. P. Hill would apply for a general permit for storm water discharges prior to construction. Wetlands would be surveyed and avoided to the extent possible. Some wetland impacts may occur where maintenance roads cross Mashbox Run. If necessary, a joint permit application would be filed with the Army Corps of Engineers prior to any wetland disturbance occurring on the site. Threatened and endangered species would be protected both on the site and at nearby White Lake. Any cultural resources identified on the proposed IPBC site would be documented, evaluated and the information submitted to the Virginia SHPO for concurrence prior to construction. Hunting and fishing would continue on this site and all site users would need to be permitted and required to attend activity specific training. Zone III noise would expand slightly off the installation; however, no additional houses would be exposed to this noise zone. The land south of post is very rural in nature.

The EA concludes that, with the implementation of appropriate best management practices as mentioned above, the proposed action would have no significant impacts on the quality of the physical and human environment at Fort A. P. Hill or in the surrounding community. In accordance with the requirements of the National Environmental Policy Act (NEPA), Fort A. P. Hill, therefore, issues a Finding of No Significant Impact (FONSI) for this project, and an Environmental Impact Statement (EIS) will not be prepared. This Environmental Assessment is available for public review at the Environmental Office in the Directorate of Public Works, Fort A. P. Hill, Virginia. Interested parties are invited to submit written comments for consideration on or before 30 days after publication of this notice to **Commander, U. S. Army Garrison Fort A. P. Hill, ATTN: Environmental Division, 19952 North Range Road, Fort A. P. Hill, VA 22427-3123.**

1 **EXECUTIVE SUMMARY**

2 **INTRODUCTION**

3 This Environmental Assessment (EA) is prepared in accordance with the National
4 Environmental Policy Act (NEPA), its implementing regulations published by the Council on
5 Environmental Quality (CEQ) (40 CFR 1500-1508), and 32 CFR Part 651 which implements
6 NEPA for the Army. Under NEPA, federal agencies are required to consider the environmental
7 consequences of proposed actions. The Army can consider environmental consequences of
8 proposed actions through the use of a Record of Environmental Consideration (REC), an EA, or
9 an Environmental Impact Statement (EIS) pursuant to 32 CFR Part 651, as appropriate,
10 depending on the level of significance of the environmental impacts of the proposed actions.

11 This EA provides NEPA analysis and documentation for the proposed action, which is to
12 construct, operate and maintain an Infantry Platoon Battle Course (IPBC) at Fort A. P. Hill. The
13 IPBC would meet critical live-fire training needs for both active and reserve component units
14 that train on the installation.

15 **PURPOSE AND NEED**

16 The purpose of the proposed IPBC is to provide year-round, comprehensive and realistic live-fire
17 training and a range facility for the training of infantry platoons. The IPBC would support the
18 collective live-fire training of active and reserve component infantry platoons assigned to or that
19 regularly train at Fort A. P. Hill. The range would train the infantry platoons to meet mission-
20 essential live-fire training tasks while simultaneously providing the best possible training for
21 current threats the Army encounters during combat operations in the contemporary operating
22 environment. This range would be an essential element of infantry platoon training and
23 readiness requirements prior to deployment into a theater of operations. There is no IPBC at Fort
24 A. P. Hill to support the live-fire training of infantry platoons assigned to active component units
25 stationed there or those units that regularly train on the installation. The proposed IPBC would
26 support the annual training requirement for 285 days of training. Units supported include MDW
27 Senior Command Units, assigned habitual training unit organizations and supported commands,
28 the 58th IBCT, 56th SBCT, 29th ID and other organizations within the Area of Responsibility
29 for Training Resource Oversight.

30 **PROPOSED ACTION**

31 The proposed action is the construction, operation and maintenance of a standard IPBC range to
32 support military infantry platoon live-fire collective training. This complex would be used to
33 train and test infantry platoons, either mounted or dismounted, on the skills necessary to conduct
34 tactical movement techniques, and detect, identify, engage, and defeat stationary and moving
35 infantry and armor targets in a tactical array. In addition to live fire, this range would also be
36 used for training with sub-caliber weapons systems and/or laser training devices. All targets
37 would be fully automated and the event specific target scenarios would be computer driven and
38 scored from the range operations center on the range. The range operating system would be fully
39 capable of providing immediate performance feedback to the using units.

1 Primary facility structures at the range would include two 800-square-foot buildings, an dry-
2 vaulted latrine facility, an ammo breakdown area, a range tower, enclosed bleachers, and a
3 covered mess facility. Supporting facilities would include electric service, transformers and
4 lighting, gravel surfaced maintenance roads and trails, parking, and drainage ditches. Range
5 facilities would include electronic targets, helicopter landing zones and an assault house. The
6 range would be capable of handling company size units which typically consist of 80-150
7 soldiers. The proposed IPBC would be used up to 285 days per year.

8 ***ALTERNATIVES CONSIDERED***

9 The Preferred Alternative and the No Action Alternative are the only alternatives to the proposed
10 action described in detail within this EA. The Preferred Alternative, which is the proposed
11 action, is the only one that meets the screening criteria established by Fort A. P. Hill. The No
12 Action Alternative serves as a benchmark against which the Preferred Alternative can be
13 evaluated. For this analysis, the No Action Alternative is defined as continuing the current use
14 of the training lands area without any changes.

15 ***ALTERNATIVES CONSIDERED AND REJECTED***

16 Consideration was given to constructing the IPBC on Range 24, Range 25 and Range 28. Range
17 24 was not large enough to meet military standards and design requirements. Training at the
18 other two ranges would conflict with aviation gunnery training or Combined Arms Support
19 Command (CASCOM) convoy live fire training. None of these alternatives met the screening
20 criteria and were not considered viable alternatives. Descriptions of these alternatives are not
21 carried throughout this document.

22 ***ENVIRONMENTAL IMPACTS AND BEST MANAGEMENT PRACTICES***

23 The EA evaluates potential environmental impacts of implementing the proposed action and the
24 No Action Alternative. Implementation of the proposed action, the installation's Preferred
25 Alternative, would mean that range construction and training mission operations on the IPBC
26 would begin. Overall, implementation of the proposed action would have no significant impact
27 on the resources evaluated including: land use, noise, soils, water resources including wetlands,
28 biological resources including vegetation and threatened and endangered species, cultural
29 resources, socioeconomics and environmental justice/protection of children, infrastructure,
30 hazardous materials/wastes and energy conservation. Mitigation measures implemented for the
31 site would minimize or prevent significant impact to environmental resources. Temporary air
32 emissions would be controlled during construction with operational procedures such as dust
33 wetting and use of designated construction entrances. Some noise impacts would occur during
34 training operations; however, noise on the proposed site falls within noise levels currently
35 experienced by training lands in this portion of Fort A. P. Hill. Noise modeling indicates that
36 Zone III would expand slightly off the installation, but no additional homes would be exposed to
37 this noise zone. Existing topography would be followed wherever possible so that impacts from
38 excavation and grading would be minimal. Stormwater management practices required by the
39 Virginia Stormwater Management Program (VSMP) would be implemented, and Fort A. P. Hill
40 would apply for a general permit for storm water discharges prior to construction. Wetlands
41 would be surveyed and avoided to the extent possible. If necessary, a joint permit application
42 would be filed with the Army Corps of Engineers prior to any wetland disturbance occurring on

1 the site. Threatened and endangered species would be protected both on the site and at nearby
2 White Lake. Cultural resources identified on the proposed IPBC site would be documented,
3 evaluated and the information submitted to the Virginia SHPO for concurrence. Hunting and
4 fishing would continue on the proposed IPBC site.

5 The No Action Alternative would mean continuation of existing conditions. Under the No
6 Action Alternative, no new land use practices would be implemented and the proposed IPBC site
7 would continue to be used as a live-fire military training range. The No Action Alternative did
8 not meet the purpose and need for the project and was not considered a viable alternative.

9 **CONCLUSIONS**

10 The EA concludes that, with the implementation of appropriate best management practices as
11 mentioned above, the proposed action would have no significant impacts on the quality of the
12 physical and human environment at Fort A. P. Hill or in the surrounding community. In
13 accordance with the requirements of NEPA, Fort A. P. Hill, therefore, issues a Finding of No
14 Significant Impact (FONSI) for this project, and an EIS will not be prepared.

15

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1 **SECTION 1.0**

2 **1.0 PURPOSE AND NEED FOR ACTION**

3 **1.1 Introduction and Scope of the Document**

4 Fort A. P. Hill is proposing construction, operation and maintenance of an IPBC for mission
5 essential training, particularly for active and reserve component infantry platoons assigned to or
6 that regularly train at the installation. This EA identifies, reviews and evaluates the
7 environmental impacts of construction and future training operations of the IPBC site and of the
8 No Action Alternative.

9 This EA is prepared in accordance with NEPA of 1969, its implementing regulations published
10 by the CEQ (40 CFR 1500-1508), and 32 CFR Part 651 which implements NEPA for the
11 Department of the Army. Pursuant to NEPA, federal agencies are required to consider the
12 environmental impacts of their proposed actions. NEPA typically applies when the federal
13 agency is the proponent of the action or where federal funds are involved in the action.

14 **1.2 Purpose and Need for the Proposed Action**

15 **1.2.1 Background**

16 Fort A. P. Hill is situated within the boundaries of Caroline County, Virginia, along the I-95
17 corridor and astride U.S. Route 301. The post is 20 miles southeast of Fredericksburg and is
18 situated roughly midway between Richmond, Virginia, and the Washington, D.C. metropolitan
19 area. The installation rests on the upper Atlantic Coastal Plain and in the watersheds of the
20 Rappahannock and Mattaponi Rivers. Fort A. P. Hill's terrain consists of rolling hills with some
21 low areas and wetlands throughout post. Most of the installation is forested with wooded areas
22 containing both hardwood and coniferous trees. U.S. Route 301 divides the post into northern
23 and southern sections, allowing maneuver and range operations to occur simultaneously. The
24 northwest portion of the post is dedicated to maneuver operations and the southeast portion
25 contains a 27,000-acre modern range facility and impact area. To the south and west, the
26 installation is bordered by forest, farmland, and the town of Bowling Green. Forests, farmland,
27 and the town of Port Royal lie to the east and north.

