

*Final*  
**Environmental Assessment for the  
Implementation of the Privatization of Army Lodging Program at  
Fort Belvoir, Virginia**



*Prepared for*

**Commander, Fort Belvoir, Virginia**

*Prepared by*

**U.S. Army Corps of Engineers, Mobile District**

**January 2011**

# ENVIRONMENTAL ASSESSMENT

## IMPLEMENTATION OF THE PRIVATIZATION OF ARMY LODGING PROGRAM AT FORT BELVOIR, VIRGINIA

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## **ENVIRONMENTAL ASSESSMENT ORGANIZATION**

This environmental assessment (EA) addresses the Preferred Alternative to implement the Privatization of Army Lodging (PAL) Program at Fort Belvoir, Virginia. It has been developed in accordance with the National Environmental Policy Act and implementing regulations issued by the Council on Environmental Quality (Title 40 of the *Code of Federal Regulations* [CFR] Parts 1500–1508) and the Army (32 CFR Part 651). Its purpose is to inform decision makers and the public of the likely environmental and socioeconomic consequences of the Preferred Alternative and other alternatives.

An **EXECUTIVE SUMMARY** briefly describes the Preferred Alternative, environmental and socioeconomic consequences, and mitigation measures.

### **CONTENTS**

**SECTION 1.0: PURPOSE, NEED, AND SCOPE** summarizes the purpose of and need for the Preferred Alternative and describes the scope of the environmental impact analysis process.

**SECTION 2.0: ALTERNATIVES** describes the Preferred Alternative to implement the PAL Program at Fort Belvoir and examines alternatives to implementing the Preferred Alternative.

**SECTION 3.0: AFFECTED ENVIRONMENT AND CONSEQUENCES** describes the existing environmental and socioeconomic setting at Fort Belvoir and identifies potential effects of implementing the Preferred Alternative.

**SECTION 4.0: FINDINGS** summarizes the environmental and socioeconomic effects of implementing the Preferred Alternative.

**SECTION 5.0: REFERENCES AND PERSONS CONSULTED** provides bibliographical information for cited sources and provides a listing of persons and agencies consulted during preparation of this EA.

**SECTION 6.0: LIST OF PREPARERS** identifies the persons who prepared the document.

**SECTION 7.0: DISTRIBUTION LIST** indicates recipients of this EA.

**APPENDICES**

- A** Agency Coordination Documentation
- B** Record of Non-applicability and Emission Calculations
- C** Coastal Zone Consistency Determination
- D** Economic Impact Forecast System Model
- E** Solid Waste Calculations
- F** Jurisdictional Determination near Parcel G
- G** Draft Programmatic Agreement

An **ACRONYMS AND ABBREVIATIONS** list is provided at the end.



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## ENVIRONMENTAL ASSESSMENT

**LEAD AGENCY:** Office of the Assistant Secretary of the Army for Installations and Environment

**TITLE OF PREFERRED ALTERNATIVE:** Implementation of the Privatization of Army Lodging Program at Fort Belvoir, Virginia

**AFFECTED JURISDICTION:** Fort Belvoir, Virginia

**PREPARED BY:** Steven J. Roemhildt, Colonel, Corps of Engineers, Commanding, U.S. Army Corps of Engineers, Mobile District

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**ABSTRACT:** This environmental assessment (EA) considers the proposed implementation of the Privatization of Army Lodging Program, including the transfer of lodging assets at Fort Belvoir, Virginia. The EA identifies, evaluates, and documents the effects of obtaining private sector funding for construction, maintenance, management, renovation, replacement, rehabilitation, and development of transient lodging facilities. This is the Army's Preferred Alternative. A No Action Alternative is also evaluated. Implementation of the Preferred Alternative is not expected to result in significant environmental impacts. Preparation of an environmental impact statement, therefore, is not required and a finding of no significant impact (FNSI) will be published in accordance with 32 CFR Part 651, *Environmental Effects of Army Actions*, and the National Environmental Policy Act.

**REVIEW COMMENT DEADLINE:** The EA and draft FNSI are available for review and comment for 30 calendar days from the publication of a Notice of Availability (NOA) in the *Washington Post* and *Springfield Connection*. For additional information concerning the EA, please contact Mr. Patrick McLaughlin, Chief of Environmental and Natural Resources Division, Directorate of Public Work, 9430 Jackson Loop Suite 200, Fort Belvoir, VA 22060-5116; (703) 806-4007. Copies of the EA and draft FNSI have been provided to the libraries listed in Section 7 of the EA and have been posted on the Fort Belvoir website: <http://www.belvoir.army.mil>. Written comments on the EA and draft FNSI are to be submitted by mail to the address above or by e-mail to [environmental-fb-dpw@conus.army.mil](mailto:environmental-fb-dpw@conus.army.mil) no later than 30 calendar days from the publication of the NOA.

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## **EXECUTIVE SUMMARY**

### **ES.1 BACKGROUND**

This environmental assessment (EA) evaluates the proposal of the Privatization of Army Lodging (PAL) at Fort Belvoir, Virginia.

### **ES.2 PREFERRED ALTERNATIVE**

The Army proposes to implement the PAL program at Fort Belvoir. The Army would convey specified lodging facilities to a private development entity (Rest Easy). The Army would also grant to the developer a 50-year lease of the land underlying the existing facilities and other land for constructing new lodging facilities. Rest Easy would be expected to meet Fort Belvoir's lodging requirements by operating and maintaining the existing facilities, renovating inadequate facilities, and constructing new ones.

### **ES.3 PURPOSE AND NEED**

The purpose of the Preferred Alternative is to transfer ownership and operation of transient lodging at Fort Belvoir to the private sector.

The need for the Preferred Alternative is to improve the quality of life for Soldiers, their families, and other personnel eligible to use Army lodging. Lodging facilities at Fort Belvoir are of varying ages; one lodging structure proposed to be included in the PAL program is historic. Some of the buildings would require life/safety standard upgrades. By leveraging scarce resources, the Army can obtain the benefits of capital improvements and professional management that are available through the private sector's investment and experience.

### **ES.4 ALTERNATIVES**

The Army identified three alternatives: the Preferred Alternative, reliance on the off-post hotel market, and the No Action Alternative. Implementing the PAL program at Fort Belvoir is the Army's Preferred Alternative. The Army would convey specified lodging facilities to Rest Easy, a special-purpose entity of the private developer. The Army would also grant to the developer a 50-year lease of the land underlying the existing lodging facilities and other land for constructing new lodging facilities. Rest Easy would be expected to meet Fort Belvoir's lodging requirements through operation and maintenance of the existing facilities and by renovating inadequate existing facilities and constructing new lodging facilities. That would achieve the purpose of and need for the Preferred Alternative.

The alternative to the Preferred Alternative that was considered is reliance on the off-post hotel market. In lieu of privatizing the function, the Army could exit the lodging business, resulting in patrons' reliance on off-post hotels and motels for similar services. The use of off-post lodging, however, would lengthen Soldiers' workdays because of commuting and increased transportation costs. In some instances, Soldiers would encounter shortages of lodging in adjacent communities. Terminating the Army's lodging program at Fort Belvoir would result in rendering idle 12 buildings. The combination of the buildings standing idle until alternative uses could be determined and the time needed to achieve such uses would contravene the Army's policy to

manage its resources to their optimal potential. For those reasons, the off-post hotel market alternative is not feasible and is not evaluated in detail in this EA.

A No Action Alternative also is evaluated in detail in this EA. The No Action Alternative is prescribed by Council on Environmental Quality regulations to serve as the baseline against which the Preferred Alternative and other alternatives are analyzed.

## **ES.5 ENVIRONMENTAL CONSEQUENCES**

This EA evaluates potential long- and short-term effects on land use, aesthetic and visual resources, air quality, noise, geology and soils, water resources, biological resources, cultural resources, socioeconomics (including environmental justice and protection of children), transportation, utilities, and hazardous and toxic substances.

Implementing the Preferred Alternative would be expected to result in a mixture of short- and long-term minor adverse and beneficial effects on the subject environmental resources and conditions.

For each resource area, the predicted effects from the Preferred Alternative and the No Action Alternative are summarized in Table ES-1.

**Table ES-1  
Summary of potential environmental and socioeconomic consequences**

<b>Resource</b>	<b>Environmental and socioeconomic effects</b>	
	<b>Preferred Alternative</b>	<b>No Action Alternative</b>
<b>Land use</b>	<b>No effect</b>	<b>No effect</b>
Aesthetic and visual resources	Short-term minor adverse Long-term minor beneficial	Long-term minor adverse
Air quality	Short- and long-term minor adverse	No effect
Noise	Short-term minor adverse	No effect
Geology and Soils	Short-term minor adverse	No effect
Water resources	Short- and long-term minor adverse Long-term minor beneficial	No effect
Biological resources	Short-term minor adverse	No effect
Cultural resources	No effect	No effect
Socioeconomics	Short- and long-term minor beneficial	Long-term minor adverse
Transportation	Short-term minor adverse	No effect
Utilities	Long-term minor adverse	No effect
Hazardous and toxic substances	Short-term minor adverse	No effect

Mitigation actions are used to reduce, avoid, or compensate for significant adverse effects. The EA does not identify any significant adverse effects on human health or the environment; however, potential adverse effects of implementing the proposed action would be mitigated by implementing certain measures, as listed below.

- The Army or its proponent would perform a jurisdictional determination of wetlands on Parcel A, and on any other parcel as necessary, before any ground disturbance.

- The Army or its proponent would implement and strictly adhere to applicable state and local erosion and sediment control/stormwater management laws and regulations to protect water quality in streams on and near the PAL parcels.
- The Army or its proponent would survey for the small whorled pogonia, a federally endangered plant species, on PAL Parcels A, C, and D before any ground disturbance.
- A PA between Fort Belvoir and the Virginia SHPO has been developed. It outlines methods by which important cultural resources will be protected during the lease period and will become part of the lease agreement with Rest Easy. The assessment of impacts on cultural resources in the EA and the finding of no significant impact (FNSI) together constitute compliance with the National Historic Preservation Act in accordance with 36 CFR 800.8(c).
- In accordance with Fort Belvoir's two-to-one tree replacement policy, the Army or its proponent would replace any tree of 4 inches or more in diameter (at *breast height*) removed in the course of implementing the PAL program with two native trees to provide habitat value for wildlife on Fort Belvoir property.
- Fort Belvoir would coordinate with the Virginia Department of Game and Inland Fisheries regarding Partners in Flight (PIF) bird species to avoid unnecessary impacts on priority species on Parcel G, and the installation would compensate for any loss of PIF priority species habitat.
- The Army or its proponent would perform a breeding bird survey on PAL Parcels A and G to determine usage before any clearing would be performed. Construction would be timed to avoid impacts on breeding birds.

## **ES.6 CONCLUSION**

Implementing the Preferred Alternative would not be expected to result in significant environmental or socioeconomic effects. Issuance of a FNSI would be appropriate, and an EIS need not be prepared before implementing the Preferred Alternative.

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## **SECTION 1.0 PURPOSE, NEED, AND SCOPE**

### **1.1 INTRODUCTION**

The Army provides transient lodging for Soldiers and their families on temporary duty (TDY) and permanent change of station (PCS) travel. Because funding shortfalls over many years have frustrated maintenance, repair, or replacement of facilities, approximately 80 percent of the Army's lodging inventory does not meet acceptable quality standards.

The Privatization of Army Lodging (PAL) program is an initiative to improve facilities and services for transient lodging users. The PAL program is founded on the Military Housing Privatization Initiative (MHPI) established in the 1996 Defense Authorization Act.<sup>1</sup> The MHPI authorizes the Army to obtain private capital by leverage government contributions, make efficient use of limited resources, and use a variety of private-sector approaches to build, renovate, and operate lodging. This environmental assessment (EA) evaluates implementation of the PAL program at Fort Belvoir, Virginia.

The Army has divided its installations into three groups for implementing the PAL program. Group A consisted of 10 installations: Fort Hood and Fort Sam Houston, TX; Fort Sill, OK; Fort Riley and Fort Leavenworth, KS; Fort Rucker, AL; Fort Myer, VA; Yuma Proving Ground, AZ; Fort Polk, LA; and Fort Shafter/Tripler Army Medical Center, HI. Implementation of the PAL program at Group A installations is now underway. Group B, of which Fort Belvoir is a part, involves 11 installations having 4,916 guest rooms. The other installations in Group B are Fort Buchanan, PR; Fort Bliss, TX; Fort Hamilton, NY; Fort Gordon, GA; White Sands Missile Range, NM; Fort Huachuca, AZ; Fort Leonard Wood, MO; Fort Wainwright, AK; Fort Knox, KY; and Fort Campbell, KY. Group C will involve implementation of the program at the remainder of the Army's installations.

### **1.2 PURPOSE AND NEED**

The Army proposes to privatize operation of its lodging at Fort Belvoir (Figure 1-1). This is the Army's Preferred Alternative. The purpose of the Preferred Alternative is to transfer operation of the transient lodging to the private sector under a long-term lease.

The need for the proposed action is to improve the quality of life for Soldiers, their families, and other personnel eligible to use Army lodging. Many lodging facilities at Fort Belvoir are old and their rehabilitation is not economically feasible. By leveraging scarce resources, the Army can obtain the benefits of capital improvements and professional management that are available through the private sector's investment and experience. In addition, the PAL program sets aside funds for the long-term sustainment of such facilities. Privatization of lodging would enable the Army to focus its management efforts on its core competencies, as required by the President's Management Agenda.<sup>2</sup>

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<sup>1</sup> Section 2801, National Defense Authorization Act for Fiscal Year 1996, Public Law 104-106, as amended (codified at Title 10 of the *United States Code* (U.S.C.), Sections 2871–2885).

<sup>2</sup> Information on the President's initiative is available at <http://www.whitehouse.gov/omb/budget/fy2002/mgmt.pdf>.



**LEGEND**

- Installation Boundary
- County Boundary
- Primary Road (Limited Access)
- Primary Road
- Secondary Road

# Installation Location

**Figure 1-1**

Source: Fort Belvoir GIS, 2009.

### **1.3 SCOPE OF ANALYSIS**

This EA has been developed in accordance with the National Environmental Policy Act (NEPA) of 1969 and implementing regulations issued by the Council on Environmental Quality (CEQ) and the Army.<sup>3</sup> An interdisciplinary team of environmental scientists, biologists, ecologists, geologists, planners, economists, engineers, archaeologists, historians, lawyers, and military technicians reviewed the proposed action in light of existing conditions and has identified relevant beneficial and adverse effects associated with the Preferred Alternative and the No Action Alternative.

The purpose of the EA is to inform Army decisionmakers and the public of the likely environmental consequences of privatizing transient lodging at Fort Belvoir.

This EA focuses on evaluating environmental effects that are reasonably foreseeable within the initial development period (IDP), which is the first five years of implementation of privatization, described in detail in Section 2.3. This is the period during which the Army's privatization entity would accomplish demolition, renovation, and new construction of lodging, as well as take responsibility for the operation and maintenance of existing lodging facilities. Potential environmental effects beyond 2016 would be speculative, and therefore they are not analyzed in this EA.

### **1.4 PUBLIC INVOLVEMENT**

The Army invites public participation in the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decisionmaking. All agencies, organizations, and members of the public having a potential interest in the proposed action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the decisionmaking process.

Army guidance provides for public participation in the NEPA process. If the EA concludes that the Preferred Alternative would not result in significant environmental effects, the Army may issue a draft Finding of No Significant Impact (FNSI). The Army will then observe a 30-day period during which agencies and the public may submit comments on the EA or draft FNSI. Upon consideration of any comments received from the public or agencies, the Army may approve the FNSI and implement the Preferred Alternative. If, however, during the development of the EA it is determined that significant effects would be likely, the Army will issue a notice of intent to prepare an environmental impact statement.

### **1.5 PRIVATIZATION AUTHORITIES**

The PAL program is founded on the MHPI. The essence of the MHPI is that it comprehensively allows access to private-sector financial and management resources for constructing, maintaining, managing, renovating, replacing, rehabilitating, and developing housing. In 2002 Congress

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<sup>3</sup> Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, Title 40 of the Code of Federal Regulations (CFR), Parts 1500–1508, and Environmental Analysis of Army Actions, 32 CFR Part 651.

amended the MHPI to provide that unaccompanied personnel housing includes “transient housing intended to be occupied by members of the armed forces on temporary duty.”<sup>4</sup>

The Army has competitively selected Actus Lend Lease (Actus) as its development entity to privatize the Army lodging at Fort Belvoir. Actus has formed a special-purpose entity, Rest Easy, LLC (Rest Easy) to execute the lease. Actus would perform the redevelopment of the lodging facilities, and InterContinental Hotels Group (IHG), its contracted hotelier, would take over the lodging operations. In 2008 Actus completed a Lodging Development Management Plan (LDMP) to serve as the conceptual business plan for the project. The LDMP served as the basis for development of the program’s governing legal document, the PAL lease. The PAL lease will be expanded to include additional installations, including Fort Belvoir. Upon approval of the expanded PAL lease, transfer of assets and transition to the developer conducting operations would begin. For its part, the Army would convey its lodging facilities to the developer and provide long-term leases for the underlying land. In return, the Army would obtain the benefit of modern facilities and services that equal the standards prevailing in the commercial sector.

## **1.6 ENVIRONMENTAL LAWS AND REGULATIONS**

Army decisions that affect environmental resources and conditions occur within the framework of numerous laws, regulations, and Executive orders (EOs). Some of these authorities prescribe standards for compliance. Others require specific planning and management actions to protect environmental values potentially affected by Army actions. These include the Clean Air Act, Clean Water Act, Noise Control Act, Endangered Species Act, Farmland Protection Policy Act, National Historic Preservation Act, Archaeological Resources Protection Act, Native American Graves Protection and Repatriation Act, American Indian Religious Freedom Act, Energy Policy Act, Energy Independence and Security Act, Toxic Substances Control Act, Resource Conservation and Recovery Act, and Comprehensive Environmental Response, Compensation, and Liability Act. Executive orders bearing on the Preferred Alternative include EO 11988 (*Floodplain Management*); EO 11990 (*Protection of Wetlands*); EO 12088 (*Federal Compliance with Pollution Control Standards*); EO 12580 (*Superfund Implementation*); EO 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*); EO 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*); EO 13175 (*Consultation and Coordination with Indian Tribal Governments*); EO 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*); EO 13423 (*Strengthening Federal Environmental, Energy, and Transportation Management*); and EO 13514 (*Federal Leadership in Environmental, Energy, and Economic Performance*). Where useful to better understanding, key provisions of these statutes and EOs are described in more detail in the text of the EA. The text of EOs can be accessed at <http://www.archives.gov/federal-register/executive-orders/>, and the text of public laws can be accessed at <http://www.archives.gov/federal-register/laws/>.

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<sup>4</sup> Section 2803(b), National Defense Authorization Act for Fiscal Year 2003, Public Law 107-314.

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## **SECTION 2.0**

### **PROPOSED ACTION AND ALTERNATIVES**

#### **2.1 INTRODUCTION**

The Army proposes to implement the PAL program at Fort Belvoir. This is the Army's Preferred Alternative. The Army would convey specified lodging facilities to Rest Easy. The Army would also grant a 50-year lease of the land underlying the existing facilities, as well as other land for construction of new lodging facilities. Rest Easy would be expected to meet Fort Belvoir's lodging requirements by operating and maintaining the existing facilities, as well as renovating inadequate facilities and constructing new ones.

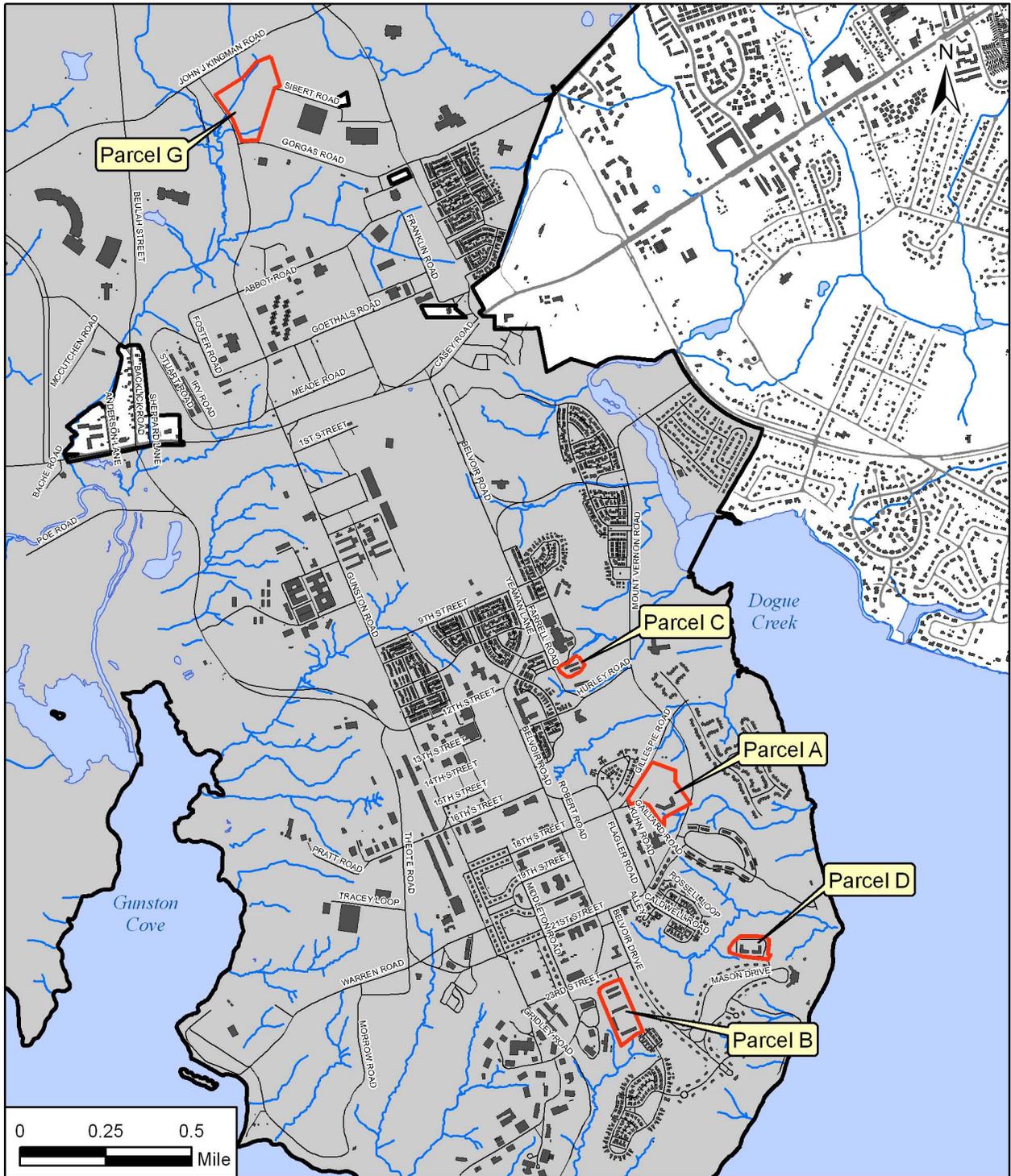
Implementing the PAL program at Fort Belvoir would entail constructing new lodging facilities and renovating existing facilities. When siting facilities, garrison commanders take into account the following criteria: availability of developable land, consistency with the land use allocations of the installation's master plan, compatibility with adjacent functions, proximity to relevant community services (e.g., Commissary, Post Exchange [PX], and recreation and entertainment venues), and avoidance of evident environmental issues (e.g., protected species, cultural resources, past hazardous waste sites, and the like). Fort Belvoir officials also gave substantial weight to the proximity of new lodging facilities to existing lodging facilities and their required support functions to enable efficient and cost-effective management of operations. These criteria resulted in the siting locations identified in Figure 2-1.

This section presents the Preferred Alternative and the No Action Alternative. It also identifies alternatives considered, but eliminated from detailed study.

#### **2.2 NO ACTION ALTERNATIVE**

Inclusion of the No Action Alternative, prescribed by CEQ regulations, serves as a baseline against which the impacts of the Preferred Alternative and other alternatives can be evaluated.

Under the No Action Alternative, the Army would not implement the PAL program at Fort Belvoir. The Army would continue to provide lodging through the use of facilities funded by Congressional appropriations and by Army Lodging resources that rely on the use of nonappropriated funds. On the basis of historical trends, it is assumed that the amount of Congressional funding for personnel on temporary duty would not change and that maintenance backlogs would remain at present levels or continue to increase. In the absence of implementing the PAL program, the Army would forego opportunities to leverage private-sector financing for the lodging function. Quality of life for personnel using the lodging facilities would in all likelihood decline based on current funding levels.



- LEGEND**
- Installation Property
  - Proposed PAL Footprint
  - Road
  - Building
  - Stream
  - Surface Water

# Site Map

Figure 2-1

Source: Fort Belvoir GIS, 2009.

## 2.3 PREFERRED ALTERNATIVE

### 2.3.1 Descriptions of Existing Lodging and Available Land

Fort Belvoir provides on-post transient lodging services through the use of 534 lodging units in 12 buildings located in the southern part of the South Post in the cantonment area. For the purposes of this project, the lodging units included in the proposed PAL action and areas available for new construction have been grouped into five distinct parcels of land, labeled A, B, C, D, and G.<sup>5</sup> Table 2-1 identifies the existing lodging inventory that is included in the PAL proposed action by parcel. Figures 2-2 through 2-6 provide more detailed views of each parcel. Figure 2-7 shows photographs of the representative sample of the lodging structures.

**Table 2-1  
Existing Lodging Facilities, Fort Belvoir**

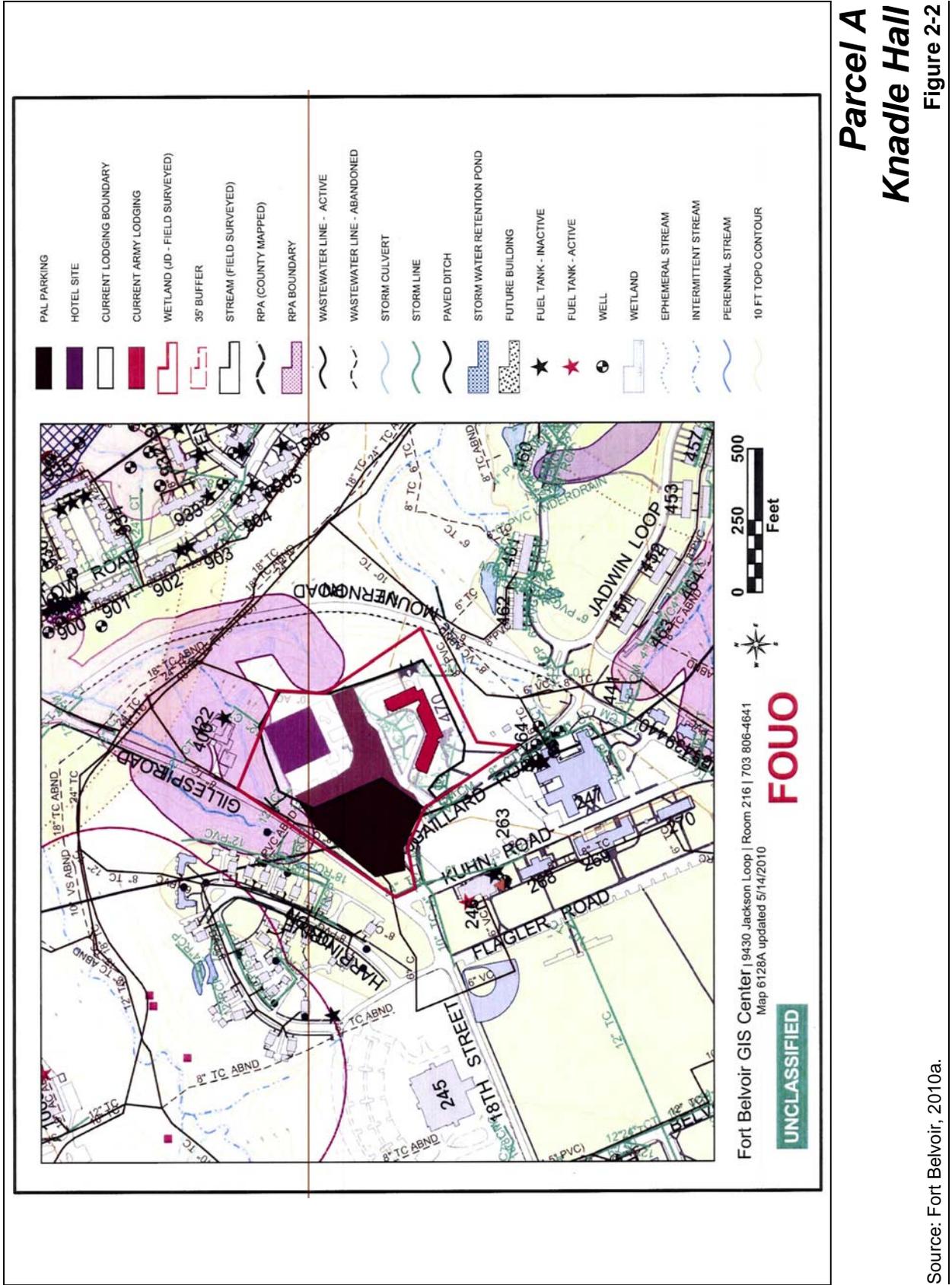
Parcel	Size (acres)	Building(s)	Building name	Year built	Lodging units	Notes
Parcel A	10.5	470	Knadle Hall	1975	219	Main lodging building; best condition of all lodging buildings
Parcel B	8	505 506 507 508 509	Fairfax Village	1956 1956 1969 1969 1969	45 29 42 42 35	
Parcel C	1.5	806 807	PCS Family Lodging	1959	9 16	
Parcel D	4	80 81	Historic BOQs	1948 1948	44 44	Contribute to historic district; NRHP eligible
<b>Total lodging units</b>					525	

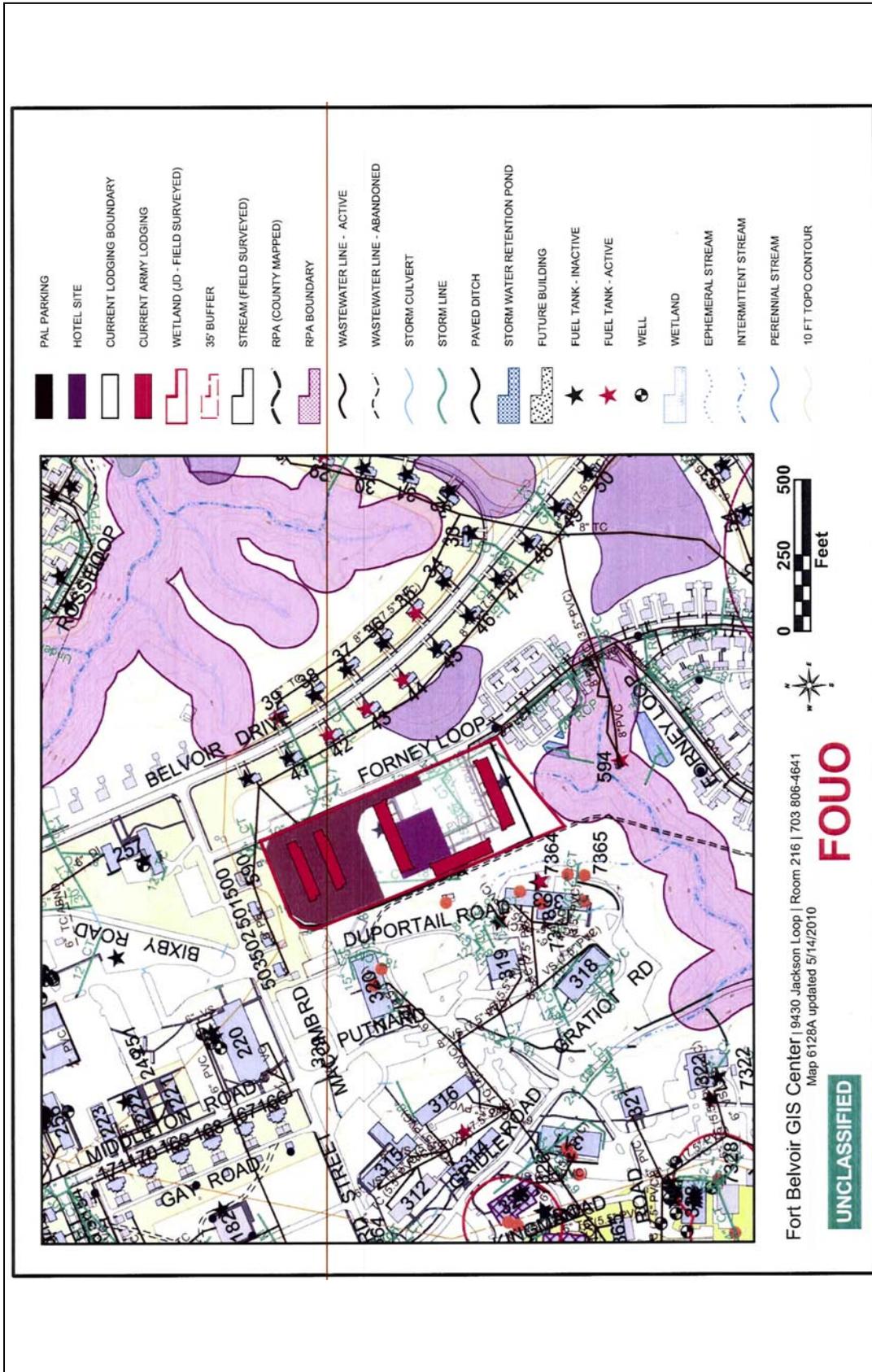
Note: BOQ = Bachelor Officer Quarters, NRHP = National Register of Historic Places. Two existing lodging facilities (Building 172, the Thermo-Con House, and Building 20-B, the Officer Club Distinguished Visitor Quarters) currently provide nine lodging units but they are not included in the PAL action and are therefore not addressed in this EA.

The following describes each of the PAL parcels and their existing lodging facilities, as well as the parcel of land being made available to Rest Easy for the siting of a new lodging facility.

**Parcel A.** Parcel A contains Knadle Hall (Building 470), the primary lodging facility at Fort Belvoir and the one in the best condition of the buildings in the lodging inventory, and parking associated with Knadle Hall. The parcel contains approximately 10.5 acres of land that is partially bounded by Gillespie and Gaillard roads.

<sup>5</sup> Initially seven individual parcels, labeled A through G, were identified for consideration as part of the PAL lodging footprint. During the planning and footprint approval process, Parcels E and F were eliminated from further consideration. To maintain consistency throughout the process, the original parcel labels have been maintained; therefore, two parcel labels appear to be missing.





# Parcel B Fairfax Village

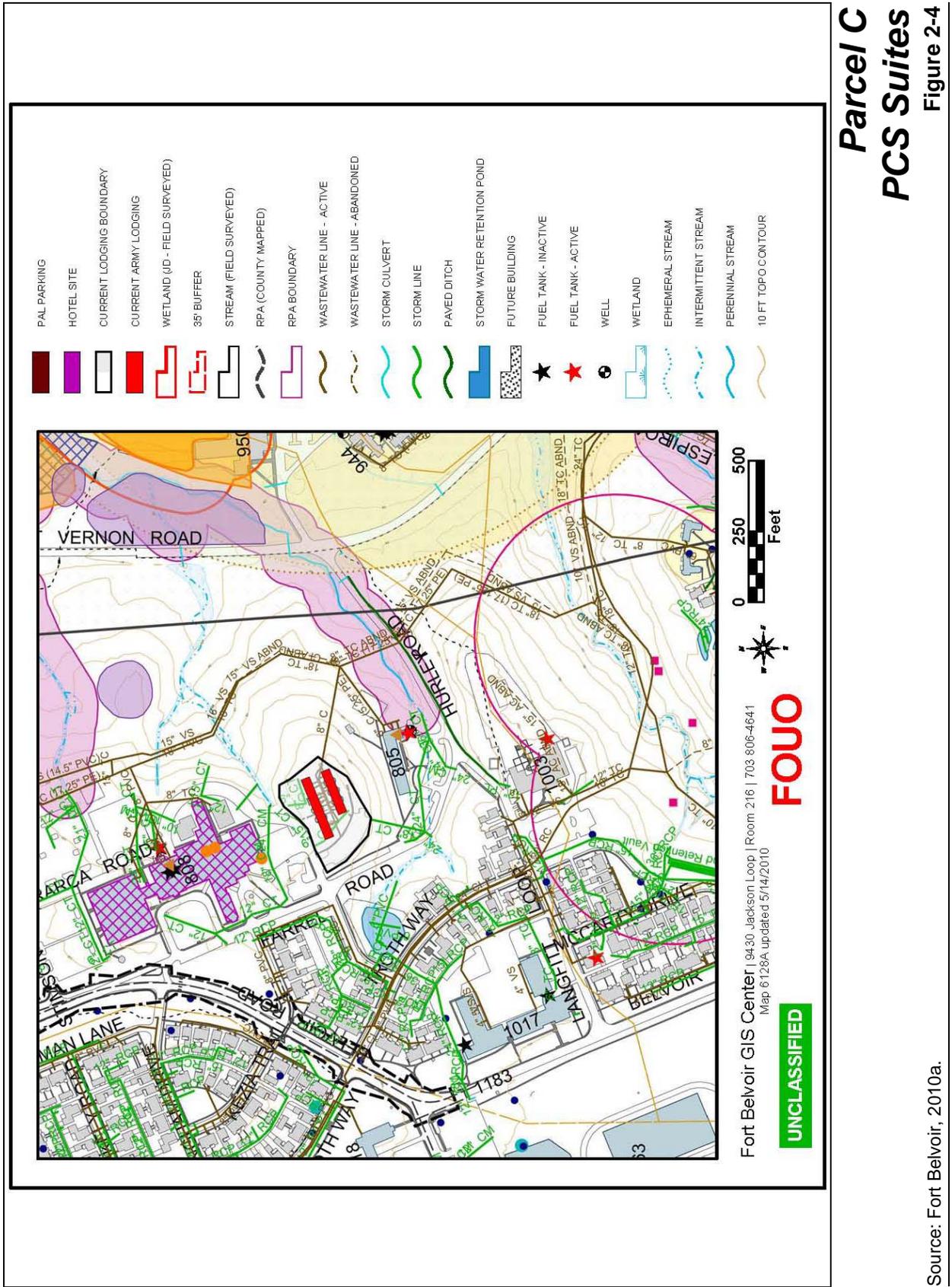
Figure 2-3

Fort Belvoir GIS Center | 9430 Jackson Loop | Room 216 | 703 806-4641  
 Map 6128A updated 5/14/2010