28 Fort A.P. Hill provides realistic joint and combined arms training, logistics and support, enabling
29 America's Defense Forces to win in the 21st Century operational environment. Fort A. P. Hill
30 maintains an all-purpose, year-round, training facility that serves Active, Reserve, and National
31 Guard troops of the Army, Marine Corps, Navy, and Air Force, as well as personnel from other
32 government agencies.

33 **1.2.2 Purpose**

1 The purpose of the proposed IPBC is to provide year-round, comprehensive and realistic live-fire
2 training and a range facility for the training of infantry platoons. The IPBC would support the
3 collective live-fire training of active and reserve component infantry platoons assigned to or that
4 habitually train at the installation. The proposed IPBC would support the annual training
5 requirement for 285 days of training. Units supported include MDW Senior Command Units,
6 assigned habitual training unit organizations and supported commands, the 58th IBCT, 56th
7 SBCT, 29th ID and other organizations within the Area of Responsibility for Training Resource
8 Oversight.

9 The IPBC range complex would be used to train and test infantry platoons on the skills necessary
10 to conduct tactical movement techniques, detect, identify, engage, and defeat stationary and
11 moving infantry and armor targets in a tactical array. The IPBC range would provide platoons
12 the ability to train collective tasks in a live-fire mode as outlined in Standards in Training
13 Commission (STRAC) live-fire tasks. The range would train the infantry platoons to meet
14 mission-essential live-fire training tasks while simultaneously providing the best possible
15 training for current threats the Army encounters during combat operations in the contemporary
16 operating environment.

17 To produce a realistic training environment, this range would use thermal targets, night
18 illumination devices, and visual flash simulators. This simulation technology would provide
19 soldiers with the best realistic training environment. This range would incorporate state-of-the-
20 art technology to support all phases of training, from ground maneuver and target engagement to
21 the critical after-action review (training feedback) phase. This support and timely feedback are
22 critical to effective training. Because of the training on this proposed IPBC, infantry platoons
23 would go into battle with the best possible training for threats the Army expects to encounter
24 during combat operations.

25 ***1.2.3 Need***

26 Infantry platoons must train in a live-fire mode to accurately replicate those tasks they must
27 perform in combat operations. The IPBC has been designed to support the live-fire collective
28 training needs of active and reserve component infantry platoons. This range would be an
29 essential element of infantry platoon training and readiness requirements prior to deployment
30 into a theater of operations. There is not an IPBC at Fort A. P. Hill to support the live-fire
31 training of infantry platoons assigned to active component units stationed there or those units that
32 regularly train on the installation.

33 ***1.3 Scope of the Document***

34 This EA assesses the effects of construction and training operations of the IPBC on the following
35 environmental resources: land use, air quality, noise, soils, water resources including wetlands,
36 biological resources including on-site vegetation and threatened and endangered species, cultural
37 resources, socioeconomics, environmental justice, infrastructure, hazardous/regulated
38 materials/wastes and energy conservation. Any potential cumulative and secondary impacts
39 associated with this project are also analyzed. Proposed best management practices to minimize
40 environmental impact are provided.

1 **1.4 Interagency Coordination and Review and Public Comment Period**

2 The preparation of this EA was coordinated with appropriate federal, state and local agencies.
3 Copies of agency correspondence are provided in Appendix B. In addition, agency and public
4 input will be obtained during a public comment period. The initial public comment period will
5 be held following completion of the draft EA. Comments submitted by agencies, organizations
6 and members of the public on the proposed action or EA will be considered. If the EA concludes
7 that there are no significant impacts, a FONSI will be issued.

8

1 **SECTION 2.0**

2 **2.0 PROPOSED ACTION**

3 The proposed action is the construction, operation and maintenance of a standard IPBC range on
4 642 acres to support military infantry platoon live-fire collective training. This complex would
5 be used to train and test infantry platoons, either mounted or dismounted, on the skills necessary
6 to conduct tactical movement techniques, and detect, identify, engage, and defeat stationary and
7 moving infantry and armor targets in a tactical array. In addition to live fire, this range would
8 also be used for training with sub-caliber weapons systems and/or laser training devices. All
9 targets would be fully automated and the event specific target scenarios would be computer
10 driven and scored from the Small Arms Range Operations and Control Area (SROCA) located at
11 the entrance to the IPBC. The range operating system would be fully capable of providing
12 immediate performance feedback to the using units. The IPBC would include 6 stationary armor
13 targets, 1 moving armor target, 43 stationary infantry targets, 14 moving infantry targets, 1
14 trench obstacle, 9 machine-gun bunkers (with sound effects simulator), 2 helicopter landing
15 zones and 1 assault/defend house. All targets would be fully automated, and the event-specific
16 target scenario would be computer-driven and scored from the range operations center. The
17 range operating system would be fully capable of providing immediate performance feedback to
18 the using participants.

19 Target locations would be site adapted to meet established training requirements. All trenches,
20 bunkers, and target emplacements would simulate typical threat scenarios. Eight mortar
21 simulation device emplacements would be located in areas from which unfriendly mortar fire
22 could be simulated. Each emplacement would contain one battle/sound effects simulator each.

23 Primary facility structures at the range would include large two 800-square-foot buildings, an
24 dry-vaulted latrine facility, ammo breakdown area, a range tower, enclosed bleachers, and a
25 covered mess facility. These primary structures would be located within the SROCA.
26 Americans with Disabilities Act (ADA) requirements would be met in the two 800-square-foot
27 buildings. Primary facility force protection measures would consist of laminated and safety
28 glass.

29 Supporting facility force protection would include security fencing and gates. Supporting
30 facilities would include electric service, transformers and lighting, surfaced roads and tank trails,
31 parking, drainage ditches, and a dry-vaulted latrine facility. If necessary, an unexploded
32 ordnance survey would be conducted prior to range construction.

33 Adjacent to the SROCA would be a large, open Assembly Area (AA) where troops would
34 assemble at the commencement and termination of training exercises. Troops would be dropped
35 off at the SROCA for infantry training. Troop carriers, medivacs, maintenance trucks and
36 helicopters are the only vehicles that would be used on the IPBC.

37 The range would be embedded with the necessary information and telecommunications
38 technologies to safely manage all personnel undergoing crew and unit live-fire training. All
39 targets would be fully automated, utilizing event-specific, computer-driven target scenarios and
40 scoring. Targets would receive and transmit digital data from the range operations center.

1 Scoring of engagement scenarios against established standards including audio and video
2 imagery would be captured and then compiled to conduct after-action reviews of all live-fire
3 exercises. A series of objectives would be set up in different locations throughout the IPBC
4 providing troops the opportunity to learn and practice a sequence of skills. Objectives may
5 include stationary and moving targets, bunkers, trenches, remote piloted vehicles, landing zones
6 and simulated building sites. The IPBC training would be targeted for company size units which
7 typically consist of 80-150 soldiers. A typical scenario would be for the company to arrive at the
8 range site in the morning and run through two rehearsals on the IPBC during the day and the
9 third time engage in live fire weapons training. A company may need a week of training to meet
10 military training standards and weapons qualification. Weapons up to .50 caliber are proposed
11 for use on this range. No weapons firing would be conducted from helicopters. Night time (after
12 10 p. m.) training may also occur. The IPBC would be used up to 285 days each year.

13 Once constructed and operational, regular maintenance to maintain roads and trails, and to
14 replace targets and wiring would be necessary for a fully functioning range.

15 The range would provide the Army with the capability to safely and effectively train to control
16 lethal weapons firing of the assigned infantry platoons without intrusion into unit command
17 integrity. Anti-terrorism/force protection (AT/FP) measures include vehicle barriers, appropriate
18 vehicle parking setbacks, security lighting, and gates. Sustainable design and energy
19 conservation methods would be incorporated where possible.

1 **SECTION 3.0**

2 **3.0 ALTERNATIVES CONSIDERED**

3 **3.1 Alternatives Development**

4 For proposed actions that require preparation of an EA, Council of Environmental Quality
5 regulations (§1508.9[b]), NEPA (§102[2][E]), and Army regulations (32 CFR Part 651) and
6 policy require that appropriate alternatives for the proposed action be described and evaluated.
7 A reasonable range of alternatives that meet the underlying purpose and need for the proposed
8 action should be analyzed for their environmental impacts to support a fully informed decision
9 by the decision-maker. An EA must include an evaluation of the No Action Alternative as a
10 reference for the comparison of potential environmental impacts associated with the proposed
11 action. Additionally, the EA should identify any alternatives eliminated from detailed analysis
12 and indicate the reasons for their elimination.

13 Four alternatives, including the Preferred Alternative and the No Action Alternative, were
14 considered by Fort A. P. Hill as part of the NEPA process. Each alternative was considered for
15 meeting the purpose and need, cost and impact to the human and natural environment.
16 Alternatives which did not meet the screening criteria established were not considered
17 throughout the EA.

18 **3.2 Screening Criteria**

19 Fort A. P. Hill considered several criteria for choosing a preferred site to construct and operate
20 the proposed IPBC. Screening criteria established by Fort A. P. Hill staff for the proposed range
21 site includes:

- 22 • Site must be large enough to meet mission and safety requirements including state-of-the-
23 art training facility. The design of the range would support Army training requirements
24 provided in Training Circular (TC) 25-8-1 and 25-8. These requirements support training
25 currently needed for operations in Iraq and Afghanistan. Current military forces operate
26 in squad and platoon size groups.
- 27 • Site must not interfere with other existing training missions and ranges on Fort A. P. Hill.
28 This would include down range firing conflicts and air space conflicts.
- 29 • Construction must be economically feasible with preference to a site that does not require
30 a great deal of unexploded ordnance (UXO) removal.
- 31 • Site work should require minimal disturbance to minimize environmental impact.

32 Several sites were considered applying the screening criteria to each site.

3.3 Preferred Alternative, Enhance Range Lands at Fort A. P. Hill, VA

The description of the proposed action presented in Section 2.0 is the Preferred Alternative. This alternative meets the screening criteria provided in Section 3.2, and is the only alternative carried throughout this EA. This alternative involves 642 acres located near the southern boundary of Fort A. P. Hill within existing Range 29. The southern most project site boundary runs adjacent to the Fort A. P. Hill boundary. The northern most project site boundary lies within the Daniel Impact Area.

3.4 Alternatives Considered and Rejected

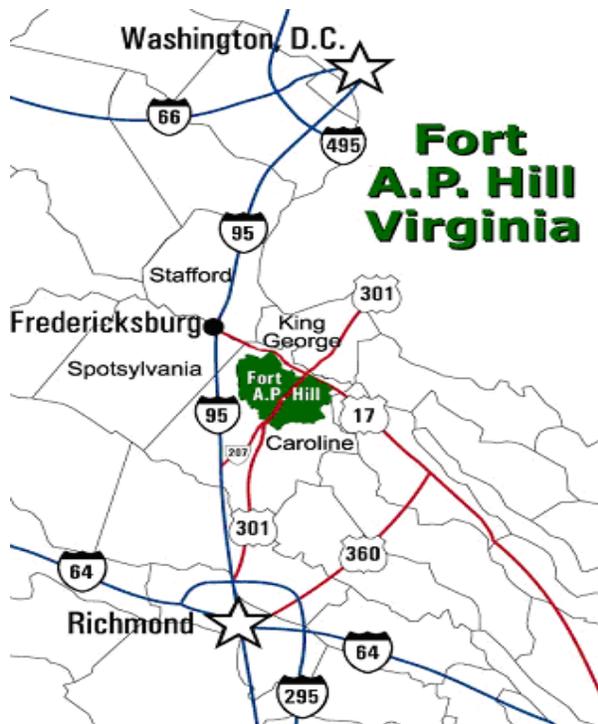
Consideration was given to constructing the IPBC on Range 24; however, this range is not large enough to meet military standards and design requirements. Range 25 was reviewed as an alternative; however, training operations on this range would conflict with the aviation gunnery training mission and there is known UXO on Range 25. Consideration was given to constructing the IPBC on Range 28; however, training would conflict with the CASCOSM convoy live fire course #2 that exists in this area. Lastly, a review was done to determine if any existing range could be renovated or upgraded for IPBC use. No range could be renovated or converted to meet military design and training standards without extensive cost and effort; therefore, this alternative was not considered feasible.

Each of these alternatives did not meet the screening criteria and were not considered a viable alternative. Descriptions of these alternatives are not carried throughout this document.

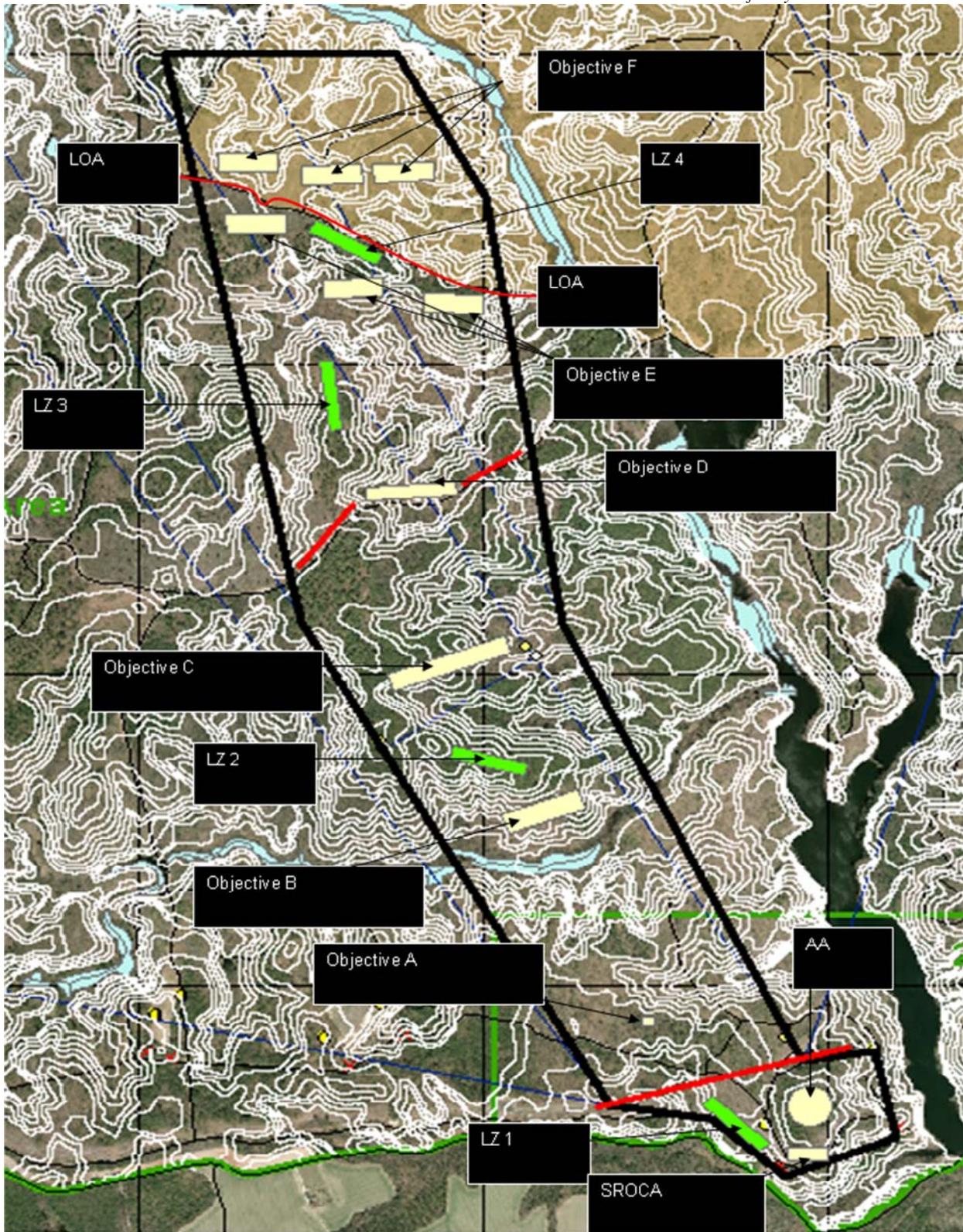
3.5 No Action Alternative

Under the No Action Alternative, the installation would not construct an IPBC range on the installation. Without this range complex, the infantry units that are stationed on or regularly train on Fort A. P. Hill would not be able to train critical, collective infantry platoon live-fire tasks. There is no other range on the installation designed to support the live-fire training of infantry platoon collective tasks. Without the IPBC range, infantry platoons would not be trained in the unit collective live-fire skills needed prior to moving into platoon and company level collective live-fire training. Without this range, training standards in this specialized skill area would not be fully satisfied. Infantry platoons would not be able to train to Army collective live-fire tasks standards and would not be considered combat ready.

The No Action Alternative would be expected to have a negative impact on national security and training objectives and mission. Baseline environmental conditions of the proposed site are described in Section 4.0 of this EA and serve as a benchmark for the evaluation of potential impacts of the proposed action. CEQ regulations and 32 CFR Part 651 require consideration of the No Action Alternative.



1
2 **Figure 1. Location of Fort A. P. Hill, Caroline County, Virginia**



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2 **Figure 2. Proposed IPBC Site**

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1 **SECTION 4.0**

2 **4.0 AFFECTED ENVIRONMENT**

3 **4.1 Location Description**

4 Fort A. P. Hill is a Department of the Army training facility located primarily in Caroline
5 County, Virginia, north of the town of Bowling Green. The installation is approximately 76,000
6 acres in size and is bisected east and west by U. S. Route 301 (Figure 1). The mission of Fort
7 A.P. Hill is to provide realistic joint and combined arms training, logistics and support, enabling
8 America's Defense Forces to win in the 21st Century operational environment. Fort A. P. Hill
9 maintains an all-purpose year-round training facility for the military units assigned to the
10 installation. Active Army, National Guard and Reserve units as well as the Marines and the
11 Navy use the installation for training activities. The proposed location of the IPBC is on 642
12 acres of training land next to Range 29 in the southeastern corner of the installation (Figure 2).

13 **4.2 Land Use**

14 The proposed IPBC would be located on 642 acres within and adjacent to Range 29 of Fort A. P.
15 Hill southeast of U. S. Route 301 and in the southeastern corner of post bordering on the
16 installation boundary. The area is currently used for military training. Range 29 has been used
17 extensively in the past as a live-fire range for the Navy SEALs and for weapons training up to
18 .50 caliber.

19
20 **4.3 Air Quality**

21 Fort A. P. Hill is located in the Northeastern Virginia Air Quality Control Region. The Virginia
22 Department of Environmental Quality (VDEQ) has classified Caroline County as an attainment
23 area for all National Ambient Air Quality Standards (NAAQS). Fort A. P. Hill currently has an
24 air quality, state operating permit for all emissions activities which occur on post including
25 weapons firing and explosive training activities.

26 **4.4 Noise**

27 The Federal Interagency Committee on Urban Noise (FICUN) has developed land use
28 guidelines, adopted by the Department of Defense, for areas on or near noise producing
29 activities, such as highways, airports and firing ranges. The Army uses these guidelines to
30 designate Noise Zones (NZ) for land use planning. Land use guidelines are meant to ensure the
31 compatibility with the noise environment while allowing maximum beneficial use of contiguous
32 property. Fort A. P. Hill has an obligation to the surrounding communities to determine ways to
33 protect both the people living and working adjacent to the installation and the public's
34 investment in the installation and the training which occurs there.

35 **4.4.1 Noise Zones**

1 NZ are designated as Land Use Planning Zone (LUPZ), I, II or III based on the number of
2 decibels (dB) produced for both long term and impulsive events. NZ descriptions for Fort A. P.
3 Hill include:

- 4 • LUPZ consists of the areas around a noise source where the C-weighted day-night level
5 (CDNL) is less than 57 dB for all noise. A LUPZ is usually acceptable for all types of
6 land use activities.
- 7 • NZ I consists of the areas around a noise source where a single event noise is less than 87
8 dB for small arms and the C-weighted day-night level (CDNL) is less than 62 dB for
9 large arms impulsive noise. The CDNL is the time weighted average sound level with a
10 10 dB penalty added to night time (2200 to 0700 hours) noise levels.
- 11 • NZ II consists of the area where a single event noise is between 87 and 104 dB for small
12 arms and the CDNL is between 62 and 70 dB for large arms impulsive events. Land use
13 within a NZ II area is normally limited to industrial, manufacturing and transportation
14 type activities.
- 15 • NZ III consists of the area around a noise source where a single event noise is greater
16 than 104 dB for small arms and the CDNL is greater than 70 dB for large arms impulsive
17 events. Noise sensitive land uses are not recommended for NZ III areas.