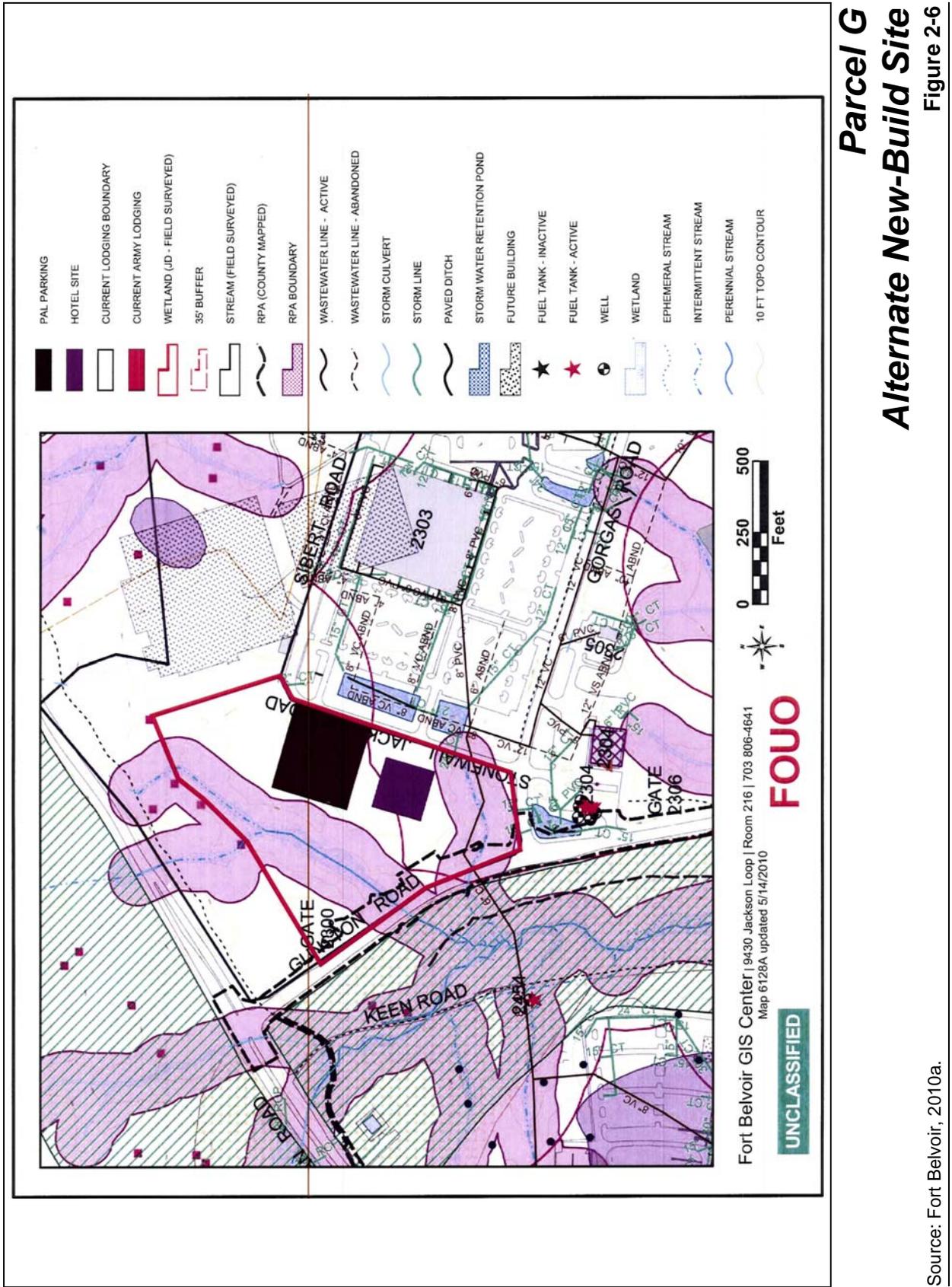
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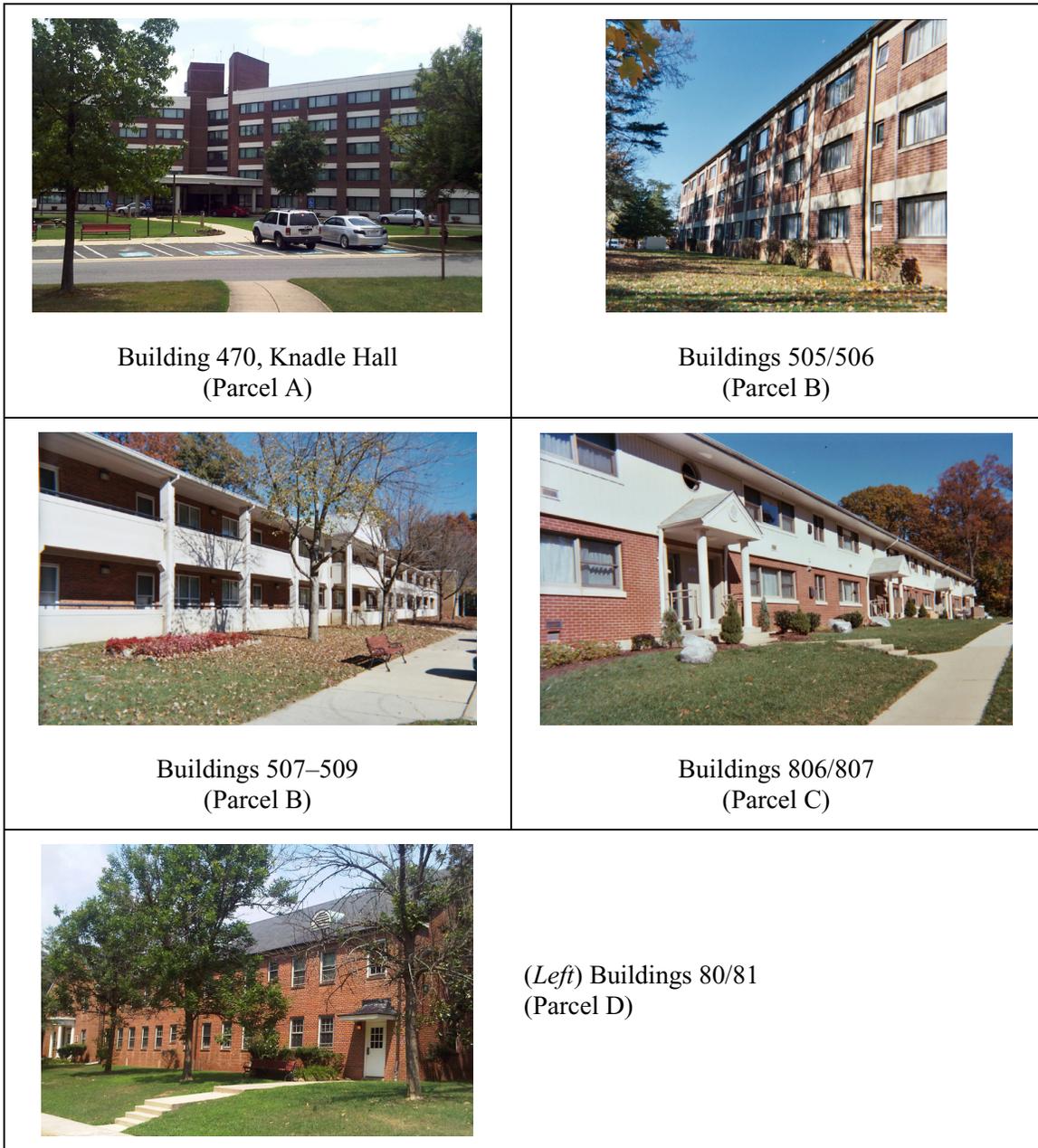
Source: Fort Belvoir, 2010a.







**Figure 2-7. Photographs of Fort Belvoir PAL buildings**



**Parcel B.** Parcel B contains Buildings 505-509 and associated parking. It encompasses approximately 8 acres west of Forney Loop. Parts of the Fort Belvoir Historic District lie north and east of the parcel. The group of buildings is designated *Fairfax Village*.

**Parcel C.** Parcel C contains Buildings 806 and 807, which are designated *Permanent Change of Station Family Lodging*. The parcel encompasses approximately 1.5 acres of land. The two buildings are just east of Farrel Road.

**Parcel D.** Parcel D contains Buildings 80 and 81, which are Historic Bachelor Officer’s Quarters. These buildings are considered contributing elements of the Fort Belvoir Historic District and are eligible for listing on the National Register of Historic Places (NRHP). The parcel encompasses approximately 4 acres of land off Schulz Drive.

**Parcel G.** Parcel G consists of approximately 15.5 acres of undeveloped land on the North Post near the existing PX. The parcel is roughly triangular in shape and abuts the western edge of the parking lot for the existing PX.

### 2.3.2 Proposed Lodging Actions

Implementing the PAL program at Fort Belvoir would involve short-term hold (STH) lease, long-term hold (LTH) lease, and new building construction actions as described in the following paragraphs and listed in Table 2-2. Upon conveyance and grants of leases noted in the following, IHG would conduct all transient lodging operations as provided for in the lease and consistent with the LDMP. The total number of lodging units at Fort Belvoir under the Preferred Alternative would increase from 534 to about 538.

**Table 2-2  
Fort Belvoir PAL Actions**

			Lodging units		PAL action
Parcel	Acres	Building(s)	Beginning state	End state	
<b>Parcel A (Knadle Hall) – LTH</b>					
	10.5	470	219	219	Renovate and maintain in lodging portfolio
		NB	0	200	Preferred new build site; Staybridge Suites
<b>Parcel B (Fairfax Village) – STH/LTH</b>					
	8	505	45	0	Renovate for STH, then demolish
		506	29	0	
		507	42	42	Renovate and maintain in lodging portfolio
		508	42	42	
		509	35	35	
<b>Parcel C (PCS Suites) – STH</b>					
	1.5	806	9	0	Renovate for STH, then demolish
		807	16	0	
<b>Parcel D (Historic BOQs) – STH</b>					
	4	80	44	0	Renovate for STH, then return to Army
		81	44	0	
<b>Parcel G– LTH</b>					
	15.5	NB	0	200	Alternate new build site; Staybridge Suites

Notes: BOQs=Bachelor Officer’s Quarters, LTH = long-term hold, N/A = not applicable, NB=New Build, PCS=Permanent Change of Station, STH = short-term hold.

**STH lease actions.** Initially, all the existing lodging structures identified in Table 2-1 would be conveyed to Rest Easy. During the IDP, Rest Easy would begin renovating the existing lodging structures and continue to operate them as lodging facilities. Renovations would include making the necessary life safety upgrades or modifications as required per safety regulations and updating the interiors (e.g., linens and décor). Buildings 505 and 506 on Parcel B and the buildings on Parcel C (Buildings 806 and 807) and Parcel D (Buildings 80 and 81) would be conveyed to Rest

Easy under a short-term (5-year) lease. These lodging units would be used during the IDP to maintain an appropriate number of available rooms while some of the other lodging structures undergo renovations and new lodging is being built. At the end of the IDP or as the new hotels become operational, Buildings 505 and 506 on Parcel B and Buildings 806 and 807 on Parcel C would be demolished and the underlying land would revert back to Fort Belvoir.<sup>6</sup> Because Buildings 80 and 81 on Parcel D are contributing elements to the Fort Belvoir Historic District and are eligible for listing on the NRHP, the buildings and the underlying land would be returned to the Army at the end of the IDP. More detailed information on these parcels is provided in Tables 2-1 and 2-2. Parcels B, C, and D are shown Figures 2-3, 2-4, and 2-5.

Buildings 80 and 81 on Parcel D are eligible for the NRHP. These buildings would be renovated in strict accordance with the historic property requirements identified in a Programmatic Agreement (PA) between the Department of the Army (Fort Belvoir) and the Virginia State Historic Preservation Officer (SHPO). The PA captures any conditions or restrictions required to preserve the buildings' historic significance and ensures adequate and enforceable protection measures; it will form part of the deed of conveyance. Rest Easy would return Buildings 80 and 81 to Fort Belvoir at the end of the IDP.

***LTH lease actions and new construction.*** The existing lodging and land on Parcel A (Knadle Hall, Building 470) (Figure 2-2), and all of the land and Buildings 507, 508, and 509 on Parcel B (Figure 2-3) would be conveyed to Rest Easy under a 50-year lease. Rest Easy would renovate these buildings, rebrand them, and continue to operate them as lodging facilities during the 50-year lease period. Renovations would include making the necessary life safety upgrades or modifications as required per safety regulations, updating the interiors (e.g., linens and décor), adding some recreational facilities and improved public spaces for guests, and making exterior structural modifications associated with rebranding the buildings as Holiday Inn Express or IHG Army hotels.

Rest Easy plans to replace much of the outdated lodging infrastructure at Fort Belvoir by building one additional hotel—a 200-room Staybridge Suites. The Army would grant Rest Easy a 50-year lease of Parcel A, which currently contains Knadle Hall, for the construction of the Staybridge Suites. If for some reason Parcel A is found to not be a suitable site for construction of the 200-room hotel, the hotel would be constructed on Parcel G on the North Post near the PX (Figure 2-6).

Note that all potential alternative construction sites for new lodging facilities are included within the Preferred Alternative analysis in Section 3.0, rather than being analyzed as separate alternatives for implementing the Preferred Alternative.

## **2.4 ALTERNATIVES ELIMINATED FROM DETAILED STUDY**

***Sources of lodging services.*** The Army now provides transient lodging to Soldiers, their dependents, and other authorized patrons. In lieu of privatizing the function, the Army could choose to discontinue all lodging operations on Army installations. This would require prospective lodging patrons to rely entirely on private-sector hotels and motels for their lodging. Currently, in many cases, lodging for personnel using unaccompanied personnel housing is

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<sup>6</sup> For the purposes of analysis, it is assumed that the buildings on Parcel C and Buildings 505 and 506 on Parcel B would be demolished. The installation, however, might choose to keep the buildings for non-lodging purposes, in which case Rest Easy would return them to the Army's inventory at the end of the IDP.

located near their temporary duty site. Many of the current occupants of Army lodging are attending Army schools located on-post. Eliminating on-post lodging would lengthen the students' workdays because of commuting, increase their transportation costs (absent specific authorization, personnel on temporary duty are ineligible for rental vehicle reimbursement), and, in some instances, cause them to encounter shortages of lodging in adjacent communities. At Fort Belvoir, termination of the Army's lodging program would result in rendering idle 12 buildings that have a total of 534 lodging rooms. The Army would incur substantial costs to convert all of these buildings to alternative uses. The combination of idling of the facilities until alternative uses could be determined and the time needed to achieve such alternative uses would contravene the Army's policy to manage its resources to optimal potential. For these reasons, this alternative is not feasible and is not evaluated in detail in this EA.

## **SECTION 3.0**

### **AFFECTED ENVIRONMENT AND CONSEQUENCES**

#### **3.1 LAND USE**

##### **3.1.1 Affected Environment**

Fort Belvoir is in southeastern Fairfax County, Virginia, about 12 miles southwest of Washington, DC, and 5 miles south of Alexandria, Virginia. Much of the installation's southern extent is bordered by the Potomac River, Dogue Creek, Gunston Cove, and Pohick Creek, all of which drain to the Chesapeake Bay about 85 miles to the south. US Route 1 divides the installation into two halves known as the North and South Posts. Much of the South Post is on a plateau with steep slopes leading towards the waterbodies mentioned above. The North Post is surrounded by non-government-owned lands. Three wildlife refuges (the Accotink Bay Wildlife Refuge [ABWR], the Jackson Miles Abbott Wetland Refuge [JMAWR], and a new refuge on the southwest portion of the South Post at Training Area 17 [T-17]) are part of Fort Belvoir. The Forest and Wildlife corridor connects the ABWR to the JMAWR.

Land use at Fort Belvoir, as at other military installations, is divided into Army-approved land use categories. Much of the central North Post area and most of the South Post is designated as Community, Professional/Institutional, and Residential land uses.

The PAL parcels A, B, C, and D are all in areas designated as Residential land use, with nearby areas near the parcels consisting of Professional/Institutional and Community land uses. Parcel G, near the existing PX, is an area of Community land use with Professional/Institutional land use to the west.

##### **3.1.2 Environmental Consequences**

###### **3.1.2.1 Preferred Alternative**

No effects on land use would be expected from implementing the Preferred Alternative. No changes to existing land use classifications would result from implementing the PAL program on Fort Belvoir, nor would any land use incompatibilities be created. Existing land use classifications for the proposed PAL parcels are compatible with the intended use under the PAL program.

###### **3.1.2.2 No Action Alternative**

No effects on land use at Fort Belvoir would be expected from implementing the No Action Alternative. The proposed PAL action would not be implemented under the No Action Alternative, and existing land use at the installation would not change.

#### **3.2 AESTHETICS AND VISUAL RESOURCES**

##### **3.2.1 Affected Environment**

*Parcel A.* Knadle Hall and its associated parking lot on Parcel A lie between Mount Vernon Road and Gillespie Road in the east-central portion of the South Post. Wooded areas surround most of

the parcel, with a large parking lot associated with historic buildings and a parade field (Long Field) visible to the south and southwest across Gaillard Road. While removed from the busiest areas of the installation and in a relatively quiet area, the parcel's location and surroundings give the visitor a sense that other parts of the installation are nearby.

**Parcel B.** The five buildings on Parcel B are surrounded by historic buildings of the Fort Belvoir Historic District, many of which are residences along 23<sup>rd</sup> Street, Belvoir Drive, and Forney Loop. Administrative-type historic buildings are east of the parcel on Macomb Road and Duportail Road. The entire area has an abundance of trees that limit views, especially during the summer months. Overall, the location has the character of a quiet, aged residential area.

**Parcel C.** Buildings 806 and 807 are off of Stimson Road in the central part of the South Post. Wooded areas are east and south of the buildings, and the buildings' parking area and trees are visible to the west and southwest. North of the parcel is Building 808, the DeWitt Army Hospital. Although primarily surrounded by wooded areas, the close proximity of Buildings 806 and 807 to Building 808 give the parcel a sense of being within an activity center of the installation.

**Parcel D.** Buildings 80 and 81 are along Sultan Loop in the southeastern part of the South Post. The buildings are surrounded by wooded areas on three sides, with four historic residences along Mason Drive to the south of the parcel being the only development visible from the buildings. The parcel's setting is quiet and sequestered from installation activities. It is within the Fort Belvoir Historic District.

**Parcel G.** The existing PX and Commissary are on the installation's North Post in a commercial part of the post. Wooded areas surround the existing PX from the northeast to the northwest, with small commercial buildings to the southwest and more wooded land to the south. Parcel G is at the western edge of the PX parking lot and it is currently vegetated. Views from the parcel are of the PX, Commissary, other commercial establishments, and surrounding wooded areas. Kingman Road is north of the parcel and Gunston Road is to the west. The area has a busy, commercial character and has a constant flow of traffic.

### **3.2.2 Environmental Consequences**

#### **3.2.2.1 Preferred Alternative**

Short-term minor adverse and long-term minor beneficial effects on aesthetics and visual resources would be expected from implementing the Preferred Alternative. Short-term minor adverse effects would result from construction activities, which are inherently aesthetically displeasing. During the construction and renovation phases of the PAL program, views of the proposed parcels and buildings would be altered with the presence of construction equipment, construction material staging areas, and bare land as demolition, construction, and renovations occur. These effects would be short term and localized to the PAL parcels and their surroundings. Construction activities would be limited to daylight hours.

Long-term minor beneficial effects would be expected from aesthetic improvements at the lodging areas. Renovations to repair or update the interior or exterior of existing lodging buildings would improve the appearance of the buildings, and new landscaping would accompany new construction. Parcel G is adjacent to an existing commercial area, so conversion of the now vegetated land to a lodging building would not be expected to alter the aesthetics of the overall

area substantially. The proposed renovations and new buildings would be in keeping with Installation Design Guidelines.

### 3.2.2.2 **No Action Alternative**

Long-term minor adverse effects on aesthetics and visual resources would be expected from implementing the No Action Alternative. Existing buildings would not be changed under the No Action Alternative, but shortfalls in funding for lodging maintenance would be expected to continue, resulting in deteriorating conditions for all lodging buildings.

## 3.3 **AIR QUALITY**

### 3.3.1 **Affected Environment**

U.S. Environmental Protection Agency (USEPA) Region 3 and Virginia Department of Environmental Quality regulate air quality in Virginia. The Clean Air Act (CAA) (42 U.S.C. 7401-7671q), as amended, gives the USEPA responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that set acceptable concentration levels for six criteria pollutants: particulate matter (measured as both particulate matter (PM<sub>10</sub>) and, fine particulate matter (PM<sub>2.5</sub>)), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), nitrous oxides (NO<sub>x</sub>), ozone (O<sub>3</sub>), and lead. Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term NAAQS (annual averages) have been established for pollutants contributing to chronic health effects. While each state has the authority to adopt standards stricter than those established under the federal program, the Commonwealth of Virginia accepts the federal standards.

Federal regulations designate Air Quality Control Regions (AQCRs) in violation of the NAAQS as *nonattainment* areas. Federal regulations designate AQCRs with levels below the NAAQS as *attainment* areas. *Maintenance* AQCRs are areas that have previously been designated nonattainment and have been redesignated to attainment for a probationary period through implementation of maintenance plans. According to the severity of the pollution problem, nonattainment areas can be categorized as marginal, moderate, serious, severe, or extreme.

Fairfax County (and therefore Fort Belvoir) is within the National Capital Interstate AQCR (AQCR 47) (40 CFR 81.12). AQCR 47 is in the ozone transport region (OTR) that includes 12 states and Washington, DC. The USEPA has designated Fairfax County as the following:

- Moderate nonattainment for the 1997 8-hour O<sub>3</sub> NAAQS (Note: EPA has not yet made area designations for the 2008 8-hour O<sub>3</sub> NAAQS)
- Nonattainment for the 1997 PM<sub>2.5</sub> NAAQS but attainment for the 2006 24-Hour PM<sub>2.5</sub> Standards
- Attainment for all other criteria pollutants (40 CFR 81.347)

Fort Belvoir holds a Title V operating permit (No. NVRO70550) that was renewed on March 21, 2003 (VDEQ 2010). The permit requirements include annual periodic inventory for all significant stationary sources of air emissions and also covers monitoring, recordkeeping, and reporting requirements. Fort Belvoir's 2009 installation-wide air emissions for all significant stationary sources are tabulated below (Table 3-1).

**Table 3-1**  
**Annual emissions for significant stationary sources at Fort Belvoir**

Pollutant	Emissions (tons/year)
Volatile organic compounds (VOCs)	2.9
Nitrogen oxides (NO <sub>x</sub> )	43.8
Sulfur dioxide (SO <sub>2</sub> )	20.0
Fine particulate matter (PM <sub>2.5</sub> )	2.2

Source: U.S. Army Fort Belvoir 2009

**Greenhouse Gases and Climate Change.** Greenhouse gases (GHGs) are components of the atmosphere that trap heat relatively near the surface of the earth, and therefore, contribute to the greenhouse effect and climate change. Most GHGs occur naturally in the atmosphere, but increases in their concentration result from human activities such as the burning of fossil fuels. Global temperatures are expected to continue to rise as human activities continue to add carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, and other greenhouse (or heat-trapping) gases to the atmosphere. Whether or not rainfall will increase or decrease remains difficult to project for specific regions (USEPA 2010a, IPCC 2007).

EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* outlines policies intended to ensure that Federal agencies evaluate climate-change risks and vulnerabilities, and to manage the short- and long-term effects of climate change on their operations and mission. The EO specifically requires the Army to measure, report, and reduce their GHG emissions from both their direct and indirect activities. The Department of Defense has committed to reduce GHG emissions from non-combat activities 34 percent by 2020 (DoD 2010). In addition, the CEQ recently released draft guidance on when and how Federal agencies should consider GHG emissions and climate change in NEPA analyses. The draft guidance includes a presumptive effects threshold of 27,563 tons per year (25,000 metric tons per year) of CO<sub>2</sub> equivalent emissions from a federal action (CEQ 2010).