18 Based on Department of Defense guidance, the Department of the Army has developed an
19 Environmental Noise Management Program which considers noise from all sources of military
20 activities. Fort A. P. Hill has an installation Environmental Noise Management Plan (ENMP).
21 The ENMP, which applies to all tenants and activities, provides information and
22 recommendations for reducing noise impact during land and air training exercises. It also
23 provides limits for weapons firing and noise complaint investigation procedures.

24 **4.5 Soils and Vegetation**

25 **4.5.1 Soils**

26 Fort A. P. Hill is located in the Atlantic Coastal Plain physiographic province. The terrain
27 includes rolling countryside to mostly level plains, interrupted by numerous shallow valleys.
28 The elevation ranges from 10 to 255 feet above mean sea level. The land on the proposed site is
29 relatively flat in an area of rolling hills and valleys. The soils on the site ranges from potentially
30 erodible to moderately erodible due to location, soil texture, structure, slope and permeability.
31 Soil types on the proposed site include Kempsville and Slagle soils.

32 Kempsville soil consists of very deep, well drained soils on coastal plain uplands formed in
33 fluvial sediments. They are typically found on nearly level to moderately steep Coastal Plain uplands.
34 Slopes range from 0 to 25 percent. Slagle soils consist of deep, moderately well drained fine
35 sandy loam formed on marine terraces and uplands. They are typically found on moderate slopes
36 of 0 to 25 percent grade.

1 **4.5.2 Vegetation**

2 The long, linear footprint of the IPBS range transects a broad swath of forest cover types and
3 structures. This range includes and intersects with nearly 50 identified, unique forest stands
4 ranging in ages and stem densities. Species communities include mixed central hardwoods
5 dominated by red and white oaks (*Quercus* spp.) and also includes yellow-poplar (*Liriodendron*
6 *tulipifera*), sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), and hickories (*Carya*
7 spp.). The mature pine stands north of Mashbox Run are generally characterized by loblolly pine
8 (*Pinus taeda*) and the mixed pines occurring south of the creek include both loblolly pine and
9 Virginia pine (*Pinus virginiana*). The forest structure south of the creek is typically younger,
10 more densely stocked stands while those north of the creek are generally larger and older with a
11 variety of stem densities. The site contains expanses of open area with scattered trees. Trees
12 become more abundant near Mashbox Run on the site.

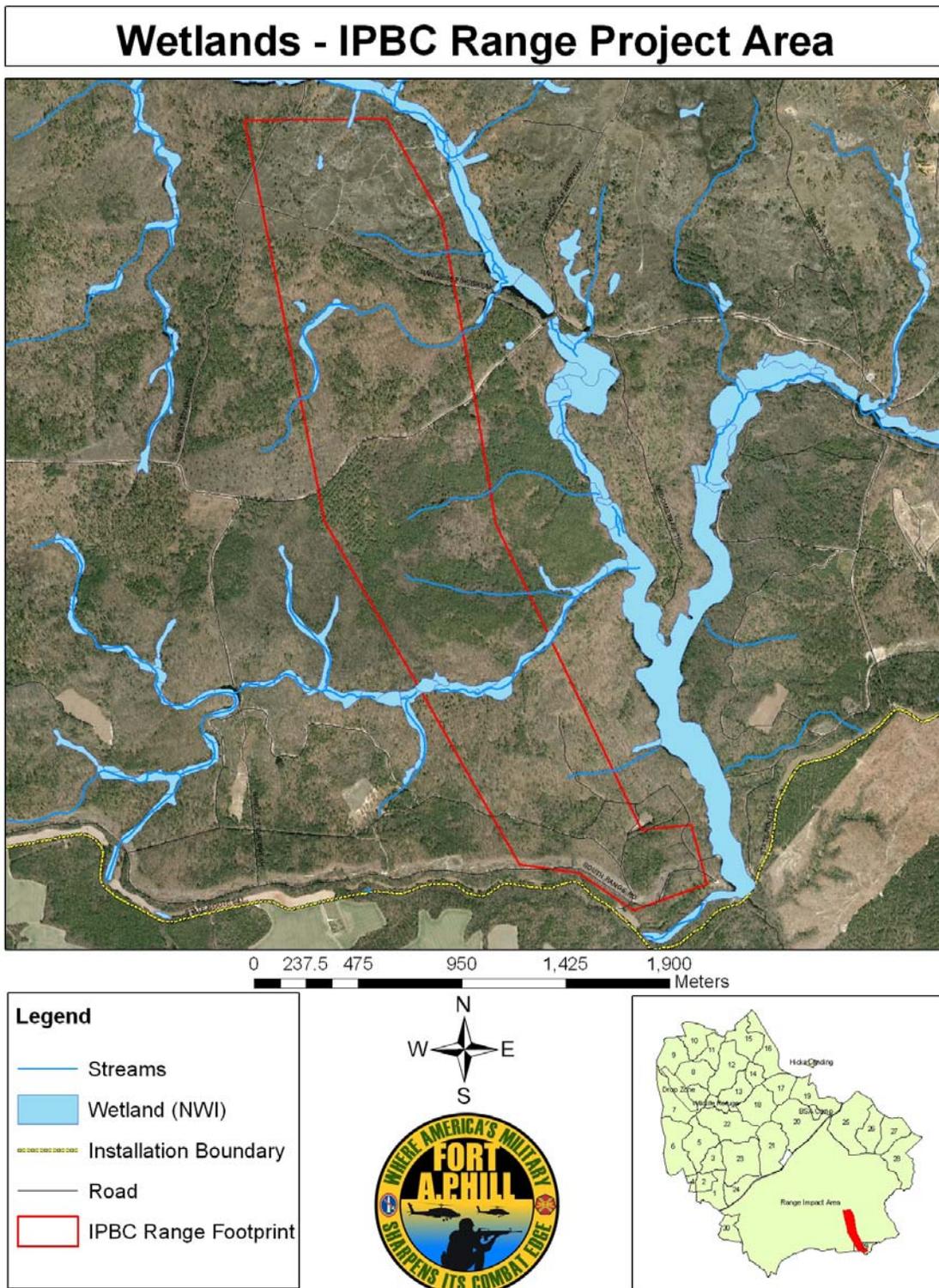
13 **4.6 Water Resources.**

14 **4.6.1 Surface Water**

15 Mashbox Run bisects the proposed site from west to east approximately one-half a mile north of
16 the southern installation boundary. Mashbox Run is a perennial stream which flows into White
17 Lake. Beverly Run, another perennial stream, runs just north and east of the upper and eastern
18 boundary of the proposed IPBC. It also flows into White Lake. White Lake lies just east of the
19 proposed range's eastern boundary.

20 **4.6.2 Wetlands**

21 Wetlands have been identified and delineated throughout the installation on the National
22 Wetlands Inventory (NWI) Survey. Additionally, water quality protection standards have been
23 established for lands adjacent to wetlands and water bodies with perennial flow. Fort A. P. Hill
24 imposes a 100 foot protective buffer around all wetlands to minimize impacts from erosion or
25 soil disturbance. According to the NWI maps, there are eight wetlands systems within the IPBC
26 site.



1

2 **Figure 3. Location of wetlands on proposed IPBC site.**

1 **4.6.3 Drinking Water**

2 Drinking water on Fort A. P. Hill is provided by a series of ground water wells located
3 throughout the installation. These wells are typically 350 to 500 feet deep and provide
4 approximately 100 to 250 gallons per minute. Water lines exist along primary and secondary
5 roads throughout post. Shallow groundwater is typically located 25 to 30 feet below grade
6 throughout Fort A. P. Hill.

7 **4.7 Biological Resources**

8 **4.7.1 Threatened and Endangered Species**

9 The Department of Conservation and Recreation (DCR) Natural Heritage Program has
10 conducted surveys throughout the installation. A Bald Eagle (*Haliaeetus leucocephalus*) nest
11 exists just east of the proposed IPBC on White Lake. According to the DCR 1994 survey, a
12 federally threatened plant species, swamp pink (*Helonias bullata*), is known to colonize in the
13 stream valley of Mashbox Run within the proposed IPBC footprint.

14 **4.7.2 Threatened and Endangered Species Potential Habitat**

15 The Department of Conservation and Recreation Natural Heritage Program has conducted
16 surveys throughout the installation. There are no known threatened or endangered plant or
17 animal species habitats located within the proposed IPBC site.

18 **4.7.3 Hunting and Fishing**

19 The installation offers deer, fall and spring turkey, dove, duck, rabbit, squirrel, bobwhite quail
20 and crow hunting seasons. Archery tackle, muzzleloaders during the special muzzleloader
21 season only, and shotguns with wheelchair accessible stands that are set-aside for disabled
22 hunters as well as three separate archery-only areas.

23 All hunting is on a first-come first serve basis. All permanent state and federal hunting licenses
24 are required. Additionally, a hunter education certificate is required for all hunters age 12 and
25 older. Most seasons are concurrent with the federal and state hunting seasons, but there are
26 exceptions.

27 Range 29 is currently used by military and other authorized guests for hunting and White Lake is
28 used for fishing. In addition to a criminal background check, Fort A.P. Hill hunters must possess
29 a valid Virginia hunting license, state- or National Rifle Association-certified hunter safety
30 course, register their firearms with the installation Provost Marshals Office, and pay for the \$50
31 installation permit fee for training area hunting, or \$60 permit fee for controlled access area
32 hunting.

33 **4.8 Cultural Resources**

1 **4.8.1 Archaeological Sites**

2 Fort A.P. Hill has identified over 50 archaeological sites that are eligible for inclusion in the
3 National Register of Historic Places (National Register). According to the Fort A. P. Hill
4 Integrated Cultural Resources Management Plan (ICRMP) and historic maps, two old home sites
5 lie in the northern portion of the proposed IPBC site. These house sites have not been verified
6 with field surveys.