### 3.3.2 Environmental Consequences

#### 3.3.2.1 Preferred Alternative

Short- and long-term minor adverse effects would be expected. Implementation of the Preferred Alternative could affect air quality through airborne dust and other pollutants generated during construction, and by the introduction of new stationary sources of pollutants, such as heating boilers. Air quality impacts would be considered minor unless the emissions would be greater than the General Conformity Rule applicability threshold, exceed the GHG threshold in the draft CEQ guidance, or contribute to a violation of any federal, state, or local air regulation.

Construction emissions were estimated for fugitive dust, on- and off-road diesel equipment and vehicles, worker trips, architectural coatings, and paving off-gasses. Operational emissions would primarily be due to heating emissions for the building and patron vehicle trips. Notably, the additional lodging units would constitute a small net increase in operational emissions. The estimated emissions from the Preferred Alternative would be below the General Conformity Rule applicability thresholds (Table 3-2). These effects would be minor.

**Table 3-2**  
**Annual air emissions compared to applicability thresholds**

Activity	Emissions (tons/year)						De minimis Threshold	Would Emissions Equal/Exceed De Minimis Levels?
	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>		
Construction and Demolition	6.8	6.2	1.5	<0.01	3.3	0.6	100(50) <sup>a</sup>	No
Operations	0.9	0.2	0.1	<0.01	<0.01	<0.01		

<sup>a</sup> De minimis threshold for VOC is 50 tons per year  
 Note: SO<sub>x</sub> = oxides of sulfur, VOC = volatile organic compound

For analysis purposes, it was assumed that all the construction would be compressed into a single 12-month period. Therefore, regardless of the ultimate implementation schedule, annual emission would be less than those shown herein. Small changes in the facilities' siting, the ultimate design, and moderate changes in the quantity and types of equipment used would not have a substantial influence on the emission estimates and would not change the level of effects under NEPA.

The new hotel would be equipped with individual furnaces or boilers for heating. These stationary sources of air emissions could be subject to federal and state air permitting regulations, including New Source Review, Prevention of Significant Deterioration, National Emission Standards for Hazardous Air Pollutants, or New Source Performance Standards. The lodging facilities would be owned, operated, and maintained by IHG on property leased by Fort Belvoir. In general, leased activities would not be considered under the direct control of Fort Belvoir. These leased activities would normally be considered "tenants" and IHG would need to perform an air quality regulatory analysis to determine if any Clean Air Act permitting is required for the operation of any sources of air emissions. However, leased activities may be considered under common control when they also have a contract-for-service relationship to provide goods or services to a military controlling entity at that military installation. Given the variety and complexity of leased and contract-for-service activities at Fort Belvoir, case-by-case determinations would be necessary to determine if the existing sources of emissions would remain on, or new sources would be added to, Fort Belvoir's Title V permit.

The Virginia Administrative Code (VAC) outlines precautions that would be required during the construction of the new facilities, such as control of fugitive dust and open burning. All contractors would comply fully with all federal, state, and local air regulations. All persons responsible for any operation, process, handling, transportation, or storage facility, which could result in fugitive dust, would take reasonable precautions to prevent such dust from becoming airborne. Reasonable precautions might include the use of water to control dust from building demolition, construction, road grading, or land clearing.

**Greenhouse Gases and Climate Change.** Under the Preferred Alternative, all construction activities combined would generate approximately 868 tons (789 metric tons) of CO<sub>2</sub>. There would be a minute increase in GHG from operation of a few additional lodging units. Regardless, the GHG emissions associated with the Preferred Alternative fall well below the CEQ threshold.

### 3.3.2.2 No Action Alternative

No effects would be expected. No demolition, construction, or changes in operations would occur. Ambient air quality conditions would remain as described in Section 3.3.1.

### 3.4 NOISE

#### 3.4.1 Overview and Regulatory Requirements

Sound is a physical phenomenon consisting of vibrations that travel through a medium, such as air, and are sensed by the human ear. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise distance between the noise source and the receptor, receptor sensitivity, and time of day. Noise is often generated by activities essential to a community's *quality of life*, such as construction or vehicular traffic.

Sound varies by both intensity and frequency. Sound pressure level, described in decibels (dB), is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz (Hz) are used to quantify sound frequency. The human ear responds differently to different frequencies. "A-weighting", measured in A-weighted decibels (dBA), approximates a frequency response expressing the perception of sound by humans. Sounds encountered in daily life and their dBA levels are provided in Table 3-3.

The dBA noise metric describes steady noise levels, although very few noises are, in fact, constant. Therefore, A-weighted Day-night Sound Level has been developed. Day-night Sound Level (DNL) is defined as the average sound energy in a 24-hour period with a 10-dB penalty added to the nighttime levels (10 p.m. to 7 a.m.). DNL is a useful descriptor for noise because: (1) it averages ongoing yet intermittent noise, and (2) it measures total sound energy over a 24-hour period. In addition, Equivalent Sound Level ( $L_{eq}$ ) is often used to describe the overall noise environment.  $L_{eq}$  is the average sound level in dB.

**Table 3-3  
Common sounds and their levels**

Outdoor	Sound level (dBA)	Indoor
Motorcycle	100	Subway train
Tractor	90	Garbage disposal
Noisy restaurant	85	Blender
Downtown (large city)	80	Ringling telephone
Freeway traffic	70	TV audio
Normal conversation	60	Sewing machine
Rainfall	50	Refrigerator
Quiet residential area	40	Library

Source: Harris 1998

The Noise Control Act of 1972 (PL 92-574) directs federal agencies to comply with applicable federal, state, interstate, and local noise control regulations. In 1974, the USEPA provided information suggesting continuous and long-term noise levels in excess of DNL 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals. The Fairfax County Code prohibits the creation of sound louder than 55 dB in a residential area, and 60 dB in a commercial area. In addition, it prohibits the creation of any

excessive noise on any street adjacent to any school, institution of learning, court, or hospital that interferes with its function (Fairfax County Code Section 108-4-1). Sounds generated from construction and demolition activities are exempt from the Fairfax County ordinance between 7:00 a.m. and 9:00 p.m.

### 3.4.2 Affected Environment

Existing sources of noise near the proposed sites include local road traffic, aircraft overflights, lawn maintenance equipment, construction activities from other projects, and natural noises such as the rustling of leaves and bird vocalizations. Existing noise levels ( $L_{eq}$  and DNL) were estimated for the surrounding areas using the techniques specified in the *American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present*. Parcels are located in areas that would normally be considered quiet urban residential or quiet suburban. DNL would range between 50 and 55 dBA.  $L_{eq}$  would range from 48 to 58 dBA in the daytime, and 42 to 52 at night (ANSI 2003).

### 3.4.3 Environmental Consequences

#### 3.4.3.1 Preferred Alternative

Short-term minor adverse effects would be expected. Short-term increases in noise would result from the use of construction equipment.

Table 3-4 presents typical noise levels (dBA at 50 feet) that the USEPA has estimated for the main phases of outdoor construction. Individual pieces of construction equipment typically generate noise levels of 80 to 90 dBA at a distance of 50 feet. With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime periods at locations within several hundred feet of active construction sites. The zone of relatively high construction noise typically extends to distances of 400 to 800 feet from the site of major equipment operations. Locations more than 1,000 feet from construction sites seldom experience noteworthy levels of construction noise.

**Table 3-4**  
**Noise levels associated with outdoor construction**

Construction phase	$L_{eq}$ (dBA)
Ground clearing	84
Excavation, grading	89
Foundations	78
Structural	85
Finishing	89

Source: USEPA 1974

The closest noise sensitive areas are Dewitt Army Community Hospital approximately 1,100 feet from Parcel C, and Webster and Troy University buildings approximately 500 feet of Parcel C. Given the temporary nature of proposed construction activities and the limited amount of noise that construction equipment would generate, this impact would be minor.

Noise from renovation activities would be minimal and confined primarily to areas inside the buildings. Limited truck and worker vehicle traffic may be audible at some nearby locations. These effects would be negligible.

All parcels would be completely compatible with the air operations at Davison Army Airfield. No long-term increases in the overall noise environment (e.g.,  $L_{eq}$ , A-weighted DNL) would be expected with the implementation of the Preferred Alternative. No military training activities, use of weaponry, demolitions, or aircraft operations would occur. Therefore, no changes in the existing noise environment associated with these sources would be expected.

### **3.4.3.2 No Action Alternative**

No effects on the noise environment would be expected. No demolition and construction or changes in operations would occur. Ambient noise conditions would remain as described in Section 3.4.1.

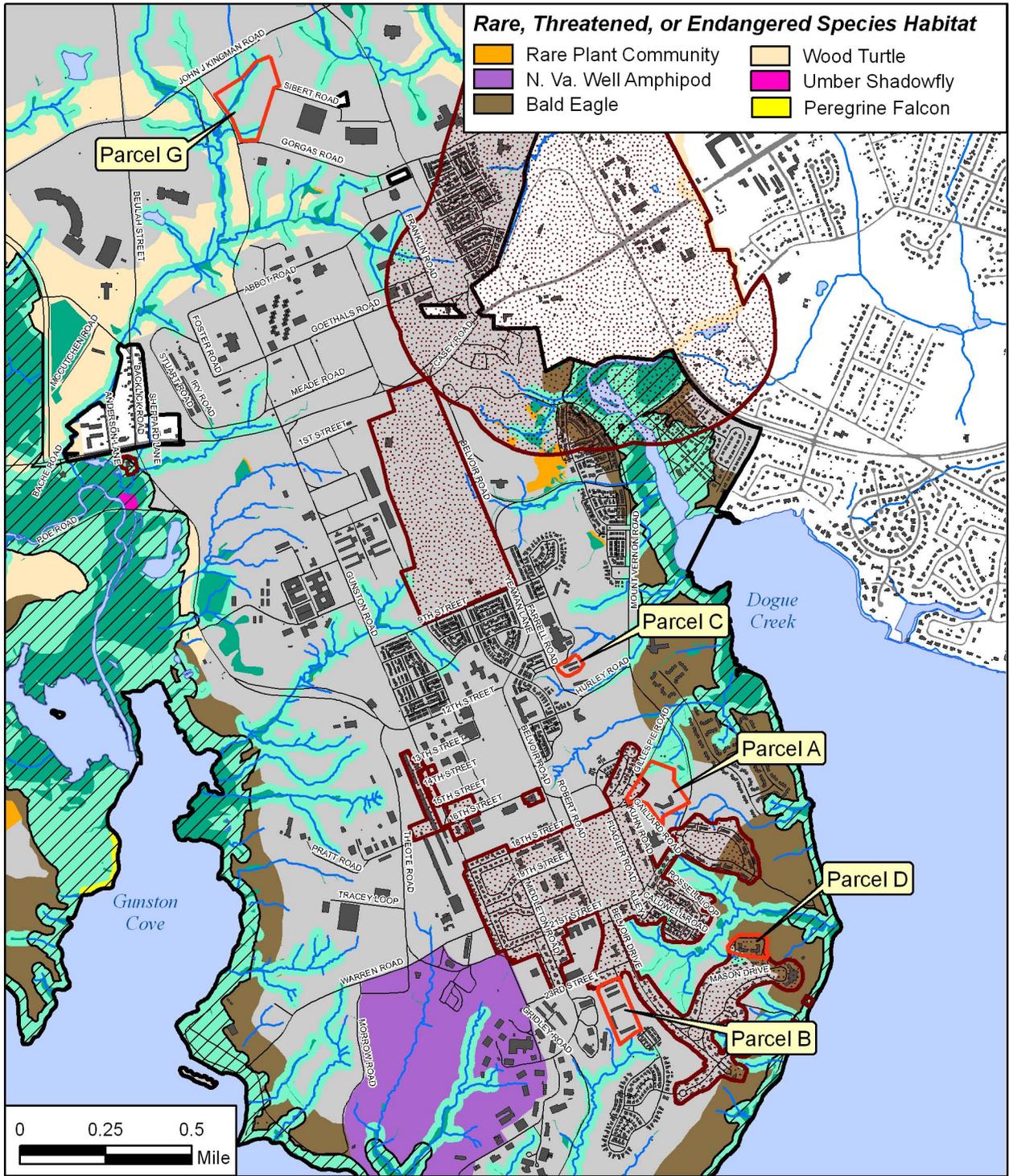
## **3.5 GEOLOGY AND SOILS**

### **3.5.1 Affected Environment**

The Main Post of Fort Belvoir is within the high and low Coastal Plain Terraces of the Coastal Plain physiographic province. The province consists of unconsolidated sand, silt, and clay underlain by residual soil and weathered crystalline rocks. Most of the province deposits in the Fort Belvoir area consist of a sequence of unconsolidated sediments that belong to the Potomac Group. The Potomac Group is characterized by lens-shaped deposits of interbedded sand, silt, clay, and gravel, primarily of non-marine origin. The Potomac Group is approximately 600 feet thick beneath most of Fort Belvoir (USACE Mobile District 2007a).

Topography of Fort Belvoir's Main Post is characterized by uplands and plateaus, lowlands (mostly along the Potomac River or its main tributaries), and steeply sloped bluffs, ravines, and stream valleys. Elevations range from near sea level along the Potomac River to approximately 230 feet above mean sea level near the intersection of Beulah Street and Woodlawn Road in the North Post uplands (USACE Mobile District 2007a). The developed areas of the South Post that encompass proposed PAL Parcels A through D are on nearly level plateau areas. The footprints of Parcels A through D are nearly level to gently-sloped and are about 130 to 140 feet above sea level in elevation. Just outside the footprint boundaries of Parcels A, C, and D, the terrain slopes more steeply toward the northeast, east, or southeast in transition toward the Potomac River shoreline. The eastern portion of Parcel G on the North Post is nearly level to gently southwesterly-sloped, about 130 feet above sea level, just west of Stonewall Jackson Road and the PX parking lot. The western portion of Parcel G features the sloped drainageway of a Mason Run tributary stream cutting northeast to southwest across the parcel, and another intermittent drainage swale is along the southern portion of the Parcel G footprint (Figure 3-1) (Fort Belvoir 2010a, 2010b; USGS 1983).

Soils of Parcels A through D on the South Post are categorized as Urban. The Urban soil includes ridgetop or other well-drained, flatter areas that have been disturbed minimally to drastically by construction and development over the years. This soil has low erodibility and is suitable for foundations (USACE Mobile District 2007a). The Parcel G footprint contains several soil types (USDA NRCS 2010b). In the flatter eastern and northeastern portion of the parcel, the soils are mostly Sassafras fine sandy loam, with some Sassafras-Marumsco complex. Those two soil types



**Rare, Threatened, or Endangered Species Habitat**

Rare Plant Community	Wood Turtle
N. Va. Well Amphipod	Umber Shadowfly
Bald Eagle	Peregrine Falcon

**LEGEND**

Installation Property	Stream	Historic District
Proposed PAL Footprint	Surface Water	Floodplain
Road	Wetland	RPA
Building		

# Environmental Constraints

Figure 3-1

Source: Fort Belvoir GIS, 2009.

are well drained to moderately well drained and have depth to restrictive features of more than 80 inches. Depth to water table is more than 80 inches in the Sassafras soil type but can be about 12 to 18 inches in the Marumsc soil. Fairfax County rates the Sassafras soil as typically providing adequate support for small buildings (up to three stories) and as suitable for most urban and residential uses (Fairfax County DPWES 2010). In the southern portion of Parcel G, the soil type is Gunston silt loam, and in the western portion of Parcel G along the Mason Run intermittent tributary drainage, the soil type is Codorus and Hatboro soils, occasionally flooded. The Gunston silt loam and Codorus and Hatboro soil types are somewhat poorly drained, with depths to water table of between 8 and 30 inches, and are considered hydric soils (USDA NRCS 2010a, 2010b). Sassafras fine sandy loam is a soil type that could support prime farmland, and the Sassafras-Marumsc complex is a soil that could support farmland of statewide importance, both of which are classifications that could qualify for protection under the Farmland Protection Policy Act of 1981. Lands within Fort Belvoir, however, have been previously converted to urban use or otherwise irreversibly committed to other uses than farmland, and, therefore, do not qualify for protection under the Farmland Protection Policy Act.

### **3.5.2 Environmental Consequences**

#### **3.5.2.1 Preferred Alternative**

Short-term minor adverse effects on soils would be expected from implementing the Preferred Alternative. In the short term, some soil disturbance would be expected during demolition, site preparation, and new construction. New construction (Parcels A or G) or demolition (Parcels B or C) would involve some vegetation removal or disturbance (particularly on the undeveloped portions of Parcels A or G), soil exposure, and minor soil loss from increased susceptibility of soils to erosion by wind or water. Those effects would be minimized, however, by using appropriate best management practices (BMPs) for controlling erosion, runoff, and sedimentation, such as silt fences and diversion dikes. Construction on Parcel G, should it occur, would avoid hydric soils and poorly drained soils. (A delineation of streams and wetlands was conducted in the area of Parcel G in 2008 and 2009, and though intermittent and ephemeral streams occur on Parcel G, no wetlands were found on the site [BCG 2009].) (See Appendix F.) Soil exposure and potential erosion following construction on any parcel would be minimized by clearing only those portions of the site required, leaving as much of the existing vegetation in place as possible, and employing erosion and sediment control measures suitable for the site. All construction activities would be conducted in accordance with applicable federal, state, county, and installation policies and guidelines. A Virginia Stormwater Management Program (VSMP) permit is required for construction activities—including clearing, grading, and excavating—that result in land disturbance of equal to or greater than 2,500 square feet in all areas subject to the Chesapeake Bay Preservation Area Designation and Management Regulations (adopted pursuant to the Chesapeake Bay Preservation Act [CBPA]). Fort Belvoir is within the Chesapeake Bay watershed and as such is subject to these regulations.

Fort Belvoir was issued a Municipal Separate Storm Sewer System (MS4) Permit by the Virginia Department of Conservation and Recreation to review construction design plans for stormwater management and erosion and sediment control. The Fort Belvoir Directorate of Public Works, Environmental and Natural Resources Division (DPW ENRD) reviews these plans to ensure they are in compliance with Virginia and Fairfax County laws and regulations governing stormwater management and erosion and sediment control, including the Virginia Erosion and Sediment Control Handbook, the Fairfax County Public Facilities Manual and the Virginia Stormwater Management Handbook. The VSMP Permit holder is required to prepare and implement a site-specific Stormwater Pollution Prevention Plan (SWPPP). Some major components of a SWPPP include (DCR 2010):

- Identification of potential sources of pollutants, such as fuel, fertilizer, and chemical storage, that may reasonably be expected to affect the quality of stormwater discharges from the construction site.
- Description of the control measures that will be used to minimize pollutants in stormwater discharges from construction sites through incorporation of the site specific erosion and sediment control plans, the stormwater management plan, and spill prevention plan.
- Site inspection reports conducted by the contractor's Responsible Land Disturber and the DPW ENRD Erosion and Sediment Control Inspector on a biweekly basis and within 48 hours of a runoff producing event.

All activities would be conducted in accordance with the Phase I and Phase II Erosion and Sediment Control Plans and the Stormwater Management Plan .

No effects on soils would be expected on any proposed PAL parcels where the only activities are interior and minor exterior building renovations. No effects on geologic or topographic conditions, or on prime farmland, would be expected under the Preferred Alternative.

### **3.5.2.2 No Action Alternative**

No effects on geologic or topographic conditions, soils, or prime farmland would be expected under the No Action Alternative because no ground disturbing activities would occur.

## **3.6 WATER RESOURCES**

### **3.6.1 Affected Environment**

Fort Belvoir is within the 64,000-square-mile Chesapeake Bay watershed and is along the shoreline of the Potomac River, the second largest tributary to the Chesapeake Bay, and several Potomac River tributary embayments. The South Post peninsula that encompasses proposed PAL Parcels A through D is surrounded by Dogue Creek to the northeast, the Potomac River to the east and south, Gunston Cove to the southwest, and Accotink Bay to the west. The upland plateau on which Parcels A through D are located transitions topographically to numerous stream valleys and ravines that carry natural drainage to those waterbodies (Figure 3-1). Parcel G on the North Post is within the watershed of Mason Run, a tributary to Accotink Creek, which flows to Accotink Bay. Fort Belvoir is within Virginia's designated coastal zone, and as such is regulated under the federal Coastal Zone Management Act and Virginia's federally-approved Coastal Zone Management (CZM) Program. In addition, management of Fort Belvoir watersheds is guided by several interagency and interstate Chesapeake Bay agreements and policies. Accordingly, Fort Belvoir has designated Resource Protection Areas (RPAs) consistent with Fairfax County's Chesapeake Bay Preservation Ordinance. RPAs are environmentally sensitive corridors along perennial streams, rivers, other waterways, and adjacent wetlands that act as natural buffers to protect water quality by filtering pollutants out of stormwater runoff, reducing the volume and velocity of stormwater runoff, and inhibiting erosion. Fort Belvoir's RPAs include 100-foot buffer zones and contiguous and adjacent wetlands along perennial streams and other waterways. Riparian buffer areas also have been designated on Fort Belvoir in accord with Directive No. 94-1 in the Chesapeake Bay Agreements, Riparian Forest Buffers (USACE Mobile District 2007a). The designated riparian buffers generally occur adjacent to a body of water, stream, river, marsh, or shoreline and provide transition zones that augment and enhance the water quality protection

benefits provided by RPAs. Designated riparian buffers generally are within 35 feet of an intermittent or perennial stream, alluvial soils, and soils with greater than 15 percent slopes (USACE Mobile District 2007a). Riparian buffer areas and RPAs in the vicinity of the proposed PAL parcels, as identified from available map resources, are presented in Figure 3-1 (Fort Belvoir GIS 2009). Planning-level delineations illustrated in Figure 3-1 should be field verified during project planning to avoid or minimize disturbing sensitive riparian areas during project development and construction.

Surface drainage in the areas surrounding Parcels A through D flows via a combination of constructed conveyance in the developed areas (e.g., curb and gutter, culverts, and pipes), and natural topography. The following discussion describes surface waters and related sensitive riparian areas on and near the proposed PAL parcels as determined from available planning-level information. Parcels A through D contain no known perennial surface waterbodies within their footprints. (Wetlands are discussed in section 3.7.) Natural drainageways to the north, east, and south of Parcel A carry surface runoff generally east to Dogue Creek. Designated riparian buffer surrounds each of those drainageways, and RPAs exist to the east and north of Parcel A. A portion of the RPA appears to extend within the northern portion of the Parcel A footprint. Riparian buffer occurs adjacent to the southern and southwest boundaries of the Parcel B footprint. RPA exists adjacent to the south side of Parcel B surrounding the intermittent headwaters of a south-flowing Potomac River tributary stream. Riparian buffer occurs along the downhill slopes to the south and northeast of Parcel C. An area of RPA also exists to the southeast of and downhill from Parcel C surrounding a tributary stream that drains northeast toward Dogue Creek. Designated riparian buffer occurs along the downhill slopes surrounding Parcel D in a clockwise arc from the southwest to southeast. RPA areas surround the Parcel D footprint on the southwest, west, and north associated with streams draining north and east toward the Dogue Creek/Potomac River confluence. The RPA appears to extend onto the southwest portion of the Parcel D footprint. Parcel G on the North Post is within the watershed of Mason Run, a tributary to Accotink Creek. Two headwater tributaries to Mason Run cross the Parcel G footprint, as described in Section 3.5.1, and convey natural drainage southwest and west toward Mason Run (Figure 3-1). The drainage across the southern portion of the Parcel G footprint is intermittent and ephemeral (BCG 2009). Riparian buffer and RPAs are designated along both of those drainageways and occur within the western and southern portions of the Parcel G footprint (Fort Belvoir 2010a, Fort Belvoir GIS 2009).

The Dogue Creek, Gunston Cove, and Accotink Bay waters surrounding the Main Post peninsula are listed on Virginia's 2008 Clean Water Act section 303(d) list as impaired because of a Virginia Department of Health fish consumption advisory resulting from polychlorinated biphenyls (PCBs) in fish tissue (VDEQ 2008). These waters are part of a 33-mile impaired segment of the Potomac River from Woodrow Wilson Bridge south to Brent Point at the mouth of Aquia Creek (identified as *Bent Point* in VDEQ 2008), whose advisory was issued in collaboration with the state of Maryland, which owns most of the Potomac River in this stretch.

Hydrogeologic features underlying Fort Belvoir are part of the Potomac Group, a sequence of unconsolidated sediments characteristic of the Coastal Plain. Fort Belvoir's water table is generally about 10 to 35 feet below ground surface, except in areas within and directly adjoining wetland and floodplain areas, and except for select areas on the installation having perched water tables about 2 feet below the surface as a result of groundwater trapped in strata overlying impermeable clays (USACE Mobile District 2007a). No such areas are known to occur within the proposed PAL parcels.

No 100-year floodplains occur in the vicinity of the proposed PAL parcels (Figure 3-1).

### **3.6.2 Environmental Consequences**

#### **3.6.2.1 Preferred Alternative**

Short- and long-term minor adverse and long-term minor beneficial effects on surface water and groundwater resources would be expected with implementing the Preferred Alternative.

In the short term, staging, site preparation, demolition, and new construction activities would be expected to involve some vegetation removal and soil disturbance, and could result in increases in dissolved solid, sediment, or other waterborne pollutant runoff that could reach surface waters or infiltrate to groundwater. Potential adverse effects on the groundwater and surface water systems would be minimized by using site-specific BMPs, such as silt fences, sediment traps, diversion dikes, and straw bales for erosion and sediment control and stormwater management in accordance with all applicable federal, state, county laws and regulations, and installation policies, and guidelines, and by adhering to the Phase I and Phase II Erosion and Sediment Control Plans. Construction on Parcel G, should it occur, would avoid sensitive riparian buffer and RPAs to the maximum extent practicable.

Applicable regulations include the VSMP requirements discussed above and Virginia's Erosion and Sediment Control regulations, Army administrative publication DA PAM 200-1 *Environmental Protection and Enhancement*, and Army Regulation AR 200-3 *Natural Resources—Land, Forest, and Wildlife Management*. Construction plans and design documents would be developed for erosion and sediment control and stormwater management and would be submitted to DPW ENRD for review and approval prior to any land disturbance. Also, before construction, the presence and boundaries of streams, RPAs, and wetlands would be field verified to protect these resources.

Long-term minor adverse effects on water resources would be expected on PAL Parcels A or G, on which new construction would result in a net loss of vegetated cover and net increase in impervious surface area. Increased impervious surface area, in the form of driveways, parking lots, sidewalks, and rooftops, can result in increased runoff (in the forms of increased volume, velocity, and peak flows), increased erosion, increased pollutant loads (e.g., dissolved solids, petroleum hydrocarbon debris from vehicles) and sediment loads, and reduced ground absorption and infiltration of runoff that would otherwise recharge groundwater aquifers. Long-term minor adverse effects would be minimized by complying with all applicable regulations for stormwater management, including developing an effective site-specific SWPPP and incorporating BMPs for stormwater management, such as rain gardens, into the site design.

Long-term minor beneficial effects would be expected to result on PAL Parcels B and C, on which demolition of existing structures would be followed by replacing formerly impervious surfaces with vegetated cover rather than redevelopment. Increased groundwater recharge through the ground, reduced volume and velocity of runoff, and reduced erosion and transport of sediment and other waterborne pollutants to streams or to groundwater would be expected from removal of the buildings on the parcels.

No effects on surface or groundwater resources would be expected on proposed PAL Parcel D, where only interior and minor exterior building renovations would occur. No effects on floodplains would be expected from implementing the Preferred Alternative.

A coastal zone management consistency determination is included in Appendix C. No effects on the Chesapeake Bay or the Virginia CZM program would be expected. Site preparations, staging for renovations, construction, and other activities associated with the Preferred Alternative would occur in a manner consistent with the Virginia CZM program enforceable policies to the maximum extent practicable.

### **3.6.2.2 No Action Alternative**

No effects on water resources would be expected under the No Action Alternative.

## **3.7 BIOLOGICAL RESOURCES**

### **3.7.1 Affected Environment**

#### **3.7.1.1 Vegetation**

Fort Belvoir's natural plant communities are highly influenced by the wide variety of landforms found on the installation, which include gently rolling plateaus and high bluffs that descend sharply into adjacent stream valleys. Factors such as topographic location, soil, moisture, slope, and natural and human disturbances influence vegetation composition within each plant community type, though most of the PAL parcels can generally be characterized as being in areas of mixed hardwood forest and beech-oak forest. Parcels A, C, and D, and to some extent Parcel G are largely surrounded by natural area of these types, while the trees on and near Parcel B are remnants of these community types.

#### **3.7.1.2 Wildlife**

Most of the PAL parcels are edged by wooded areas, and Parcels A, C, and D are near steep ravines that slope downward toward Dogue Creek and the Potomac River. A variety of wildlife species including mammals, amphibians, reptiles, and birds live in the wooded areas surrounding the parcels. Other than fringing wooded areas, high-value habitat does not exist on the parcels. Wildlife in these areas primarily consists of species typical of developed settings such as squirrel, deer, and raccoon. The Potomac River and other natural areas on-post provide habitat for migratory birds and other natural wildlife. Parcel G, which is undeveloped, contains some Partners in Flight (PIF) priority bird species habitat (USACE, Mobile District 2007a).

#### **3.7.1.3 Wetlands**

Map-identified RPAs that border streams are adjacent to the north and east edges of Parcel A, the southern edge of Parcel B, and the southwestern corner of Parcel D. Two headwater tributaries to Mason Run with intermittent and ephemeral flow cross the Parcel G footprint. RPAs designated along both of those drainageways are within the western and southern portions of the Parcel G footprint. No jurisdictional wetlands are known to exist within any of the PAL footprint areas, however no formal jurisdictional wetland determinations have been performed on Parcels A–D.

#### **3.7.1.4 Sensitive Species**

A number of nests of the state-threatened bald eagle (*Haliaeetus leucocephalus*) occur on Fort Belvoir, and the shoreline of Pohick Bay is a designated conservation zone for the species. Dogue

Creek, Accotink Creek, Pohick Creek, and the Potomac River are designated Anadromous Fish Use Areas.

The Northern Virginia well amphipod (*Stygobromus phreaticus*) is a species that is only known from Fort Belvoir, had previously been thought to be extinct, and has special status in Virginia. Stringent stormwater management measures are taken on the installation to protect the species, which occurs in subterranean habitats associated with seeps that occur on the installation's steep slopes that lead to creeks and bays.

The installation, with its wildlife refuges and wildlife corridor, provides habitat for other sensitive and protected species, such as flowering plants, dragonflies, turtles, migratory birds, and birds of prey, but the species are not associated with the PAL parcels. Accotink Creek, a tributary of which passes through part of Parcel G, is considered to be habitat for the state-threatened North American wood turtle (*Glyptemys insculpta*).

As part of the EA process, a review of information provided by the U.S. Fish and Wildlife Service (USFWS) Field Office in Gloucester, Virginia, was performed to determine whether any federally listed, proposed, or candidate species and/or "critical habitat" might occur on the PAL parcels (see Appendix A). Based on the review of the current USFWS information, the following species that have been identified within a 3-mile radius of the proposed PAL footprint:

- Sensitive joint-vetch (*Aeschynomene virginica*)
- Small whorled pogonia (*Isotria medeoloides*)

Sensitive joint-vetch occurs in fresh to slightly brackish tidal river systems, within the intertidal zone where populations are flooded twice daily (USFWS 1999). The small whorled pogonia is an orchid that grows in older hardwood stands of beech, birch, maple, oak, and hickory that have an open understory (USFWS 2010). It prefers acidic soils with a thick layer of dead leaves, often on slopes near small streams. The PAL parcels do not provide habitat for the sensitive joint-vetch, but the small whorled pogonia could occur on or near parcels A, C, and D.

Also as part of the preliminary USFWS review, the Virginia Department of Conservation and Recreation, Division of Natural Heritage was contacted regarding records of species and habitats occurring in the project footprint. The division indicated that it has no concerns with respect to the proposed PAL project on Parcels A, B, C, and D (see Appendix A). The division noted that the Pohick/Accotink Wetland Conservation Site is downstream of Parcel G and natural heritage resources of concern at the site include the wood turtle, river bulrush (*Schoenoplectus fluviatilis*), and the tidal freshwater marsh community type. The division also noted that the Laura's clubtail (*Stylurus laurae*), a state rare dragonfly, has been documented downstream of Parcel G.

Coordination letters concerning the Preferred Alternative were sent to the U.S. Fish and Wildlife Service, the Virginia Department of Conservation and Recreation, and the Virginia Department of Game and Inland Fisheries. The coordination letters and responses received are provided in Appendix A.

### **3.7.2 Environmental Consequences**

#### **3.7.2.1 Preferred Alternative**

Short-term minor adverse effects on biological resources would be expected from implementing the Preferred Alternative. Some vegetation would be removed during building construction and

demolition, but the impact of such disturbance on wildlife and vegetative communities would likely be negligible. Fort Belvoir would adhere to its natural resources management policies with respect to tree removal and replacement, as specified in the INRMP, including compliance with Fort Belvoir's two-to-one tree replacement policy. The habitat offered to wildlife on most of the parcels is marginal and better habitat is in abundance elsewhere on the installation. Development on Parcel G would be conducted in accordance with management guidelines in the Fort Belvoir INRMP for PIF species, and Fort Belvoir would coordinate with VDGIF regarding PIF species to avoid unnecessary impacts on priority species, and would compensate for any loss of PIF priority species habitat on the parcel. After new construction was completed, native species of trees and shrubs that provide benefits to wildlife would be used to replace trees and habitat lost during construction.

No adverse effects on rare, threatened, and endangered species would be expected from implementing the Preferred Alternative. If necessary, construction activities would be timed to avoid interference with bald eagle nesting and roosting and with breeding birds. A breeding bird survey should be performed on the PAL parcels to determine usage before any clearing is performed. Though the North American wood turtle is rare on Fort Belvoir and it is doubtful that it would be found on or use the streams on Parcel G, it does occur downstream of the parcel in Accotink Creek, so adverse effects on water quality of the streams on the parcel would be minimized by implementing and strictly adhering to applicable state and local erosion and sediment control/stormwater management laws and regulations. A survey for the small whorled pogonia should be conducted before any disturbance of areas that could provide habitat for the species on Parcels A, C, and D.

Any tree of 4 inches or more in diameter (at breast height) removed during construction on Parcel A or G would be replaced with two other trees on Fort Belvoir property, in keeping with the installation's tree replacement policy.

No effects on wetlands would be expected. No wetlands are known to exist within the PAL footprint, and stormwater management measures sufficient to adequately protect the habitats of the slopes near Parcels A, C, and D, and the streams on Parcel G would be required to be used during all construction, demolition, and renovation activities on those parcels. Runoff from parking areas and all impervious surfaces on the sites would have to be adequately captured and treated with stormwater management measures. The precise measures that would be used would be determined during final site layout and planning, when the amount of stormwater runoff from the sites would be calculated. If necessary and depending on the final construction footprint for Parcel A, a jurisdictional determination of wetlands could be required and would be performed before any ground disturbance on the parcel. If required for construction on any parcel, a Section 404 permit from the U.S. Army Corps of Engineers and a Virginia Water Protection Permit would be obtained, and any mitigation required under the permits for wetland loss or impacts on water resources would be performed.

### **3.7.2.2 No Action Alternative**

No effects on biological resources at Fort Belvoir would be expected under the No Action Alternative. No demolition or construction would occur under the No Action Alternative.

## **3.8 CULTURAL RESOURCES**

### **3.8.1 Affected Environment**

The Fort Belvoir Integrated Cultural Resources Management Plan (ICRMP) (R. Christopher Goodwin and Associates 2001) includes detailed information on applicable cultural resources regulatory frameworks, regional prehistoric and historic background, the history of Fort Belvoir, cultural resources investigations and recorded properties, and installation-specific standard operating procedures for the management and protection of important sites. That and other ICRMP information is incorporated here by reference and, therefore, is not repeated.

The PAL program involves granting a long-term lease of Fort Belvoir lodging to a private entity. According to 36 CFR 800 (*Protection of Historic Properties*), “the transfer, lease, or sale of property out of Federal ownership or control, without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance” is an adverse effect. Implementation of the PAL program at Fort Belvoir would involve the transfer of a long-term interest in the construction, demolition, renovation, operation, and maintenance of historic Army lodging, and it would have the potential to affect cultural resources. A Programmatic Agreement (PA) between Fort Belvoir and the Virginia State Historic Preservation Officer (SHPO), therefore, has been developed. The PA outlines methods by which important cultural resources would be protected during the lease period and would become part of the lease agreement. The PA demonstrates that the Army has considered the potential effects of PAL on historic properties, and will become part of the legally binding lease agreement with Rest Easy.

#### **3.8.1.1 Archaeological Sites**

The entire installation has been surveyed for archaeological resources (Derek Manning, personal communication, 2010). The surveys located more than 300 prehistoric and historic period sites. Of these, one is listed on the NRHP (44FX4, Belvoir Manor Ruins and Fairfax Grave site), six are eligible for NRHP-listing, and 172 have been recommended for further study.

There are no known archaeological sites located on the PAL parcels and two archaeological sites recorded near PAL parcels. Site 44FX1675 is located adjacent to Parcel B. Site 44FX1675 was evaluated in 1989 and determined to be ineligible for listing on the NRHP. Site 44FX1928 is located to the northeast of Parcel C. This site was evaluated in 2008 and further study was recommended, it is considered potentially eligible for listing on the NRHP.

#### **3.8.1.2 Historic Architecture**

A number of NRHP-eligible or listed historic architectural resources have been identified on and adjacent to Fort Belvoir. Historic architecture on the installation includes the Fort Belvoir Historic District (FBHD), the U.S. Army Package Power Reactor (SM-1 Plant; the first prototype nuclear generating plant); the Camp A. A. Humphreys Pump Station and Filter Building (the oldest permanent structure on the installation and one of the few remaining features associated with the original Camp A.A. Humphrey); and the Thermo-Con House.

The FBHD is NRHP-eligible, a Virginia Landmark, and Fairfax County-designated Historic Site. Essentially it forms the administrative and residential core of the installation and comprises more than 250 contributing structures and features including the parade ground, streets, and

surrounding buildings. The FBHD is significant in its Colonial Revival style and the layout is a good example of 1920s and 1930s military post planning and construction.

The northwest corner of Parcel A is within the FBHD. The northern border of Parcel B borders the FBHD. Parcel D is located entirely within the FBHD. Buildings 80 and 81, Historic BOQs built in 1948, are contributing structures to the FBHD and therefore considered eligible for listing on the NRHP. These two buildings are slated for renovations.

### **3.8.1.3 Native American Resources**

No known or recorded Native American resources are on any of the PAL parcels.

## **3.8.2 Environmental Consequences**

### **3.8.2.1 Preferred Alternative**

No adverse effects on archaeological sites would be expected from implementing the Preferred Alternative. There are no known NRHP-eligible sites located on or immediately adjacent to PAL parcels where demolition or construction activities are planned. Should any currently unknown archaeological materials be identified or disturbed as a result of PAL program construction or demolition activities, they would be treated as agreed in the PA section pertaining to Post Review Unanticipated Discoveries. This treatment would be coordinated through the Installation Cultural Resources Manager, the SHPO, and other parties as appropriate.

Implementing the Preferred Alternative would not be expected to result in adverse effects to historic architecture. The PAL program involves granting a long-term lease of Fort Belvoir lodging to a private entity. Section 106 of the NHPA defines the “Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure the long-term preservation of the property’s historic significance” as an adverse effect on historic properties<sup>1</sup>. Fort Belvoir has entered into a PA outlining the adequate restrictions and conditions necessary to ensure the preservation of the historic properties being leased under the PAL program. The restrictions and conditions of the PA will be made legally enforceable through incorporation of the PA into the lease agreement, and Rest Easy will adhere to the lease agreement and all historic property requirements contained therein. The involved NRHP-eligible properties will be treated in accordance with the terms of the PA, a copy of which is provided in Appendix G. A parcel-specific discussion follows.

Parcel A lies partially within the FBHD. The Preferred Alternative for this parcel includes renovations to Knadle Hall and the construction of a new Staybridge Suites hotel including parking and other ancillary facilities. The parcel has been surveyed for archaeology and contains no NRHP-eligible sites. Knadle Hall (built in 1975) is not eligible for listing on the NRHP because it is less than 50 years old. As such indirect effects to archaeological sites and historic resources are not anticipated. Because Parcel A lies adjacent to and partially within the FBHD there is a potential for effects to the setting and viewshed.

Parcel B lies immediately adjacent to the FBHD. The Preferred Alternative for this parcel includes renovations to Buildings 505, 506, 507, 508, and 509. Long-term use of Buildings 505 and 506 is not envisaged and these two buildings are slated for demolition. This area has been

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<sup>1</sup> 36 CFR 800.5(a)(2)(vii)

heavily disturbed and lacks archaeological potential. There are no NRHP-eligible archaeological sites adjacent to the parcel. All of the buildings are covered by the Advisory Council on Historic Preservation (ACHP) Program Comment for Cold War Era Unaccompanied Personnel Housing 1946 – 1974 (UPH). As such indirect effects to archaeological sites and historic resources are not anticipated. Because Parcel B lies adjacent to the FBHD there is a potential for effects to the setting and viewshed.

The Preferred Alternative for Parcel C is renovation of Buildings 806 and 807 for short-term use to be followed by demolition. Parcel C contains no NRHP-eligible archaeological sites; Site 44FX1928, which is potentially eligible for listing on the NRHP is located nearly 200 m to the northeast of the parcel and is not at risk as a result of PAL activity. Buildings 806 and 807 are covered under the ACHP Program Comment for UPH. Parcel C is not located within or adjacent to any historic architecture or districts. No adverse effects (direct or indirect) to cultural resources are anticipated to result from PAL implementation on Parcel C.