7

8 **4.8.2 Architectural Resources**

9 Fort A.P. Hill has identified two architectural resources that are eligible for inclusion in the
10 National Register of Historic Places (National Register). According to a 2004 Phase I Cultural
11 Resources Survey conducted on Fort A. P. Hill, no architectural resources exist within the
12 boundaries of the proposed IPBC.

13 **4.9 Socioeconomic Resources**

14 **4.9.1 Demographics**

15 Caroline County is located in the rapidly growing I-95 urban corridor, separating two major
16 metropolitan statistical areas (MSA): the Baltimore-Washington MSA comprising a population
17 in excess of 2,407,400 (Virginia portion only, 2005) and the Richmond-Petersburg MSA
18 encompassing a population of nearly 1,167,500 (2005). Caroline County is part of the
19 Fredericksburg Region, which was the fastest growing area in the state between 1980 and 1990,
20 in terms of population and job creation. The Fredericksburg Region contains a population in
21 excess of 215,000 (2000). As the southernmost locality in the Fredericksburg Region, Caroline
22 County draws from both the Fredericksburg and Greater Richmond regional labor markets.

23 **4.9.2 Economy**

24 Historically, Caroline County's major private industries have been tied directly to natural
25 resources. These include agriculture and forestry products and nearly 51,604 acres of farmland.
26 Principal crops are soybeans, wheat, barley and corn. There are over 261,700 acres of
27 commercial forestland, which predominantly include loblolly pine, short leaf pine, oak and
28 hickory. Significant mineral resources include sand, gravel, clay, mica and beryl. In addition to
29 the expansion of some resource-based industries, Caroline County is seeing a new wave of
30 activity from a variety of businesses and industries and growth in Caroline County has
31 significantly changed in recent years.

32 The population areas surrounding Fort A. P. Hill tend to have lower incomes than Virginia
33 residents as a whole; however, this fact most likely reflects the rural nature of the county and the
34 lag in growth compared to its more rapidly urbanizing neighbors such as Stafford and
35 Spotsylvania Counties.

1 **4.9.3 Protection of Children**

2 Executive Order 13045 seeks to protect children from disproportionately incurring
3 environmental health or safety risks that might arise as a result of installation policies,
4 procedures, programs, activities and standards. The training lands and ranges of Fort A. P. Hill
5 are restricted to authorized personnel only and access is limited, excluding the entry of
6 unauthorized adults and children.

7

8 **4.10 Environmental Justice**

9 Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority*
10 *Populations and Low-Income Populations*, requires Federal agencies to identify and address
11 disproportionate adverse effects of their programs, policies and activities on minority and low-
12 income populations.

13 The Region of Influence (ROI) for this proposed action lies within the confines of Fort A. P.
14 Hill. The training mission applies only to facilities that lie within the installation boundaries and
15 has no applicability to resources that are located on lands outside Fort A. P. Hill. No low income
16 or minority populations exist on the installation or immediately adjacent to the IPBC site.

17 **4.11 Infrastructure and Utilities**

18 Existing infrastructure on the proposed IPBC site consists of paved and gravel roads and
19 unimproved trails. The Range 25 Firebreak Access Road is part of the infrastructure proposed
20 for use and maintenance of the IPBC.

21 Power lines currently run to Range 27 located adjacent to Range 29. There is also existing cable
22 available to provide a land line communications line to the proposed IPBC site. Water and
23 sewer are not currently available to this site and would require drilling a potable water well and
24 installing a septic treatment system if determined necessary.

25 **4.12 Hazardous Materials/Wastes**

26 **4.12.1 Hazardous Materials/Wastes**

27 Hazardous materials and hazardous wastes used and generated on Fort A. P. Hill are handled
28 within the guidelines of Army regulations and any other applicable federal, state and local laws
29 and regulations. Hazardous wastes are not currently generated in the range area proposed for
30 the IPBC. Fort A. P. Hill has an on-going contract for collection and disposal of any regulated
31 and hazardous waste generated on the installation. Fort A. P. Hill follows Department of the
32 Army pollution prevention and recycling methods wherever applicable.

33 **4.12.2 Regulated Materials/Wastes**

1 Current use of the range area proposed for the IPBC does not include generation, storage or
2 disposal of regulated materials/waste. Fort A. P. Hill currently has a contract for collection and
3 disposal of regulated waste generated on post.

4 **4.13 Energy Conservation and Sustainability**

5 To the extent possible and practicable, the Department of the Army and Fort A. P. Hill
6 participate in the Leadership in Energy and Environmental Design (LEED) program. The LEED
7 rating system recognizes building sustainability and promotes healthier work and living
8 environments. The program emphasizes modifying construction materials and techniques and
9 promotes the use of recycled materials to reduce the human carbon footprint on the earth. Fort
10 A. P. Hill has requested that all units, contractors, vendors and any other activities that live,
11 work, train or operate on the installation consider using more sustainable materials and recycle
12 whatever materials they can.

13

14

1 **SECTION 5.0**

2 **5.0 ENVIRONMENTAL IMPACTS**

3 **5.1 Land Use**

4 **5.1.1 Effects of the Preferred Alternative**

5 The proposed IPBC site is currently part of Fort A. P. Hill Range Area 29 used extensively by
6 the Navy SEALs. The proposed military operations and training activities are similar to those
7 currently performed on or near this site. No significant impact to land use is anticipated due to
8 the proposed action.

9 **5.1.2 Effects of the No Action Alternative**

10 The No Action Alternative would have no impact to land use because the site would not be used
11 for establishment of the IPBC. The land would remain as part of the range lands on Fort A. P.
12 Hill.

13 **5.2 Air Quality**

14 **5.2.1 Effects of the Preferred Alternative**

15 Air impacts from the proposed action would include short-term, temporary emissions from
16 construction equipment operation, the removal of vegetation and possible fugitive dust from
17 vehicle movement. During construction, all fugitive dust would be kept at a minimum using
18 control methods recommended under the Virginia Air Quality Regulations, such as wetting
19 roadways and using construction entrances. During site operations, fugitive dust would be kept
20 at a minimum through the use of operational controls such as limiting vehicle speed within the
21 training areas. The SROCA and support buildings would be heated and cooled with the use of
22 high efficiency heat pumps which would produce insignificant air emissions on the site.

23 Training operations at the IPBC would be short-term and localized. Training activities may
24 include the use of smoke and flares. There are no regulatory emissions restrictions for the
25 proposed training on this site.

26 All possible air emissions from the proposed IPBC construction and operations would be added
27 to the Fort A. P. Hill Air Permit. No significant effects to air quality are anticipated by
28 construction, operation and maintenance of the IPBC.

29 **5.2.2 Effects of the No Action Alternative**

1 The No Action Alternative would have no impact to air quality because the site would not be
2 used for establishment of the IPBC. Existing conditions would continue.

3 **5.3 Noise**

4 **5.3.1 Effects of the Preferred Alternative**

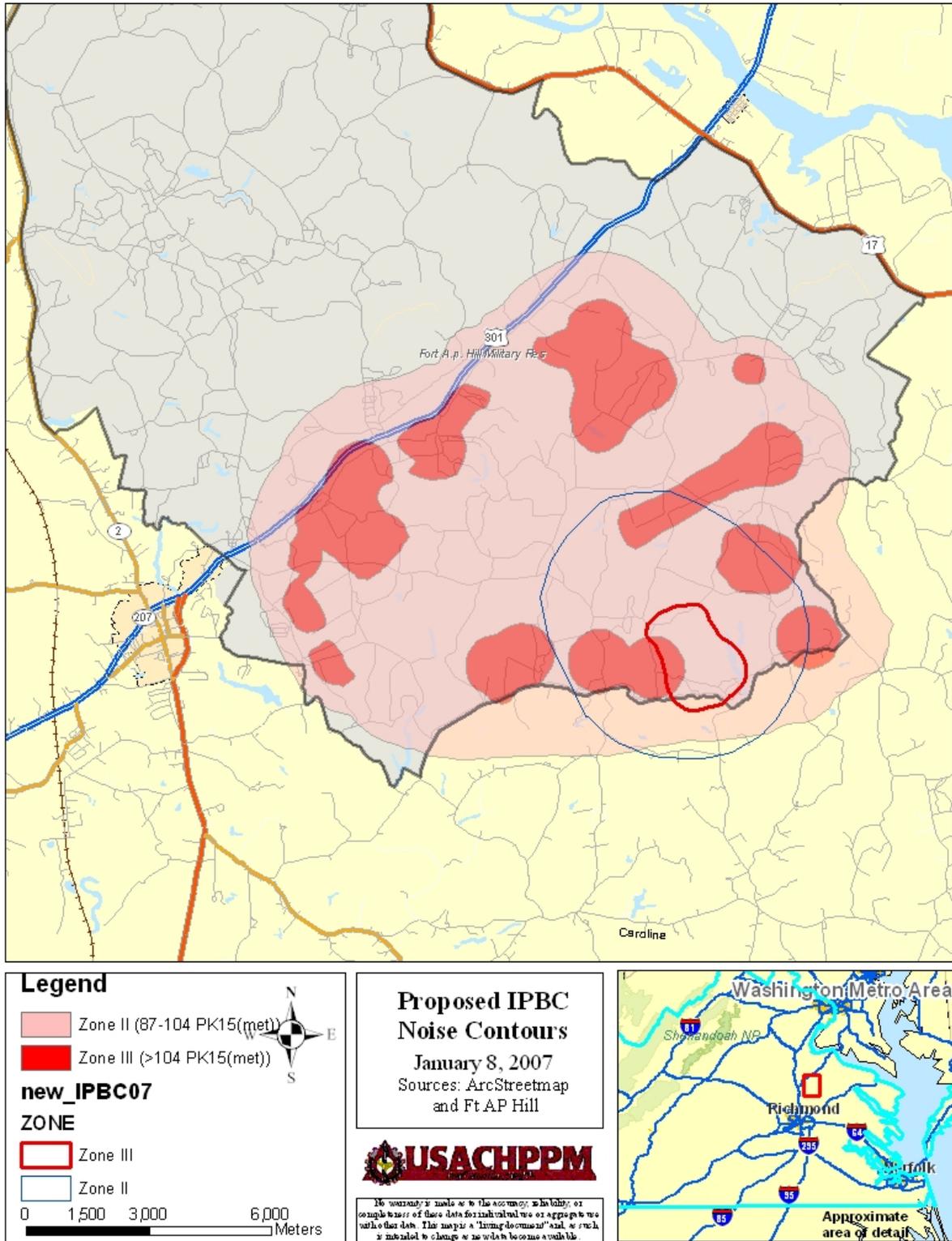
5 Noise would be generated within the IPBC during construction and during training operations.
6 Construction noise would be short-term and localized. Noise during training would include live-
7 fire of weapons up to .50 caliber, one or more battle sound effects simulators and possibly a
8 grenade simulator. Noise modeling was conducted for proposed operations at the IPBC by the U.
9 S. Army Center for Health Promotion and Preventive Medicine (CHPPM) in January 2007. The
10 results indicated that the NZs may extend beyond the FAPH boundary in the southeastern corner.
11 The most common activity at the site would be the live-fire during daylight hours. The noise
12 levels from this training should not have a negative impact off-post. However, battle sound
13 effects and grenade simulators would also be used at the site and some night firing may occur.
14 Depending on weather conditions at the time of detonation, levels may be loud enough to fall
15 within the moderate complaint risk criteria off post.

16 Although there is a risk of noise complaints during adverse weather conditions, noise on the
17 proposed site falls within noise levels currently experienced by training ranges in this portion of
18 Fort A. P. Hill. Currently, Zone III contours exist off the installation (Figure 4). Zone III will
19 expand slightly according to the model; however, no additional homes would be exposed to Zone
20 III levels. Noise complaints would be investigated and mitigated in accordance with the Fort A.
21 P. Hill policy to promote an open dialogue with the local community. The portion of Caroline
22 County adjacent to the southeastern corner of post is very rural. The installation would continue
23 to promote an open dialogue with neighboring localities, to include re-zoning reviews, education
24 and outreach with local communities, and a comprehensive, proactive noise complaint
25 management program.

26 **5.3.2 Effects of the No Action Alternative**

27 The No Action Alternative would have no new impact to noise because the site would continue
28 to be used as a military training area within the range lands. Existing conditions would continue.

29



1

2 **Figure 4. Noise model contours for proposed IPBC.**

1 **5.4 Soils and Vegetation**

2 **5.4.1 Effects of the Preferred Alternative**

3 An E&S Control Plan would be developed and implemented in accordance with the Virginia
4 Erosion & Sediment Control Law and Regulations. The proposed IPBC is bisected by Mashbox
5 Run. Topography adjacent to the stream is fairly steep. Elsewhere, site topography is rolling to
6 fairly flat. Existing topography is necessary to provide real world training on the site; therefore,
7 minimal disturbance is anticipated.

8 Vegetation would be removed at the SROCA and AA during construction to provide space for
9 infrastructure and structure emplacement. Much of these areas are already cleared of trees.
10 Trails for the IPBC would follow pre-existing trails wherever possible and clearing would be
11 minimal. Maintenance roads down range would follow site topography wherever possible.
12 Helicopter landing zones would be cleared, leveled, and grubbed. Once the range is used for
13 live-fire training, the forest will no longer be suitable for commercial timber harvest or active
14 forest management due to metal contamination.

15 **5.4.2 Effects of the No Action Alternative**

16 The No Action Alternative would have no impact to vegetation because the site would not be
17 used for IPBC. Existing conditions would continue.

18 **5.5 Water Resources**

19 **5.5.1 Effects of the Preferred Alternative**

20 For the period of construction, Fort A. P. Hill would prepare and implement an E&S Control
21 Plan and a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the VSMP and
22 the Chesapeake Bay Local Assistance Board (CBLAB) Regulations. Stormwater management
23 practices required by the VSMP would be implemented, and Fort A. P. Hill would apply for a
24 general permit for storm water discharges prior to construction. After construction, natural
25 infiltration would be used for storm water drainage. Sheet flow in the SROCA would drain into
26 swales. Roof run-off would be directed away from buildings with splash blocks. Natural
27 infiltration would be used on the remainder of the IPBC site. The E&S Control Plan would
28 determine the appropriate site controls for this project.

29 A wetlands survey would be completed for the proposed site. No wetlands exist within the
30 proposed SROCA footprint; however, training objectives, landing zones and maintenance roads
31 may impact wetlands. Fort A. P. Hill imposes 100 foot protective buffer areas around existing
32 wetlands. Once the survey is completed it would be determined if any landing zones, targetry
33 emplacements or roadway culvert crossings would need a wetlands permit. A joint permit
34 application would be submitted to and approved by the Army Corps of Engineers prior to any
35 work being done in wetlands areas. Wetlands impacts would be minimized to the extent possible
36 and, if necessary, wetlands mitigation would be done.

1 Based on local topography and stream networks, excavation depths for clearing and grubbing are
2 not expected to encroach upon groundwater levels at the proposed site. To protect groundwater
3 from possible spills, the construction contractor would maintain spill control equipment on the
4 site during construction. Military personnel are required to use drip pans underneath parked
5 vehicles during training activities.

6 No drinking water well would be drilled on the IPBC site. Potable water would be provided by
7 personnel soldier canteens and water buffalos. A dry-vaulted latrine would be constructed in the
8 SROCA and portable chemical toilets would be placed down range during active training
9 maneuvers.

10 **5.5.2 Effects of the No Action Alternative**

11 The No Action Alternative would have no impact to water resources, including surface water,
12 wetlands, storm water, groundwater and drinking water because the sites would not be used for
13 establishment of the IPBC. Existing conditions would continue.

14 **5.6 Biological Resources**

15 **5.6.1 Effects of the Preferred Alternative**

16 A DCR threatened and endangered species survey of the proposed IPBC site identified a small
17 colony of swamp pink along Mashbox Run south of Objective B. An updated survey would be
18 conducted prior to any construction occurring on the IPBC site. Protection of this species would
19 be accomplished by designating the area as a chemical field for training purposes and
20 surrounding the area with wire obstacles and boundaries which would force units to bypass the
21 swamp pink location and its associated buffer.

22 The bald eagle nest on White Lake is located outside the IPBC; however, protection zones have
23 been established to minimize noise impacts on the birds during nesting season. The bald eagle
24 has been delisted and is no longer a threatened or endangered species under the Endangered
25 Species Act; however, it continues to be protected under the Bald and Golden Eagle Protection
26 Act and the Migratory Bird Treaty Act. Bird protection zones would be established in
27 accordance with the U. S Fish and Wildlife Service's national bald eagle management
28 guidelines. Helicopter flights during the November to April time frame would be minimal and
29 from April to July flights would be somewhat restricted. Noise impacts from training are
30 anticipated to be minimal since the nest was built during military training activities and the nest
31 has been active for the past five years.

32 No other endangered species or habitats have been identified in the proposed IPBC.

33 Hunting would continue on Range 29 after establishment of the IPBC. Fishing would also
34 continue on White Lake. Both areas would continue to be used in accordance with Fort A. P.
35 Hill and Virginia hunting and fishing regulations and licensing requirements. Range Operations
36 controls IPBC scheduling to ensure the safety of both the military troops and the hunters on site.

1 **5.6.2 Effects of the No Action Alternative**

2 The No Action Alternative would have no impact to biological resources because the site would
3 not be used for establishment of the IPBC. Existing conditions would continue.

4 **5.7 Cultural Resources**

5 **5.7.1 Effects of the Preferred Alternative**

6 A Phase I Cultural Resources Survey of the proposed IPBC would need to be completed prior to
7 any land disturbance occurring on the property. A site walk-over identified a historic house site
8 near Objective C which needs to be evaluated and documented. Cultural resources found
9 included a foundation, plants that surrounded the house, a water well and a driveway. Other
10 similar resources found on Fort A. P. Hill are regularly evaluated but are not eligible for the
11 National Register of Historic Places. Evaluation and consultation with the Virginia State
12 Historic Preservation Officer (VSHPO), if appropriate, for this site would be completed before
13 any construction occurs on this site. Once surveyed and evaluated, Fort A. P. Hill would submit
14 all cultural resources reports to the VSHPO for review and concurrence. It is anticipated that no
15 historic properties or cultural resources would be affected by the construction and operation of
16 the proposed IPBC.

17 **5.7.2 Effects of the No Action Alternative**

18 The No Action Alternative would have no impact to cultural resources because this site would
19 not be used for establishment of the IPBC. Existing conditions would continue.

20 **5.8 Socioeconomic Resources**

21 **5.8.1 Effects of the Preferred Alternative**

22 Use of the proposed IPBC could bring as many as 10,000 additional soldiers to Fort A. P. Hill
23 yearly for infantry training. The 56th Stryker Brigade Combat Team and other mission essential
24 units, as well as the Army Reserve and the Army National Guard currently use other facilities
25 and training areas on Fort A. P. Hill, but there is no equivalent training range to the proposed
26 IPBC. While training at the IPBC, soldiers would stay on post and spend some amount of time
27 and money in the local economy. By providing realistic training that meets military standards,
28 Fort A. P. Hill can ensure regular use of the installation by active Army, Reserve and National
29 Guard units and other governmental law enforcement agencies. The economy of Caroline
30 County benefits from the regular influx of troops using the post because soldiers typically spend
31 some money in the local economy.

32 The IPBC would be restricted to authorized personnel only; therefore, the proposed action would
33 have no effect on children. There would be no significant impact to socioeconomic resources
34 due to establishment of the IPBC on Fort A. P. Hill.

1 **5.8.2 Effects of the No Action Alternative**

2 The No Action Alternative would have no impact to socioeconomic resources because the site
3 would not be used for establishment of the IPBC. Existing conditions would continue.

4 **5.9 Environmental Justice**

5 **5.9.1 Effects of the Preferred Alternative**

6 Existing conditions at Fort A. P. Hill would continue under the proposed action. Construction
7 and operation of the proposed IPBC does not create any advantage or disadvantage for any group
8 or individual, and its use would not create any adverse human health or environmental effects on
9 children, minorities or low-income populations or communities within or surrounding the
10 installation. The proposed IPBC operations and activities would be completely within the
11 existing boundaries of Fort A. P. Hill.