Parcel D lies within the FBHD and consists of two NRHP-eligible architectural properties, Buildings 80 and 81. The Preferred Alternative at Parcel D is renovation of these two buildings for short-term use after which time they would revert to the Army. Renovations would include making safety upgrades and modifications and updating linens and décor. Construction and demolition are not proposed for Parcel D. As such, no effects to archaeological sites are anticipated. Because renovation work would be performed in accordance with the restrictions and conditions of the PA, no adverse and minor beneficial effects to historic resources are anticipated for Parcel D.

Parcel G is the proposed alternate new build site. This area has been surveyed for archaeological sites with negative results. There are no NRHP-eligible structures on the site. It is not adjacent to any historic properties or districts. No adverse effects to cultural resources are anticipated from implementing the Preferred Alternative at Parcel G.

### **3.8.2.2 No Action Alternative**

No effects on cultural resources would be expected under the No Action Alternative. All Army actions affecting the involved parcels would conform to installation policies, the ICRMP, and relevant regulatory frameworks.

## **3.9 SOCIOECONOMICS**

### **3.9.1 Affected Environment**

This section describes the economy and the sociological environment of the region of influence (ROI) surrounding Fort Belvoir. An ROI is a geographic area selected as a basis on which social and economic impacts of project alternatives are analyzed. The major factor used to determine the ROI are the location of Fort Belvoir and the location of businesses providing goods and services to the installation. On the basis of these criteria, the ROI for the social and economic environment is the Washington, DC Metropolitan Statistical Area.

The baseline year for socioeconomic data is 2009, the most recent year for which socioeconomic indicators are reasonably available. Where 2009 data are not available, the most recent data available are presented.

### 3.9.1.1 Regional Economy

**Employment and Industry.** The ROI is large and robust economic region. The presence of the federal government provides some stability to the ROI during periods of economic downturn, resulting in less fluctuation in unemployment and other economic indicators that may be experienced in other regions or on a national level. ROI civilian labor force and unemployment data is shown in Table 3-5, with national data for comparative purposes. The region's labor force increased 17 percent between 2000 and 2009, higher than the national growth rate of 8 percent. The ROI 2009 annual unemployment rate was 6 percent, lower than the national unemployment rate of 9 percent. The primary sources of ROI employment were government and government enterprises; professional, scientific, and technical services; health care and social assistance; and retail trade. Together, these industry sectors account for almost 50 percent of regional employment (BEA 2010).

**Table 3-5  
Labor force and unemployment**

	2000 civilian labor force	2009 civilian labor force	Change in labor force, 2000–2009	2009 annual unemployment rate
ROI	2,071,104	2,417,988	17%	6%
United States	142,583,000	154,142,000	8%	9%

Source: BLS 2010

**Income.** ROI income levels were higher than national averages (Table 3-6). The ROI 2008 per capita personal income (PCPI) was \$56,824, about 140 percent of the national per capita income of \$40,166 (BEA 2010). The ROI median household income of \$85,824 was 165 percent of the national median household income of \$52,029 (U.S. Census Bureau 2010).

**Table 3-6  
2008 Income**

	PCPI	Median household income
ROI	\$56,824	\$85,824
United States	\$40,166	\$52,029

Source: BEA 2010; U.S. Census Bureau 2009, 2010

**Population.** The ROI's 2009 population was about 4,796,000, an increase of approximately 680,160 persons since 2000. The ROI's population growth of 14 percent was higher than the national growth rate of 9 percent (Table 3-7).

**Table 3-7  
Population**

	2000 population	2009 population	Change in population, 2000–2009
ROI	4,796,074	5,476,241	14%
United States	281,424,602	307,006,550	9%

Source: U.S. Census Bureau 2010

### 3.9.1.2 Quality of life

The proposed PAL Program would not affect residential housing, shopping or recreational services, or public services (e.g., primary and secondary schooling). They are, therefore, not further addressed in this EA.

**Lodging.** The Fort Belvoir lodging facilities are described in Section 2.3. During a seven year study period from Fiscal Year 2001 through 2007, demand for on-post lodging was found to average 82 percent official TDY, 8 percent PCS, and 10 percent unofficial travelers. Over the 7-year study period, the Fort Belvoir Army Lodging operation maintained an occupancy rate of about 75 percent. When Soldiers on TDY, PCS, or unofficial demand cannot be accommodated on post, they receive Certificates of Non-Availability to stay at a market sector lodging facility. Fort Belvoir's lodging demand is driven by many of the classes offered on-post for military training schools and other educational courses; the installation's lodging demand fluctuates throughout the year depending on class schedules.

**Law enforcement, fire protection, medical services.** The Fort Belvoir Directorate of Emergency Services oversees professional law enforcement, fire protection, emergency services, physical security, and access control on Fort Belvoir to maintain the safety and security of the Soldiers, civilians, and family members living and working on Fort Belvoir (Fort Belvoir PAO 2010).

The DeWitt Army Community Hospital on Fort Belvoir provides health care services to active and retired military personnel and their families residing in Northern Virginia. A new on-post hospital is under construction to replace the Dewitt Army Community Hospital. This project is in support of the BRAC 2005 Recommendations.

### 3.9.1.3 Environmental Justice

On February 11, 1994, President Clinton issued EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*. The EO requires that federal agencies take into consideration disproportionately high and adverse human health or environmental effects of governmental decisions, policies, projects, and programs on minority and low-income populations

According to the U.S. Census Bureau, minority populations composed 42 percent of the total population in the ROI. This is higher compared to the national average of 20 percent of the population being classified as minority population (U.S. Census Bureau 2009). The poverty level in the ROI was 7 percent, lower than the national rate of 13 percent (U.S. Census Bureau 2010).

### 3.9.1.4 Protection of Children

EO 13045, *Protection of Children from Environmental Health and Safety Risks*, issued by President Clinton on April 21, 1997, requires federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. Children are present at Fort Belvoir as residents and visitors (e.g., family housing, schools, and use of recreational facilities). The Army takes precautions for their safety through a number of means, including, but not limited to, the use of fencing, limitations on access to certain areas, and provision of adult supervision.

### 3.9.2 Environmental Consequences

#### 3.9.2.1 Preferred Alternative

***EIFS Model Methodology.*** The economic effects of implementing the Preferred Alternative are estimated using the Economic Impact Forecast System (EIFS) model, a computer-based, economic tool that calculates multipliers to estimate the direct and indirect effects resulting from a given action. Changes in spending and employment caused by the renovation and construction of on-post lodging facilities represent the direct effects of the action. Using the input data and calculated multipliers, the model estimates ROI changes in sales volume, income, employment, and population, accounting for the direct and indirect effects of the action.

For purposes of this analysis, a change is considered significant if it falls outside the historical range of ROI economic variation. To determine that range, the EIFS model calculates a rational threshold value (RTV) profile for the ROI. This analytical process uses historical data for the ROI and calculates fluctuations in sales volume, income, employment, and population patterns. The historical extremes for the ROI become the thresholds of significance (i.e., the RTVs) for social and economic change. If the estimated effect of an action falls above the positive RTV or below the negative RTV, the effect is considered significant. Appendix D discusses this methodology in more detail and presents the model inputs and outputs developed for this analysis.

***EIFS Model Results.*** Short-term minor beneficial economic effects on the regional economy would be expected from implementation of the PAL Program. The expenditures and employment associated with the construction and renovation of Fort Belvoir lodging would increase ROI sales volume, employment, and income, as determined by the EIFS model (Table 3-8 and Appendix D). The economic benefits would last only for the duration of construction. These changes in sales volume, employment, and income would fall within historical fluctuations (i.e., within the RTV range) and would be considered minor.

**Table 3-8**  
**EIFS model output**

<b>Indicator</b>	<b>Projected change</b>	<b>Percentage change</b>	<b>RTV range</b>
Direct sales volume	\$9,374,000		
Induced sales Volume	\$17,154,420		
Total sales volume	\$26,528,420	0.01	-4.49% to 12.08%
Direct income	\$1,984,455		
Induced income	\$3,631,553		
Total income	\$5,616,008	0.00	-3.85% to 11.60%
Direct employment	41		
Induced employment	75		
Total employment	116	0.00	-2.92% to 3.42%
Local population	0	0.00	-0.72% to 1.19%

Source: EIFS model calculations.

Note: There would be minor beneficial effects on income and employment, as shown in the *Projected Change* column. Because of the size of the Preferred Alternative relative to the size of the ROI economy, and because the EIFS model only goes out to 2 decimal points, the change shows up as 0 in the *Percentage Change* column.

**Lodging.** Long-term minor beneficial effects on on-post lodging would occur. The availability of quality, on-post lodging facilities that meet government per diem rates is important to Soldiers and visitors when they are on TDY or PCS. It also is important to the installation to be able to accommodate Soldiers and guests in suitable lodging equal to that of lodging in the market sector. Under the Preferred Alternative, the development partner would renovate existing lodging and construct one new hotel to provide a sufficient number of on-post rooms to meet Fort Belvoir's lodging requirements as determined by the Army's market demand review. The installation would have renovated, modern lodging facilities with amenities preferred by today's travelers, such as Internet access and workout rooms, benefitting the quality of life of those who stay at the facilities. The preferred alternative would not increase the number of on-post lodging rooms, therefore no adverse effects would be expected on market sector lodging.

**Emergency services.** There would be no effect on law enforcement, fire protection, and emergency medical response. The proposed buildings and renovated buildings would be on Fort Belvoir property within the jurisdiction of the Fort Belvoir Directorate of Emergency Services, who would respond to emergencies at the proposed facilities as they do with existing facilities on the installation at a cost reimbursable basis to the development partner. The new lodging facilities would be built to installation design guidelines for height of structures and would have all of the safety equipment required by law (such as smoke alarms, fire alarms, sprinklers). The Preferred Alternative would not increase the number of on-post lodging rooms and therefore would not affect the demand for emergency services.

**Environmental Justice and Protection of Children.** No effects on environmental justice or the protection of children would be expected with implementation of the PAL Program. The Preferred Alternative of renovation and construction of lodging facilities on Fort Belvoir would not result in disproportionate adverse environmental or health effects on low-income or minority populations or children. The Preferred Alternative is not an action with the potential to substantially affect human health or the environment by excluding persons, denying persons benefits, or subjecting persons to discrimination.

### **3.9.2.2 No Action Alternative**

Long-term minor adverse effects would be expected on quality of life. Continuation of the present lodging programs would perpetuate deficiencies in quality of life for Soldiers, their families, and other personnel eligible to use Army lodging. The Army would continue to do regular maintenance on existing lodging, but these activities would be conducted on a constrained budget. In the absence of implementing the PAL program, the Army would forego opportunities to leverage private sector financing for the lodging function. Quality of life for personnel using lodging facilities would in all likelihood decline based on current funding levels.

## **3.10 TRANSPORTATION**

### **3.10.1 Affected Environment**

Transportation in and around Fort Belvoir is achieved mainly via road and street networks, pedestrian walks, trails and bike paths. The transportation system serves installation traffic consisting of everyday work, living, and recreations trips.

Fort Belvoir is approximately 14 miles southwest of Washington DC, 13 miles southeast of Fairfax, and 83 miles north of Richmond, Virginia. The closest Airport to Fort Belvoir is Davison

Army Airfield approximately two miles northwest of the cantonment area. Parking capacity at Fort Belvoir is appropriate for existing demand. Barracks and larger facilities have dedicated parking lots, and parallel parking is provided on many streets. Pedestrian traffic is accommodated by a system of sidewalks along many streets and walkways between buildings. Troop pathways are provided between foot traffic high-volume areas.

Today there are transportation challenges on roadways in and around Fort Belvoir during the A.M. and P.M. peak periods, as off-post roadways are congested and queues form at the gates for access into the installation. Local roadways include the Fairfax County Parkway and Route 1. Traffic tends to flow unimpeded in the off-peak direction of flow, except for turn lanes into Fort Belvoir. Further to the west is Interstate 95. Interstate 95 is congested during the morning and afternoon peak hours in the peak direction of flow, often up to three hours of congestion during each of the peak periods. During the off-peak hours, very little traffic congestion occurs on roadways off post.

The Fort Belvoir on-post road network primarily forms a gridded pattern with an adjunct circumferential system. Primary roadways link the gates with major facilities on-post. The roadways on Fort Belvoir are classified as primary, secondary, and tertiary. Primary roads serve as main arteries carrying traffic on and off the post and connecting the main portions of the installation. The inbound flow of traffic into Fort Belvoir is approximately 4,000 vehicles per hour during the morning peak hour of the cumulative daily flow of about 26,400 vehicles (14.7 percent of the daily flow). Tulley Gate is the most heavily used gate for South Post with more than 9,000 trips per day (representing 34 percent of the total trips) because it serves all visitors and is the southernmost gate on U.S. Route 1 and the Fairfax County Parkway. The Kingman Gate is the busiest gate for North Post with more than 5,000 trips per day (25 percent of the total trips) (USACE Mobile District 2007a). Often during the morning peak period, queues form at the gates as people wait to be checked. Sometimes traffic backs up onto U.S. Route 1.

### **3.10.2 Environmental Consequences**

#### **3.10.2.1 Preferred Alternative**

Short-term minor adverse effects would be expected. Construction vehicles would be scheduled and routed to minimize conflicts with other traffic. It is likely during these phases that construction vehicles and day labor traffic would have a minor adverse effect.

The small increase in lodging units would constitute an overall corresponding increase in trips of approximately 113 vehicles per day on post (ITE 2003). Many of these trips would occur at peak periods, and would account for some minute amount of on-post, off-post, and gate traffic. Regardless of the ultimate location, there would be increases in traffic near the new hotel of about 1,740 vehicles per day. These increases would be offset by traffic decreases at other locations near the facilities that are slated for demolition.

#### **3.10.2.2 No Action Alternative**

No effects on transportation resources would be expected because there would be no change to the road network or changes in traffic volume. Current and future traffic would remain as described in section 3.10.1.

### 3.11 UTILITIES

#### 3.11.1 Affected Environment

Fully functioning utility systems—including potable water supply and distribution, stormwater drainage, sanitary sewage collection and treatment, electrical power, natural gas supply and distribution, solid waste collection and disposal, and communications systems—are provided on Fort Belvoir at existing buildings. All utilities are available at the PAL parcels and are provided to existing buildings on the parcels.

#### 3.11.2 Environmental Consequences

##### 3.11.2.1 Preferred Alternative

No adverse effects on utilities would be expected from implementing the Preferred Alternative. Implementation of the PAL program at Fort Belvoir would result in a minor increase of lodging rooms, but the number of lodging buildings would decrease from 12 to five. Renovations to existing facilities and demolition of older buildings would be expected to increase the overall efficiency of the utility systems (with the installation of energy-efficient and low-usage utility systems, appliances, and fixtures) serving lodging facilities and could result in a decrease in utility demand from lodging. Existing utility systems are adequate to handle current and future anticipated demands from lodging facilities, and connections to existing utility systems are available at the proposed locations for a new lodging facility.

A long-term minor adverse effect on landfill capacity would be expected from the generation of debris from construction, demolition, and renovation of lodging facilities. A substantial amount of construction debris would be generated (Table 3-9). Implementing the Preferred Alternative would be expected to generate approximately 7,179 tons of construction and demolition (C&D) debris during the IDP. In compliance with the February 2006 memorandum from the Assistant Chief of Staff for Installation Management (ACSIM 2006), approximately half of the debris would be recycled, however, which would result in approximately 3,590 tons of nonhazardous C&D debris for disposal in landfills.

**Table 3-9**  
**Summary of C&D generation calculations**

Action	Debris generation (lbs/sq ft)	Debris from Preferred Alternative (lbs)	Debris from Preferred Alternative (tons)	Quantity recycled (50%) (tons)	Total quantity landfill disposed of (tons)
Renovation	20	5,600,200	2,800	1,400	1,400
Demolition	115	8,252,630	4,126	2,063	2,063
Construction	4.4	506,000	253	127	127

Note: More detailed calculations are provided in Appendix E  
Source: USEPA 1998

##### 3.11.2.2 No Action Alternative

No effects would be expected from implementing the No Action Alternative. No changes to utility systems would result if the No Action Alternative was implemented.

## **3.12 HAZARDOUS AND TOXIC SUBSTANCES**

### **3.12.1 Affected Environment**

Department of Defense (DoD) policy requires that the environmental condition of property be determined before any real property may be sold, leased, transferred, or acquired. In accordance with that policy, an Environmental Condition of Property (ECP) report was prepared for the sites included in the Preferred Alternative. The ECP report documents the physical and environmental condition of each property resulting from the past storage, use, release, and disposal of hazardous substances and petroleum products within or directly adjacent to the subject properties. Findings from the preparation of the ECP report are presented below.

#### **3.12.1.1 Polychlorinated biphenyls (PCBs)**

Multiple transformers were observed on the PAL parcels during visual site inspections (VSI). The transformers appeared to be in good condition, and no leaks or spills were observed. Installation records indicate that PCBs have not been released on the subject properties.

#### **3.12.1.2 Installation Restoration Program (IRP) and Solid Waste Management Units (SWMUs)**

Four former IRP sites are within or near Knadle Hall/Snow Loop (Parcel A), Fairfax Village (Parcel B), and Historic BOQs (Parcel D). The IRP sites are described below.

IRP Site 247-1 had three heating oil underground storage tanks (USTs) that served Building 247 approximately 90 feet from the southwestern corner of the proposed Knadle Hall/Snow Loop (Parcel A) site. The USTs were identified as UST 247A (1,000 gallon capacity), 247B (4,000 gallon capacity), and 247C (20,000 gallon capacity). Investigations determined that soil around the USTs had been impacted by petroleum contamination. On the basis of these findings USTs 247B and 247C were removed and 247A was closed in-place. Impacted soil was taken offsite for treatment and disposal, and the tanks were closed in January 1997. In 2005 installation personnel determined that the site was still impacted by residual contamination. A pump and treat system was installed in June 2005 and was operated until November 2007 after closure was achieved (Wallen 2010).

IRP Site 506-1 is directly east of Building 506 in Fairfax Village (Parcel B). This site was impacted by a petroleum release from UST 506A (No. 2 Heating Oil/3,000 gallons). The tank was closed in place, and the site was closed in 1997 (Wallen 2010).

IRP Site 508-1 is in the southern portion of Fairfax Village (Parcel B), directly south of Building 508. Based on information provided by Fort Belvoir, the soil in the vicinity of the site was impacted by a petroleum release from UST 508A (No. 2 Heating Oil/1,500 gallons). According to the installation the UST was removed. The site was closed in 1997 (Wallen 2010).

IRP Site 80-1 is between Buildings 80 and 81 on the Historic BOQs (Parcel D). According to the installation, IRP site 80-1 had two USTs, 80A (No.2 Heating Oil/1,000 gallons) and 81A (No. 2 Heating Oil/1,200 gallons), that served Buildings 80 and 81. Both USTs had releases that impacted soil. UST 80A was closed in place and UST 81A was removed from the site. Both sites were closed in 1997 (Wallen 2010).

No SWMUs are located within the boundaries of the six PAL parcels; however, six SWMUs are located near the western boundary of Fairfax village (Parcel B). The six SWMUs are located within the secured area of Fort Belvoir, known as the "300 Area", in the vicinity of Building 363 and its two adjoining storage buildings, 363A and 363B. Building 363 is 170 feet west of the southern portion of Parcel B. Based on review of installation records pertaining to the six SWMUs, no environmental impacts are anticipated from these sites during construction activities related to Parcel B; nevertheless, a brief description of each of the sites are provided below.

SWMU B-14, Building 363A Hazardous Waste Storage Area and SWMU B-15, Building 363C Hazardous Waste Storage Area, were both similarly described as three room indoor waste storage facilities for solvents, acids, and various other chemicals generated by various operations in the 300 Area. No releases were ever recorded at the two SWMUs. Both sites are currently scheduled to be closed through administrative closure reports, since the hazardous materials were removed from the two storage facilities a number of years ago, as well as there are no records of any type of releases occurring (Visual Site Inspection, 2008).

SWMU B-21, Room B100 in Building 363 Hazardous Waste Storage Area, was described as the basement room of Building 363 used from 1978 to 1988 used for storage of waste paints and pigments that contained lead and chromium. Building 363 was renovated in the 1990s, and converted to a building/landscaping maintenance center. This site is scheduled to be closed through a no further action closure letter that will be sent to EPA Region 3 for acceptance, since no documented releases ever occurred and all hazardous materials were removed from the site in 1988 (Visual Site Inspection, 2008).

SWMU B-22, Room 111 in Building 363, Waste Paint Storage Area, was described as a laboratory hood and storage cart that held waste paints used in tests and experiments. Waste storage began prior to 1986 and was discontinued in 1987. Building 363 has been renovated and turned into building/landscaping maintenance center. SWMU B-22 is scheduled to be closed through a no further action closure letter that, since the hazardous materials were removed from the site a number of years ago (Visual Site Inspection, 2008).