12 **5.9.2 Effects of the No Action Alternative**

13 The No Action Alternative would have no disproportionate or adverse impacts or environmental
14 or social effects on minority and low-income populations. Existing conditions would continue.

15 **5.10 Infrastructure and Utilities**

16 **5.10.1 Effects of the Preferred Alternative**

17 Primary access to the proposed IPBC would be off South Range Road. Military vehicles would
18 drop off soldiers at the SROCA and either leave the site or be stored in designated parking areas
19 during the infantry training exercises. Pre-existing trails within the site would be used where
20 possible; however, additional maintenance roads would be constructed to allow access to all
21 targetry areas and to provide forest access for fire suppression. Two maintenance roads would
22 be cleared and grubbed, follow pre-existing topography as much as possible and be covered with
23 gravel. Locations where these roadways cross Mashbox Run would contain culverts to prevent
24 waterway obstruction and wetland permits would be obtained as discussed in Section 5.5.1. A
25 firebreak road south of Range 25 would also provide some access to the northern end of the
26 proposed IPBC site. Troops would not enter this area because it is part of the active impact area.
27 LZs for helicopters would be cut and filled to a minimal extent. Grubbing would also be done at
28 the LZs. Because the rolling topography of the site is needed for training purposes, a minimum
29 amount of cut and fill would be conducted anywhere on the site.

30 Utilities, including phone and power lines, are available along South Range Road and lines
31 would be brought into the proposed IPBC for communications and powering the electronic
32 targetry. Transformers would be installed as necessary to supply power to the targets. Water
33 lines are not planned for the proposed IPBC.

1 No significant impact to existing post infrastructure is anticipated due to the proposed action.

2 **5.10.2 Effects of the No Action Alternative**

3 Under the No Action Alternative there would be no additional infrastructure added to Fort A. P.
4 Hill, and existing conditions would continue.

5 **5.11 Hazardous Materials/Wastes**

6 **5.11.1 Effects of the Preferred Alternative**

7 It is anticipated that no hazardous wastes would be generated on the proposed IPBC. Weapons
8 cleaning would be done once the troops are returned to other areas of post. If for some reason
9 wastes are generated during training exercises, the Fort A. P. Hill Environmental Division would
10 be notified for proper guidance concerning collection and storage of this waste. Any hazardous
11 materials and wastes generated would be handled, stored and disposed of in accordance with
12 federal, state and Army regulations and requirements. Fort A. P. Hill would provide disposal for
13 all wastes through existing contracts. Fort A. P. Hill also has a program for recycling and
14 pollution prevention and a fully implemented Environmental Management System. No
15 significant impact to post from hazardous waste is anticipated due to the proposed action.

16 **5.11.2 Effects of the No Action Alternative**

17 Under the No Action Alternative there would be no hazardous materials and wastes on the
18 proposed site, and existing conditions would continue.

19 **5.12 Energy Conservation and Sustainability**

20 **5.12.1 Effects of the Preferred Alternative**

21 Per the Department of Army requirements for energy conservation and sustainability, Fort A. P.
22 Hill plans to incorporate as many sustainable design elements into the proposed IPBC as possible
23 without impacting military training. Long life, low maintenance, recycled materials would be
24 considered for building construction. All lights installed within the proposed IPBC buildings
25 and parking areas would be energy efficient. Heat pumps used for heating and cooling buildings
26 would meet energy efficiency ratings required for the LEED program. All parking areas and
27 roadways would be covered by a pervious gravel surface. The design of the proposed IPBC
28 would meet requirements of a LEED silver rating.

29 No significant impact to existing energy conservation is anticipated due to the proposed action.

30 **5.12.2 Effects of the No Action Alternative**

1 Under the No Action Alternative there would be no need for energy conservation and sustainable
2 construction on the proposed site, and existing conditions would continue.

3 **5.13 Best Management Practices**

4 Most air emissions would be temporary either during construction or during short duration
5 training exercises. Operational controls, such as road wetting, use of construction entrances, and
6 limited speed limits, would be used to control dust emissions. Emissions from heat pumps
7 would fall under the Fort A. P. Hill Air Permit.

8 Noise complaints would be investigated in accordance with Fort A. P. Hill policy.

9 Minimal vegetation removal would be done to minimize environmental impact. Existing
10 topography would be followed wherever possible to reduce excavation and grading.

11 Wetlands impacts would be minimized wherever possible. If necessary, a joint permit
12 application would be submitted to the Army Corps of Engineers prior to any construction
13 occurring within a designated wetland area.

14 A threatened and endangered species protection area would be established around the swamp
15 pink colony indicating that the area is off limits to military troops. Helicopter landings would be
16 restricted during eagle nesting times on White Lake.

17 **5.14 Secondary and Cumulative Effects**

18 A cumulative effect is defined as an impact on the environment that results from the incremental
19 effect of the action when added to other past, present and reasonably foreseeable future actions
20 regardless of what agency or person undertakes these actions. Cumulative effects can result
21 from individually minor but collectively significant actions taking place locally or regionally
22 over a period of time.

23 The proposed IPBC would be constructed on a pre-existing training area within an active Army
24 training installation. Future proposed activities at Fort A. P. Hill include construction of a
25 training complex, a demolition range, indoor firing range and 800-meter range for use by the
26 Asymmetric Warfare Group (AWG). Other future activities include construction of a maneuver
27 corridor and re-location of Fort Lee training activities to Fort A. P. Hill and construction of a
28 permanent breacher training facility for the Department of the Navy. At this time, there are no
29 plans to change the current use of the property contained within Fort A. P. Hill. All proposed
30 construction and military training activities are within the current mission of Fort A. P. Hill. The
31 Preferred Alternative is not anticipated to have any significant secondary or cumulative effects
32 on Fort A. P. Hill or the surrounding areas of Caroline County.

33

1 **SECTION 6.0**

2 **6.0 CONCLUSIONS**

3 Construction, operation and maintenance of the IPBC at Fort A. P. Hill would not result in
4 significant environmental or socioeconomic impacts. Army regulations, management plans and
5 environmental requirements implemented by Fort A. P. Hill would ensure activities are in
6 compliance with all applicable federal and state and local laws, regulations, Executive Orders,
7 Presidential Memoranda and Army guidelines. Mitigation measures implemented on the site
8 would minimize or prevent significant impact to environmental resources. Temporary air
9 emissions would be controlled during construction and training activities with operational
10 procedures such as dust wetting and use of designated construction entrances. Although there is
11 a risk of noise complaints during adverse weather conditions; noise on the proposed site falls
12 within noise levels currently experienced by training ranges in this portion of Fort A. P. Hill.
13 Noise complaints would be investigated and mitigated as necessary under the Fort A. P. Hill
14 policy to have an open dialogue with the surrounding county and communities. Existing
15 topography would be followed wherever possible to reduce impacts from excavation and
16 grading. Wetlands would be surveyed and avoided to the extent possible. If necessary, a joint
17 permit application would be filed with the Army Corps of Engineers prior to any wetland
18 disturbance occurring on the site. Threatened and endangered species would be protected both
19 on the site and at nearby White Lake. Cultural resources identified on the proposed IPBC site
20 would be documented, evaluated and information submitted to the VSHPO for concurrence.

21 As a result of the analyses performed by this EA, it has been determined that the known and
22 potential impacts of the Preferred Alternative on the physical and socioeconomic environment
23 would not be significant. Based on the findings and conclusions in this EA, issuance of a FONSI
24 would be appropriate and preparation of an EIS would not be required.

25

26

1 **SECTION 7.0**

2 **7.0 REFERENCES**

3 AR 200-1, Army Regulation 200-1, *Environmental Protection and Enhancement*. 18 December
4 2007.

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9 for Paciulli, Simmons & Associates, Ltd., Fairfax. 2004

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11 March 2002.

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13 January 2008.

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19 <http://www.aphill.army.mil/sites/mwr/huntinginfo.asp>

20 Weldon Cooper Center for Public Service, Demographics and Workforce, Population Estimates.
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24 Hill, Bowling Green, Virginia. Prepared by Natural Alternatives, LLC, Richmond, for
25 Fort A.P. Hill Environmental Division, Directorate of Public Works. February 2008.

26 Williams, Eileen. Environmental Assessment for the Proposed Asymmetric Warfare Group
27 Ranges. Prepared by Natural Alternatives, LLC, Richmond, for Fort A. P. Hill
28 Environmental Division, Directorate of Public Works. November 2006.

29 Williams, Eileen. Draft Environmental Assessment for the Proposed Naval Special Warfare
30 Explosive Center of Excellence. Prepared by Natural Alternatives, LLC, Richmond, for
31 Fort A. P. Hill Environmental Division, Directorate of Public Works. August 2008.