SWMU L-16, Building 363, Former Electroplating Room, was described as Room B-114 formerly used to manage waste from an electroplating operation in Building 363. The electroplating operation at this unit began in 1960 and ended in 1980 and included the use of a variety of chemicals and processes. During the 2008 VSI, Room B-114 was observed to contain offices, cubicles, and workspaces. SWMU L-16 is scheduled to be closed through a no further action closure letter, since all hazardous materials were removed from the site a number of years ago.

SWMU G-02, Building 363 Underground Waste POL Tank, is northwest of Building 363. According the February 2008 VSI, the tank was described as a 550-gallon metal, underground storage tank. The tank was used to store waste oil and other waste organics from 1960 to 1982. Douglass Environmental Services sampled, characterized, and disposed of the tank and contents in January 1993. The tank pit soil excavation was approximately 900 cubic feet. Final closure samples were collected and the analytical results were compared to site background sample concentrations. Statistical comparison between final closure and site background concentrations indicated that five constituents exhibited statistically significant concentrations in the final closure samples. A subsequent health-based risk assessment was carried out, which came up with the same conclusions as the statistical comparison. Fort Belvoir submitted the closure report requesting no further action to VDEQ in December 1996 and received a letter from the VDEQ

dated May 21, 1999, accepting clean closure at the site (Visual Site Inspection, 2008). Even though the site is considered closed by VDEQ, the installation must submit a closure letter requesting no further action to EPA Region 3 for acceptance, to formally close the site through Fort Belvoir's RCRA SWMU Program.

SWMU B-20, Building 363, Satellite Storage Area, is approximately 190 feet north of Building 363 and 75 feet west of Parcel B. According to the VSI, the SWMU was described as two storage units on a 6-foot by 10-foot concrete pad and an adjacent 40-foot by 15-foot concrete pad used as a RCRA 90-day waste-accumulation site and the storage of fuels in 55-gallon drums on wooden pallets or on a drum rack. The storage units became operational in 1982. Both pads were reported to be slightly stained, although there were no reports of spills or releases identified in the file information. During the February 2008 VSI, the site appeared to have been unused for at least several years. No active storage or accumulation was observed. No signs of contamination were observed. Signs indicating that the site is active were present, but the site was overgrown with vegetation. The site is surrounded by a chain link fence. SWMU B-20 is scheduled to be closed through a no further action closure letter, since the site has not been used for hazardous materials for at least 8 years and there are no reports of spills or releases identified in the file information.

SWMU L-19 is located approximately 140 feet west of Parcel B's northwestern boundary in Building 320, a former photo lab. According to the 2008 VSI, Building 320 was renovated approximately six to seven years ago. The building now is used for the Civilian Personnel Advisory Center. Before being renovated, there were four silver recovery buckets in Building 320 (SWMU L-19), used to recover silver from spent black-and-white photographic solutions. One unit was in the color print room, two were in the photo lab, and the fourth was inactive and located in the black-and-white photo lab. The spent solution was collected in 2.5-gallon containers before being discharged into the sanitary sewer (Visual Site Inspection, 2008). A closure report was submitted to VDEQ for no further action in 1999 and is currently pending closure by EPA through an administrative closure report that was submitted in August 2008.

Adjacent to Building 320 is SWMU B-23, described as a former metal freezer unit that was situated upon a concrete pad next to the building. The freezer was designated as a former waste storage unit for spent photographic chemical. However, both the freezer and pad were removed sometime in the 1980s or 1990s. No signs of staining or contamination were observed during the 2008 VSI and there are no recorded releases according to installation records (Visual Site Inspection, 2008). The SWMU B-23 is pending closure by EPA through an administrative closure report that was submitted in August 2008.

### **3.12.1.3 Storage tanks**

Knadle Hall/Snow Loop (Parcel A), Fairfax Village (Parcel B), and the Historic BOQs (Parcel D) have had USTs within their boundaries. Most of the USTs have been removed; however, some were closed in-place. Below is a brief summary of the USTs that were removed or closed in-place.

Prior to closure, UST 470A (No. 2 Heating Oil/7,000 gallons) and UST 470B (No. 2 Heating Oil/10,000 gallons) were approximately 70 feet from the southeastern corner of Building 470 in Parcel A. Both of the USTs were removed and closed in February 1994. Records do not indicate any petroleum releases from the former USTs.

Five former heating oil USTs within Fairfax Village (Parcel B), served heating and hot water boilers in Buildings 505 through 509. UST 505A (3,000 gallon capacity) was closed and removed from the site in August 1997. The UST was adjacent to the northeastern corner of Building 505. According to installation records, no releases are suspected (Wallen 2010).

Former UST 506A (3,000 gallon capacity) served heating and hot water boilers in Building 506. The UST is located directly east of Building 506. According to installation records, a release of product impacted the soil near the UST. UST 506A was closed in place and backfilled with concrete in August 1997. The area was backfilled with imported soil, and the site was closed in August 1997. Impacted soil was excavated and disposed of offsite (Wallen 2010). Residual contamination from this former UST could still be encountered during constructions activities if the soil near the area is disturbed.

Former UST 507A (1,500 gallon capacity) served heating and hot water boilers in Building 507. UST 507A was closed and removed in August 1997. The former UST was located towards the middle of the northern side of Building 507. According to the installation's records, there are no indications of any release of product, and no leaks or effects are suspected (Wallen 2010).

Former UST 508A (1,500 gallon capacity) served heating and hot water boilers in Building 508. Former UST 508A was closed and removed in August 1997. The former UST was located towards the middle of the southern side of Building 508 (Fort Belvoir GIS 2009). According to installation records, a release of product impacted the soil around the UST. The impacted soil was excavated and disposed of offsite. The area was backfilled with imported soil and the site was closed in August 1997. Residual contamination from the former UST could be encountered during constructions activities if the soil is disturbed (Wallen 2010).

Former UST 509A (1,500 gallon capacity) served heating and hot water boilers in Building 508. Former UST 509A was closed in place in August 1997. The former UST was located towards the middle of the eastern side of Building 509. According to the installations records, there are no indications of any release of product, and no leaks or effects are suspected (Wallen 2010).

Two former USTs are associated with Buildings 80 and 81, Historic BOQs (Parcel D). Both USTs 80A (1,000 gallon capacity) and 81A (1,200 gallon capacity) had documented releases that occurred underneath the BOQ's courtyard that impacted the soil locally (Fort Belvoir GIS 2009). Former UST 80A was closed in-place, while former UST 81A was removed along with approximately 35 cubic yards of impacted soil in April 1997. The site was then backfilled with imported soil. The sites were both closed together in November 1997 (Wallen 2010). Residual contamination from these two former USTs could be encountered during construction activities if the soil is disturbed.

#### **3.12.1.4 Munitions and Explosives of Concern (MEC)**

Existing records and available information from Fort Belvoir provide no evidence that MECs are present on the subject properties. Parcels A and G are on former training areas, but these areas were historically used for training/maneuvers and not for live munitions training. Parcel A is on the former *Entrenchment and Gas School* range. Virginia DEQ has issued a letter documenting no further action is necessary for the former range site on Parcel A. Parcel G is located on former range T-15, a small arms/training range; however, there are no records or evidence of small arms ever being used at T-15, and if they were, blank ammunition would have presumably been used.

Range T-15 also is documented by VDEQ letter that no further action is necessary (Kivimaki 2010).

Because this project is located on a military installation; there is a potential for encountering MEC. In the event the Lessee or any person associated with the project should encounter or suspect they have encountered MEC on the project, they shall not attempt to disturb, remove or destroy it, but shall cease any intrusive or ground disturbing activities being conducted at the project and immediately notify the installation police and Fort Belvoir's Provost Marshall's Office.

### **3.12.1.5 Pesticides**

Fort Belvoir has an Integrated Pesticide Management Plan (IPMP) that covers the storage and application of pesticides. The IPMP is performed in accordance with the U.S. Army's Integrated Pest Management techniques. The IPMP is intended to reduce the use of pesticides. On the Main Post, pesticides are stored in industrial areas on the South Post and the North Post golf courses and are either DoD certified or certified by Virginia as *Commercial Applicators*. Eighty percent of the pesticides applied on Fort Belvoir are on the golf courses (USACE Mobile District 2007a).

### **3.12.1.6 Lead-based Paint (LBP)**

The following buildings are known or presumed to contain LBP based on their pre-1978 construction dates: Building 470, Knadle Hall (Parcel A); Buildings 505 and 506, Fairfax Village (Parcel B); Buildings 806 and 807, PCS Family Suites (Parcel C); and Buildings 80 and 81, Historic BOQs (Parcel D) (Jones Lange LaSalle 2007). During the VSI, flaking and bubbling paint was observed throughout the interior lodging units of Building 470, Knadle Hall/Snow Loop (Parcel A); Buildings 505 and 506, Fairfax Village (Parcel B); and Buildings 80 and 81, Historic BOQs (Parcel D). Flaking paint from the exterior window frames, pillars near the main entrances, and doors was visually observed on the bare ground around the majority of both Buildings 80 and 81, Historic BOQs (Parcel D). Some remediation/ abatement/encapsulation may have occurred, but none of these buildings are 100 percent remediated or 100 percent surveyed.

### **3.12.1.7 Mold**

Mold typically grows on common interior and exterior building components that are chronically moist or water-damaged. Historically, mold has been an issue in the older lodging. Mold was observed in the following buildings during the VSI; Building 470, Knadle Hall/Snow Loop (Parcel A); Buildings 505 and 506, Fairfax Village (Parcel B); and Buildings 80 and 81, Historic BOQs (Parcel D).

### **3.12.1.8 Asbestos-containing material (ACM)**

An asbestos survey of various facilities was conducted by Dewberry & Davis, Inc., in 1989 to determine the presence of asbestos containing materials (ACM) in the facilities located on Fort Belvoir. In December 1994, Dewberry & Davis, Inc. conducted a field verification survey to verify the ACM identified in the 1989 asbestos survey (Jones Lange LaSalle 2007). During the 1994 verification survey, basement floor tiles in Building 470, Knadle Hall (Parcel A), and the basement boiler room of Building 505 in Fairfax Village (Parcel B) were found to have ACM requiring abatement. The ACM was abated directly after the survey. Low friability ACM was found in the fire doors, floor tiles, some fixture paper, and transite board in Buildings 505 and

506 (Parcel B); 806 and 807 (Parcel C); and Buildings 80 and 81 (Parcel D). However, the samples contained low levels of chrysotile, and were deemed low-risk and low friability, so no abatement has taken place (Jones Lange LaSalle 2007). As long as the ACM, actual or potential, remains non-friable, it does not pose a significant health risk. Because the ACM identified at the installation has not been released into the soil, groundwater, or air, it would not affect the environmental condition of the subject properties. Buildings 507, 508 and 509 (Parcel B) have undergone total renovations in the last 10 years and are deemed asbestos-free (Jones Lange LaSalle 2007).

### **3.12.1.9 Radon**

Fort Belvoir is located in Fairfax County, which is classified as a high radon potential zone by the USEPA. Existing subject properties could have a theoretical average indoor radon screening level greater than 4 picocuries per liter (USEPA 2010b). Radon testing for existing Fort Belvoir residential buildings was completed in 1991. Only three residential buildings (Building 140 in Gerber Village, Building 174 adjacent to Gerber Village, and Building 810F in Colyer Village) exhibited any elevated radon levels (above 4 picocuries per liter). No testing has been done for new or renovated buildings since 1992 (USACE Mobile District 2007a).

## **3.12.2 Environmental Consequences**

### **3.12.2.1 Preferred Alternative**

Short-term minor adverse effects would be expected if residual contamination was encountered during site clearing or excavation activities associated with implementing the Preferred Alternative. Some of the PAL sites have been impacted by petroleum contamination. Each site has been investigated and closed; however, the potential for residual soil contamination exists. The contractor would immediately stop work and notify appropriate installation personnel for appropriate management. The resulting delay would result in a short-term minor adverse effect. No effects to site workers would be expected because they will be required to work under the requirements of a project-specific health and safety plan.

Asbestos-containing material and LBP would be characterized and disposed of in accordance with applicable federal, state, and local solid waste management regulations. Additionally, Army policy calls for controlling LBP by using in-place management rather than mandated removal procedures. In-place management is used to prevent deterioration over time of those surfaces likely to contain LBP, followed by replacement as necessary. LBP would be encapsulated and removed in accordance with Army, Housing and Urban Development, and Occupational Safety and Health Administration guidelines, which cover contractor training, notification requirements, use of personal protective equipment, and approved disposal methods.

No additional adverse effects on hazardous and toxic substances would be expected from implementing the Preferred Alternative. Hazardous and toxic substances would be managed in accordance with established installation and regulatory requirements.

### **3.12.2.2 No Action Alternative**

No adverse environmental or health effects related to the use, disposal, or storage of hazardous or toxic materials would be expected from the No Action Alternative.

### 3.13 CUMULATIVE EFFECTS SUMMARY

No significant adverse cumulative effects would be expected from implementing the Preferred Alternative at Fort Belvoir. For all resource areas analyzed in the EA, the Preferred Alternative would be expected to have no worse than minor adverse effects. The scope of the activities proposed under the PAL program implementation—including building renovation, demolition of some individual buildings, and construction of one hotel—would not be large, and most effects would be concentrated in and confined to Fort Belvoir’s cantonment area and to the 5-year IDP.

Minor beneficial cumulative socioeconomic effects would be expected from implementing the PAL program at Fort Belvoir. In addition to the Preferred Alternative, other economic development projects would have short- and long-term beneficial effects on the local economy by increasing employment, income, and business sales volume. Principal among these other projects is Base Realignment and Closure construction on Fort Belvoir. Commercial, residential, and infrastructure development or improvements occurring in the ROI also would contribute to cumulative effects.

Implementing the PAL action would render two buildings that are currently used at Fort Belvoir as lodging, Building 172 and Building 20, idle. After PAL implementation at Fort Belvoir, the Army would find an appropriate use for Building 172 and would incorporate the lodging in Building 20 into the Officer’s Club general operations.

### 3.14 MITIGATION SUMMARY

Mitigation actions are used to reduce, avoid, or compensate for significant adverse effects. Although the EA does not identify any significant adverse effects on human health or the environment, potentially significant adverse effects of implementing the proposed action would be avoided by implementing certain mitigation measures, as described below.

**Wetlands.** Significant impacts on wetlands would be avoided, minimized, or mitigated. As required, a jurisdictional determination of wetlands would be performed before any ground disturbance on the PAL parcels. If necessary, the Army would obtain a Section 404 permit from the U.S. Army Corps of Engineers and a Virginia Water Protection Permit and any mitigation required under the permits for wetland loss or impacts on water resources would be performed.

**Endangered species.** The potential exists for the small whorled pogonia, a federally endangered species of plant, to exist on the slopes near PAL Parcels A, C, and D. The Army would perform a survey for the species before any ground disturbance and would take measures to protect any plants found. Fort Belvoir would perform any necessary coordination with the USFWS.

**Cultural resources.** Section 106 of the NHPA (as implemented under 36 CFR 800, *Protection of Historic Properties*) defines the “Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure the long-term preservation of the property’s historic significance” as an adverse effect. Fort Belvoir has entered into a PA outlining the adequate restrictions and conditions necessary to ensure the preservation of the historic properties being leased under the PAL program. A copy of the PA is found in Appendix G. The restrictions and conditions in the PA will be made legally enforceable through incorporation of the PA into lease agreement with Rest Easy.

Measures to protect the resources of Fort Belvoir would also be undertaken in accordance with existing Fort Belvoir policies, as described below.

**Tree replacement.** Fort Belvoir would adhere to its natural resources management policies with respect to tree removal and replacement, as specified in the INRMP, including compliance with Fort Belvoir's two-to-one tree replacement policy. Any tree of 4 inches or more in diameter (at *breast height*) removed in the course of implementing the PAL program would be replaced with two native trees that provide habitat value for wildlife on Fort Belvoir property.

**PIF habitat.** Development on Parcel G would be conducted in accordance with management guidelines in the Fort Belvoir INRMP for PIF species, Fort Belvoir would coordinate with VDGIF regarding PIF species to avoid unnecessary impacts on priority species, and the installation would compensate for any loss of PIF priority species habitat on the parcel. After new construction was completed, native species of trees and shrubs that provide benefits to wildlife would be used to replace and trees lost during construction, in accordance with Fort Belvoir's two-to-one tree replacement policy (see above).

**Breeding birds.** A breeding bird survey would be performed on PAL Parcels A and G to determine usage before any clearing would be performed. Construction would be timed to avoid impacts on breeding birds

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## SECTION 4.0 CONCLUSIONS

This EA has been prepared to evaluate the potential effects on the natural and human environment from the proposal to implement the PAL program at Fort Belvoir, Virginia. The EA examines the Preferred Alternative and a No Action Alternative. The No Action Alternative is prescribed by CEQ regulations to serve as the baseline against which the Preferred Alternative and other alternatives are analyzed.

This EA evaluates potential short- and long-term effects on land use, aesthetic and visual resources, air quality, noise, geology and soils, water resources, biological resources, cultural resources, socioeconomics (including environmental justice and protection of children), transportation, utilities, and hazardous and toxic substances.

Implementing the Preferred Alternative would be expected to result in a combination of short- and long-term minor adverse and beneficial effects. No effects would be expected on land use, cultural resources, or hazardous and toxic materials.

*Short-term minor adverse effects* on aesthetics and visual resources, air quality, noise, soils, surface and groundwater, biological resources, transportation, and hazardous and toxic materials would be expected, primarily associated with construction and renovation activities.

*Long-term minor adverse effects* would be expected on air quality (from operational emissions), water resources (from new impervious areas), and on utilities (from the consumption of landfill capacity).

*Long-term minor beneficial effects* on aesthetics and visual resources and socioeconomics would be expected from the overall improved quality of the lodging facilities. Long-term minor beneficial effects on surface and ground waters would result from increased stormwater infiltration on any areas converted from an impervious to a pervious surface.

Mitigation actions are used to reduce, avoid, or compensate for significant adverse effects. The EA does not identify any significant adverse effects on human health or the environment; however, potential adverse effects of implementing the proposed action would be avoided by implementing certain mitigation measures, as listed below.

- The Army or its proponent would perform a jurisdictional determination of wetlands on Parcel A, and on any other parcel as necessary, before any ground disturbance.
- The Army or its proponent would implement and strictly adhere to applicable state and local erosion and sediment control/stormwater management laws and regulations to protect water quality in streams on and near the PAL parcels.
- The Army or its proponent would survey for the small whorled pogonia, a federally endangered plant species, on PAL Parcels A, C, and D before any ground disturbance.
- A PA between Fort Belvoir and the Virginia SHPO has been developed. It outlines methods by which important cultural resources will be protected during the lease period and will become part of the lease agreement with Rest Easy. The assessment of impacts on cultural resources in the EA and this FNSI together constitute compliance with the National Historic Preservation Act in accordance with 36 CFR 800.8(c).

- In accordance with Fort Belvoir's two-to-one tree replacement policy, the Army or its proponent would replace any tree of 4 inches or more in diameter (*at breast height*) removed in the course of implementing the PAL program with two native trees to provide habitat value for wildlife on Fort Belvoir property.
- Fort Belvoir would coordinate with the Virginia Department of Game and Inland Fisheries regarding PIF species to avoid unnecessary impacts on priority species on Parcel G, and the installation would compensate for any loss of PIF priority species habitat on the parcel.
- The Army or its proponent would perform a breeding bird survey on PAL Parcels A and G to determine usage before any clearing would be performed. Construction would be timed to avoid impacts on breeding birds.

For each resource, the predicted effects from both the Preferred Alternative, identified as the Army's Preferred Alternative, and the No Action Alternative are summarized in Table 4-1.

Implementing the Preferred Alternative would not be expected to result in significant environmental or socioeconomic effects. Issuance of a FNSI would be appropriate, and an environmental impact statement need not be prepared before implementing the Preferred Alternative.