1 **SECTION 8.0**

2 **8.0 LIST OF PREPARERS**

3 **Fort A. P. Hill**

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5 Ms. Kristine Brown, NEPA Coordinator

6 Department of the Army

7 Environmental Division

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11 **Natural Alternatives LLC**

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16 **MG's Environmental Services**

17 Mr. Milton Gay, Owner

18 429 Crossett Street

19 Virginia Beach, VA 23452

20

21

1 **SECTION 9.0**

2 **9.0 AGENCIES AND INDIVIDUALS CONSULTED**

3 Department of Environmental Quality
4 629 East Main Street
5 Richmond, VA 23219
6 Ellie Irons, Office of Environmental Impact Review
7 Michelle Henicheck, Office of Wetlands, Water Protection and Compliance
8 Allen Brockman, Waste Division
9 Kotur Narasimhan, Division of Air Program Coordination

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11 Department of Environmental Quality
12 Northern Regional Office
13 13901 Crown Court
14 Woodbridge, VA 22193
15 John Bowden, Northern Virginia Regional Office

16
17 Department of Conservation and Recreation
18 203 Governor Street
19 Richmond, VA 23219
20 John Davy, Planning and Recreation Resources
21 Nancy VanAlstine, Division of Natural Heritage

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23 Department of Conservation and Recreation
24 101 N. 14th Street, 17th Floor
25 Richmond, Virginia 23219
26 Alice Baird, Chesapeake Bay Local Assistance Board

27
28 Department of Forestry
29 900 Natural Resources Drive
30 Charlottesville, VA 22903
31 Michael Foreman, Division of Forest Management

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34 4010 West Broad Street
35 Richmond, VA 23230
36 Raymond Fernald, Division of Project Review

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38 Department of Historic Resources
39 2801 Kensington Avenue
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41 Marc Holma, Division of Project Review

42
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44

-
- 1 U.S. Fish and Wildlife Service
 - 2 Virginia Field Office
 - 3 6669 Short Lane
 - 4 Gloucester, VA 23061
 - 5 Mr. Tylan Dean, Project Review
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 - 7 Virginia Marine Resources Commission
 - 8 2600 Washington Ave
 - 9 Newport News, VA 23607
 - 10 Ben McGinnis, Project Review
 - 11
 - 12

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APPENDIX A
ACRONYMS AND ABBREVIATIONS

AA	Assembly Area
ADA	Americans with Disabilities Act
APE	Area of Potential Effect
AR	Army Regulation
AT/FP	Anti-terrorism/force protection
BMPs	Best Management Practices
CAAA	Clean Air Act Amendments
CASCOM	Combined Arms Support Command
CBLAB	Chesapeake Bay Local Assistance Board
CEQ	Council of Environmental Quality
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
ED	Environmental Division
ENMP	Environmental Noise Management Plan
EPA	Environmental Protection Agency
E&S	Erosion and Sediment
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
ICRMP	Integrated Cultural Resources Management Plan
IPBC	Infantry Platoon Battle Course
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NZ	Noise Zone
PK	Peak Level
ROI	Region of Influence
SROCA	Small Arms Range Operations and Control Area
STRAC	Standards in Training Commission
SWPPP	Storm Water Pollution Prevention Plan
USFWS	United States Fish and Wildlife Service
VDEQ	Virginia Department of Environmental Quality
VPDES	Virginia Pollution Discharge Elimination System
VSHPO	State Historic Preservation Officer
VSMP	Virginia Stormwater Management Program

APPENDIX B
AGENCY CORRESPONDENCE

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1 Agency comments will be added once received.

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APPENDIX C
PUBLIC NOTICES/PUBLIC COMMENTS

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1 Public comments will be added once received.

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APPENDIX D
RESPONSE TO COMMENTS

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1 Response to comments on the Draft Final EA will be added after comment period is closed.

2

APPENDIX E
COASTAL RESOURCES CONSISTENCY DETERMINATION

1

1 **Determination of Consistency with**
2 **Virginia’s Coastal Resources Management Program**
3 **Infantry Platoon Battle Course**
4

5 Pursuant to Section 307 of the Coastal Zone Management Act of 1972, as amended, this is a
6 Federal Consistency Determination for Fort A.P. Hill’s construction, operation and maintenance
7 of a proposed Infantry Platoon Battle Course (IPBC). The Army is required to determine the
8 consistency of its activities affecting Virginia’s coastal resources or coastal uses with the
9 Virginia Coastal Resources Management Program (VCRMP).

10
11 This document represents an analysis of project activities in light of established VCRMP
12 Enforceable Programs. Furthermore, submission of this consistency determination reflects the
13 commitment of the Army to comply with those Enforceable Programs. The proposed project will
14 be constructed and operated in a manner, which is consistent with the VCRMP. Fort A. P. Hill
15 has determined that the construction and use of the IPBC would not affect the land and water
16 uses or natural resources of the Commonwealth of Virginia’s coastal zone.

17
18 **1. Description of Proposed Action**

19 The proposed action is the construction, operation and maintenance of a standard IPBC range to
20 support military infantry platoon live-fire collective training. This complex would be used to
21 train and test infantry platoons, either mounted or dismounted, on the skills necessary to conduct
22 tactical movement techniques, and detect, identify, engage, and defeat stationary and moving
23 infantry and armor targets in a tactical array. In addition to live fire, this range would also be
24 used for training with sub-caliber and/or laser training devices. All targets would be fully
25 automated and the event specific target scenarios would be computer driven and scored from the
26 range operations center on the range. The range operating system would be fully capable of
27 providing immediate performance feedback to the using units.

28 Primary facility structures at the range would include two 800-square-foot buildings, a dry-
29 vaulted latrine facility, an ammo breakdown area, a range tower, enclosed bleachers, and a
30 covered mess facility. Supporting facilities would include electric service, transformers and
31 lighting, gravel surfaced roads and trails, parking, and drainage ditches. Range facilities would
32 include electronic targets, helicopter landing zones and an assault house. The range would be
33 capable of handling company size units which typically consist of 80-150 soldiers. The
34 proposed IPBC would be used up to 285 days per year.

35 **2. Assessment of Probable Effects**

36 The planning and design phase of the proposed action would have no coastal zone effects to
37 relevant VCRMP elements. All applicable permits required for the proposed action would be
38 obtained and complied with throughout project duration. A review of the permits and/or
39 approvals required under the enforceable regulatory program has been conducted. Fort A.P. Hill
40 staff evaluated the construction and operation of the IPBC based on the foreseeable effect on the
41 following enforceable policies:

1 **Fisheries** - The IPBC has no foreseeable impacts on finfish or shellfish resources and would not
2 affect the promotion of commercial or recreational fisheries at the project site area. The property
3 is bisected west to east by Mashbox Run which flows into White Lake. The project implements
4 best management practices (BMPs) recommended by the Virginia Department of Conservation
5 and Recreation (VDCR) and Fort A.P. Hill's Environmental Division.
6

7 **Subaqueous Lands Management** – The project has no foreseeable impact on subaqueous
8 resources. The IPBC is located on existing training lands. The project implements BMPs
9 recommended by the VDCR and the Department of Forestry.
10

11 **Wetlands Management** –NWI maps indicate wetlands on the project site along Mashbox Run.
12 A wetlands survey of the proposed site would be conducted. It is Fort A. P. Hill's policy is to
13 avoid or minimize wetlands impacts and maintain a 100 foot buffer around all wetland areas.
14 Wetlands would be avoided during construction and operation of the IPBC wherever possible. If
15 necessary, a joint permit application would be submitted to the Army Corps of Engineers.
16 Permit requirements, including mitigation, would be complied with prior to any land disturbing
17 activities occurring on the site.
18

19 **Dunes Management** – Construction and operation of the IPBC has no foreseeable impact on
20 coastal primary sand dunes. The project would not destroy or alter coastal primary sand dunes.
21

22 **Non-Point Source Pollution Control** – During project construction and long-term operation,
23 storm water runoff would be directed to a vegetated area for natural infiltration. All erosion
24 control would be designed in accordance with the Virginia Erosion and Sediment Control
25 Regulations handbook. Land disturbing activities within the sites are limited to timber
26 harvesting, clearing, grubbing and grading. Erosion and sediment controls would be
27 implemented in accordance with the Virginia Stormwater Management Program (VSMP),
28 Forestry BMPs for Water Quality, Chesapeake Bay Preservation Area Designation and
29 Management guidelines, and the VSMP General Permit for Storm Water discharges associated
30 with land disturbing activities. An approved Erosion and Sediment Control Plan would be
31 implemented for construction on this site. Fort A.P. Hill natural resource staff would implement
32 the Forestry BMPs described in the installation Integrated Natural Resources Management Plan
33 (INRMP) for land and water quality monitoring, impact mitigation and land rehabilitation
34 programs that may apply to this project. These programs would continue into the operational
35 phase of the project. The project would not cause non-point source pollution.

36 **Point Source Pollution Control** – The IPBC would have no water connections on site. The
37 project would not cause point source pollution.
38

39 **Shoreline Sanitation** – The project would have no impact on shoreline sanitation.
40

41 **Air Pollution Control** – The project would be located in an attainment area for air pollutants.
42 Construction activity related to the proposed action is likely to create fugitive dust emissions.
43 During construction, fugitive dust would be kept to a minimum by employing measures that
44 include, but are not limited to: installing and using material to enclose and vent the handling of
45 dusty material, covering open equipment for transporting materials, washing down construction

1 vehicles, providing construction entrances, applying water to suppress dust, and washing down
2 paved roadways immediately adjacent to the construction site.

3
4 The IPBC would have negligible impact on air quality. Construction and operation of the
5 proposed project would be subject to regulation 9 VAC 5-50-80/ 90, *Visible and Fugitive Dust*
6 *Emissions*, by the Department of Environmental Quality (DEQ).

7 **Coastal Lands Management** – The project would have no impact on any coastal lands.

8 **Chesapeake Bay Preservation Areas** –The project may involve either development or
9 redevelopment activities on any properly designated Resource Protection Areas (RPA) as
10 defined by the Chesapeake Bay Preservation Act, Virginia Code 10.1-2100 *et seq.* and its
11 implementing Chesapeake Bay Preservation Area Designation and Management Regulations, 9
12 VAC 10-20-10 *et seq.* All necessary permitting would be done in coordination with the
13 appropriate state and federal regulatory agencies. Impacts would be minimized wherever
14 possible.

15 **3. Summary of Findings**

16 Based on the above analysis and as elaborated in the Draft Environmental Assessment, Fort A.P.
17 Hill finds the proposed IPBC fully consistent, or consistent to the maximum extent practicable,
18 with the federally approved enforceable provisions of VCRMP, pursuant to the Coastal Zone
19 Management Act of 1972, as amended and in accordance with 15 CFR Part 930.30(c).

20 By certification that the proposed action is consistent with VCRMP Enforceable Programs, the
21 Commonwealth of Virginia will be notified that it has 60 days from receipt of this letter, in
22 which to concur with or object to this Consistency Determination. However, pursuant to 15 CFR
23 Part 903.63(b), if the Commonwealth of Virginia has not issued a decision by the 60th day from
24 receipt of this determination, it shall notify Fort A. P. Hill of the status of the matter and the basis
25 for further delay. The State’s concurrence, objection, or notification of review status shall be sent
26 to:

27 ***Commander, US Army Garrison Fort A.P. Hill***
28 ***ATTN: ED***
29 ***19952 North Range Road***
30 ***Fort A.P. Hill, VA 22427-3123***