**Table 4-1**  
**Summary of potential environmental and socioeconomic consequences**

Resource	Environmental and socioeconomic effects	
	Preferred Alternative	No Action Alternative
Land use	No effect	No effect
Aesthetic and visual resources	Short-term minor adverse Long-term minor beneficial	Long-term minor adverse
Air quality	Short- and long-term minor adverse	No effect
Noise	Short-term minor adverse	No effect
Geology and Soils	Short-term minor adverse	No effect
Water resources	Short- and long-term minor adverse Long-term minor beneficial	No effect
Biological resources	Short-term minor adverse	No effect
Cultural resources	No effect	No effect
Socioeconomics	Short- and long-term minor beneficial	Long-term minor adverse
Transportation	Short-term minor adverse	No effect
Utilities	Long-term minor adverse	No effect
Hazardous and toxic substances	Short-term minor adverse	No effect

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The Virginia Conservation Network  
422 East Franklin Street, Suite 303  
Richmond, VA 23219

The Reverend Travis Hilton  
Woodlawn Baptist Church  
9001 Richmond Highway  
Alexandria, VA 22309

Ms. Laurie Ossman  
Executive Director  
Woodlawn Plantation and Frank Lloyd  
Wright's Pope Leighey House  
P.O. Box 15097  
Mt. Vernon, VA 22309

#### **Libraries**

Mr. Daniel Sadowitz - Director  
Fort Belvoir Van Noy Library  
Building 1024  
5966 12th Street  
Fort Belvoir, VA 22060

Ms. Kathryn Hoffman - Branch Manager  
Fairfax County Public Library  
City of Fairfax Regional Branch  
10360 North Street  
Fairfax, VA 22030-2514

Ms. Kathryn Alleman - Branch Manager  
Fairfax County Public Library  
John Marshall Branch  
6209 Rose Hill Drive  
Alexandria, VA 22310-6299

Mr. Ted Kavich - Branch Manager  
Fairfax County Public Library  
Kingstowne Branch  
6500 Landsdowne Centre  
Alexandria, VA 22315-5100

Branch Manager  
Fairfax County Public Library  
Lorton Branch  
9520 Richmond Highway  
Lorton, VA 22079-2124

Branch Manager  
Fairfax County Public Library  
Richard Byrd Branch  
7250 Commerce Street  
Springfield, VA 22150-3499

Ms. Denise Morgan - Branch Manager  
Fairfax County Public Library  
Sherwood Regional Branch  
2501 Sherwood Hall Lane  
Alexandria, VA 22306-2799

Branch Manager  
Prince William County Public Library  
Lake Ridge Neighborhood Library  
12964 Harbor Drive  
Woodbridge, VA 22192-2930

Branch Manager  
Prince William County Public Library  
Chinn Park Regional Library  
13065 Chinn Park Drive  
Prince William, VA 22192-5073

**APPENDIX A**  
**Agency Consultation Letters**

*(Note: The figure that follows the first letter was an enclosure sent each of the first three letters.)*

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**TETRA TECH**

September 7, 2010

Ms. Tylan Dean  
Assistant Field Office Supervisor  
U.S. Fish and Wildlife Service  
6669 Short Lane  
Gloucester, VA 23061

RE: Request for concurrence and notification of the preparation of an Environmental Assessment for the proposed Privatization of Army Lodging at Fort Belvoir, Virginia

Dear Ms. Dean:

The U.S. Army is preparing an Environmental Assessment for the implementation of the Privatization of Army Lodging (PAL) program at Fort Belvoir, Virginia. The purpose of the EA is to evaluate the potential effects on the natural and human environment associated with implementation of the PAL program, which will privatize the management, operation, and maintenance of lodging facilities at Fort Belvoir. All proposed activities would take place within the Installation's cantonment area (see attached map).

Under the proposed PAL action, Fort Belvoir would convey the existing lodging buildings to a private development company to provide affordable, quality lodging facilities by both replacing and improving existing lodging facilities. Fort Belvoir has 11 lodging buildings with a total of 526 lodging units, and a small increase in the number of on-post lodging units to 539 units is anticipated as a result of implementing the PAL action at Fort Belvoir. The initial development plan would be implemented over a 5-year period beginning in 2011. The Army would grant the private developer a 50-year lease of underlying land. The developer would be expected to meet Fort Belvoir's lodging requirements through operation and maintenance of the existing facilities, as well as by renovating inadequate facilities and constructing new ones, during the 50-year lease.

We are requesting your concurrence with a finding of no significant impact with respect to the proposed action's effects on resources of concern to the U.S. Fish and Wildlife Service. If you do not agree with our finding of no significant impact, please send any information you have that supports a finding of a significant effect.

For your reference, the affected PAL footprint parcels are depicted on the attached map. Note that a new hotel facility would be constructed on either Parcel A (the preferred location) or Parcel G, but not on both. Existing facilities on the other parcels, including Knadle Hall on Parcel A, would be renovated only. Some demolition of existing facilities would occur as new facilities come into service.

Thank you in advance for your cooperation in this matter. Your prompt consideration and response is greatly appreciated. Please provide any issues you feel the Army should address in its EA to Sam Pett, Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030; via e-mail at sam.pett@tetratech.com; or via fax at (703) 385-6007 Attention: Sam Pett.

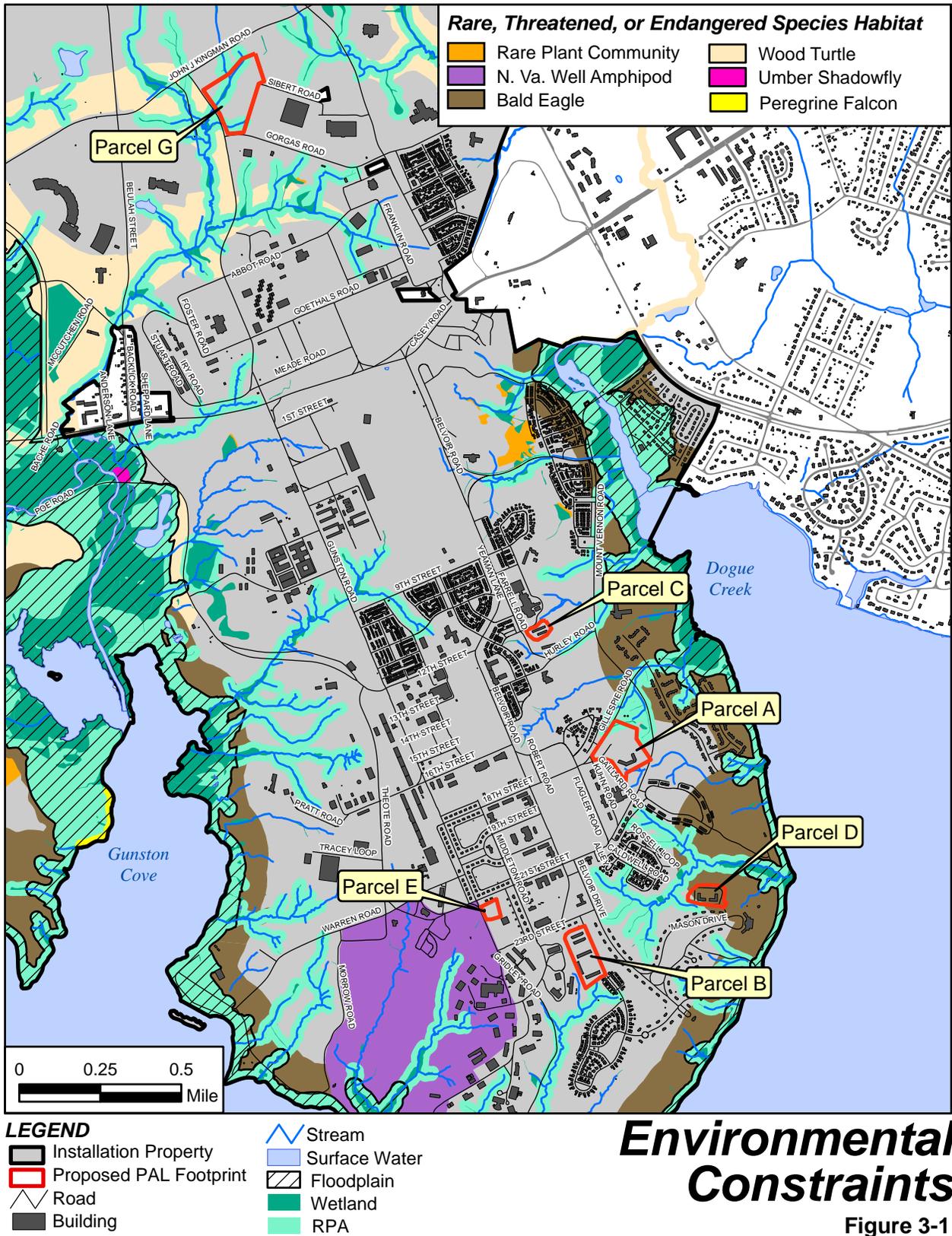
Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Pett", with a long horizontal flourish extending to the right.

Samuel Pett  
Tetra Tech, Inc.

Enclosure: Site map, showing environmental constraints

cc: Patrick M. McLaughlin, Chief, Environmental and Natural Resources Division  
Dorothy Keough, Branch Chief, Natural Resources Branch  
Marcia Kicos, Branch Chief, Environmental Protection Branch



Source: Fort Belvoir GIS, 2009.



**TETRA TECH**

September 7, 2010

Mr. Andy Zadnik  
Wildlife Diversity Division  
Virginia Department of Game and Inland Fisheries  
4010 West Broad Street  
Richmond, VA 23230

RE: Request for concurrence and notification of the preparation of an Environmental Assessment for the proposed Privatization of Army Lodging at Fort Belvoir, Virginia

Dear Mr. Zadnik:

The U.S. Army is preparing an Environmental Assessment for the implementation of the Privatization of Army Lodging (PAL) program at Fort Belvoir, Virginia. The purpose of the EA is to evaluate the potential effects on the natural and human environment associated with implementation of the PAL program, which will privatize the management, operation, and maintenance of lodging facilities at Fort Belvoir. All proposed activities would take place within the Installation's cantonment area (see attached map).

Under the proposed PAL action, Fort Belvoir would convey the existing lodging buildings to a private development company to provide affordable, quality lodging facilities by both replacing and improving existing lodging facilities. Fort Belvoir has 11 lodging buildings with a total of 526 lodging units, and a small increase in the number of on-post lodging units to 539 units is anticipated as a result of implementing the PAL action at Fort Belvoir. The initial development plan would be implemented over a 5-year period beginning in 2011. The Army would grant the private developer a 50-year lease of underlying land. The developer would be expected to meet Fort Belvoir's lodging requirements through operation and maintenance of the existing facilities, as well as by renovating inadequate facilities and constructing new ones, during the 50-year lease.

We are requesting your concurrence with a finding of no significant impact with respect to the proposed action's effects on resources of concern to the Virginia Department of Game and Inland Fisheries. If you do not agree with our finding of no significant impact, please send any information you have that supports a finding of a significant effect.

For your reference, the affected PAL footprint parcels are depicted on the attached map. Note that a new hotel facility would be constructed on either Parcel A (the preferred location) or Parcel G, but not on both. Existing facilities on the other parcels, including Knadle Hall on Parcel A, would be renovated only. Some demolition of existing facilities would occur as new facilities come into service.

Tetra Tech, Inc.  
10306 Eaton Place, Suite 340, Fairfax, VA 22030  
Tel 703.385.6000 Fax 703.385.6007 www.tetrattech.com www.ttwater.com

Thank you in advance for your cooperation in this matter. Your prompt consideration and response is greatly appreciated. Please provide any issues you feel the Army should address in its EA to Sam Pett, Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030; via e-mail at sam.pett@tetratech.com; or via fax at (703) 385-6007 Attention: Sam Pett.

Sincerely,

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Samuel Pett  
Tetra Tech, Inc.

Enclosure: Site map, showing environmental constraints

cc: Patrick M. McLaughlin, Chief, Environmental and Natural Resources Division  
Dorothy Keough, Branch Chief, Natural Resources Branch  
Marcia Kicos, Branch Chief, Environmental Protection Branch



**TETRA TECH**

September 7, 2010

Ms. René Hypes  
Virginia Department of Conservation and Recreation  
Division of Natural Heritage  
217 Governor St. Suite 312  
Richmond, VA 23219

RE: Request for concurrence and notification of the preparation of an Environmental Assessment for the proposed Privatization of Army Lodging at Fort Belvoir, Virginia

Dear Ms. Hypes:

The U.S. Army is preparing an Environmental Assessment for the implementation of the Privatization of Army Lodging (PAL) program at Fort Belvoir, Virginia. The purpose of the EA is to evaluate the potential effects on the natural and human environment associated with implementation of the PAL program, which will privatize the management, operation, and maintenance of lodging facilities at Fort Belvoir. All proposed activities would take place within the Installation's cantonment area (see attached map).

Under the proposed PAL action, Fort Belvoir would convey the existing lodging buildings to a private development company to provide affordable, quality lodging facilities by both replacing and improving existing lodging facilities. Fort Belvoir has 11 lodging buildings with a total of 526 lodging units, and a small increase in the number of on-post lodging units to 539 units is anticipated as a result of implementing the PAL action at Fort Belvoir. The initial development plan would be implemented over a 5-year period beginning in 2011. The Army would grant the private developer a 50-year lease of underlying land. The developer would be expected to meet Fort Belvoir's lodging requirements through operation and maintenance of the existing facilities, as well as by renovating inadequate facilities and constructing new ones, during the 50-year lease.

We are requesting your concurrence with a finding of no significant impact with respect to the proposed action's effects on resources of concern to the Virginia Department of Conservation and Recreation. If you do not agree with our finding of no significant impact, please send any information you have that supports a finding of a significant effect.

For your reference, the affected PAL footprint parcels are depicted on the attached map. Note that a new hotel facility would be constructed on either Parcel A (the preferred location) or Parcel G, but not on both. Existing facilities on the other parcels, including Knadle Hall on Parcel A, would be renovated only. Some demolition of existing facilities would occur as new facilities come into service.

Tetra Tech, Inc.  
10306 Eaton Place, Suite 340, Fairfax, VA 22030  
Tel 703.385.6000 Fax 703.385.6007 www.tetrattech.com www.ttwater.com

Thank you in advance for your cooperation in this matter. Your prompt consideration and response is greatly appreciated. Please provide any issues you feel the Army should address in its EA to Sam Pett, Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030; via e-mail at sam.pett@tetratech.com; or via fax at (703) 385-6007 Attention: Sam Pett.

Sincerely,

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Samuel Pett  
Tetra Tech, Inc.

Enclosure: Site map, showing environmental constraints

cc: Patrick M. McLaughlin, Chief, Environmental and Natural Resources Division  
Dorothy Keough, Branch Chief, Natural Resources Branch  
Marcia Kicos, Branch Chief, Environmental Protection Branch



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Ecological Services  
6669 Short Lane  
Gloucester, Virginia 23061

SEP 27 2010

Greetings:

Due to increases in workload and refinement of our priorities in Virginia, this office will no longer provide individual responses to requests for environmental reviews. However, we want to ensure that U.S. Fish and Wildlife Service (Service) trust resources continue to be conserved. When that is not possible, we want to ensure that impacts to these important natural resources are minimized and appropriate permits are applied for and received. We have developed a website, [http://www.fws.gov/northeast/virginiafield/endspecies/Project\\_Reviews.html](http://www.fws.gov/northeast/virginiafield/endspecies/Project_Reviews.html), that provides the steps and information necessary to allow landowners, applicants, consultants, agency personnel, and any other individual or entity requiring Service review / approval of their project to complete a review and come to the appropriate conclusion.

The website will be frequently updated to provide new species / trust resource information and methods to review projects, so refer to the website for each project review to ensure that current information is utilized.

If you have any questions about project reviews or need assistance, please contact Tylan Dean of this office at (804) 693-6694, extension 166, or [tylan\\_dean@fws.gov](mailto:tylan_dean@fws.gov). For problems with the website, please contact Mike Drummond of this office at [mike\\_drummond@fws.gov](mailto:mike_drummond@fws.gov).

Sincerely,

Cindy Schulz  
Supervisor  
Virginia Field Office

**From:** [nhreview \(DCR\)](#)  
**To:** [Pett, Sam](#)  
**Subject:** EA for Privatization of Army Lodge, Fort Belvoir, VA  
**Date:** Thursday, September 09, 2010 12:05:24 PM  
**Attachments:** [info\\_order\\_form.pdf](#)

---

Mr. Pett,

We have received the project review request for EA for Privatization of Army Lodge, Fort Belvoir, VA. In order to process this request we require a completed information services order form. I have attached a copy of this form for your convenience and you may return the completed form via email, fax or hardcopy. Once we receive the completed form we will begin our 30 day review process. Please feel free to contact me if you have any questions.

Thank you,

Lindsey Adkins  
DCR-DNH  
Project Review Assistant  
804-225-2821

<<info\_order\_form.pdf>>



Department of Conservation & Recreation  
 CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

**INFORMATION SERVICES ORDER FORM**

Updated 1/09



Print out and fill in this form and mail to:

**Project Review Coordinator**  
**DCR Division of Natural Heritage**  
**217 Governor St.**  
**Richmond, VA 23219**  
**Voice: 804-371-2708 Fax: (804) 371-2674**  
**[nhreview@dcr.virginia.gov](mailto:nhreview@dcr.virginia.gov)**

**ENVIRONMENTAL REVIEW SERVICES:**

**Project Review** (30 calendar day turnaround)..\$90 per site; add \$35 for 1-5 natural heritage occurrences (rare plants, rare animals, significant communities and karst) and \$60 for 6 or more occurrences.  
 Multi-quad project area \$90 per quad.

\_\_\_ **Project Review with Accompanying Map**...\$250 per site; for projects with potential impact to Natural Heritage Resources, written comments with 8.5 X 11 map displaying Natural Heritage Screening Coverage.

\_\_\_ **Priority Service** (5 business day turnaround)..\$500 surcharge

**Details:** Describe project in the space below, please include detailed project description, project location information, acreage, and existing site conditions (photographs if available). Fax additional information as necessary. In order to ensure an accurate assessment, please **fax a site map** (preferably from a USGS topo map with identified project boundaries) to: **Environmental Review Coordinator @ (804) 371-2674**. Or you may send electronic copies of **all** information to [nhreview@dcr.virginia.gov](mailto:nhreview@dcr.virginia.gov). **Incomplete submittal of information will delay the review process.**

The description of the proposed action from the draft environmental assessment (attached) provides a complete description of the proposed project, as well as an overall site map showing all six parcels, maps of the individual parcels, and photographs of the facilities now on Parcels A–E (Parcel G currently has no facilities). Briefly, six parcels of land will be used for Army lodging on Fort Belvoir. For the purposes of this review, assume construction of a new hotel on both Parcels A and G. Facilities on Parcels B, C, D, and E will receive interior renovations, and minor exterior renovations that will involve very little ground disturbance (sign installation, etc.).

**Natural Heritage Resource Reports & Distribution Maps**

\_\_\_ Custom NHR Maps (describe, call for more information).....\$80/hour

\_\_\_ Custom NHR Reports (describe, call for more information).....\$60/hour



Department of Conservation & Recreation  
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

**INFORMATION SERVICES ORDER FORM**  
Updated 1/09



**SUBSCRIPTION SERVICES:**

**Natural Heritage Data Explorer Subscription Service**

\_\_\_(unlimited access per subscription year, complete a [digital license agreement](#)).....\$1000/yr.

**Digital Conservation Sites Subscription Service** (specify area of interest; complete a [digital license agreement](#))

\_\_\_ Less than 1 county or 12 quads).....\$1000/yr.

\_\_\_ 13-100 quads.....\$3500/yr.

\_\_\_ Statewide coverage.....\$6000/yr.

Please provide details in the space below: (failure to provide information will delay subscription processing)

**Conditions:**

1. Digitized DCR natural heritage resource locational data for GIS or map production, whether provided by DCR digitally or entered by the client from tables or reports, may not be used without first completing a data licensing agreement with DCR Division of Natural Heritage. A license form is available on request.
2. Although DCR-DNH data are closely quality controlled, DCR-DNH makes no warranty as to the fitness of the data for any purpose.
3. Any publication of data provided by DCR, whether as text, table or map, must acknowledge Virginia DCR-Natural Heritage Program, and include the date the data were provided by DCR.

(DCR 199-005) (1/09)



Department of Conservation & Recreation  
 CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

**INFORMATION SERVICES ORDER FORM**

Updated 1/09



4. If fees are assessed, an invoice will be included with the response. **Please do not pre-pay.**  
 Payment is due within 30 days of receipt. **Minimum charge for hourly fees is \$60.**

I understand and agree to the above conditions:  **Yes (Required for Fee Services)**

**PUBLICLY AVAILABLE PRODUCTS**

DCR maintains lists of natural heritage resources monitored by the Natural Heritage Program. These lists provide information on taxonomy, rarity and federal/state legal statuses. These reports are not site specific and are **NOT** to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

Due to staff and budget constraints we ask that you use the online service whenever possible to download these lists of natural heritage resources:

     [Natural Heritage Resources of Virginia: Rare Animals \(PDF\)](#)

     [Natural Heritage Resources of Virginia: Rare Plants \(PDF\)](#)

County lists of natural heritage resources can be generated using the Internet Database Search Tool:

[County Lists of Natural Heritage Resources](#)

**Send data and invoice (if applicable) to:** (Please be sure to include a phone number so we may contact you if we have any questions regarding your data needs)

Samuel Pett

Name: \_\_\_\_\_

Tetra Tech, Inc.

Company: \_\_\_\_\_

10306 Eaton Place, Ste 340

Address: \_\_\_\_\_

City/State/Zipcode: Fairfax VA 22030-2201

sam.pett@tetratech.com

Email: \_\_\_\_\_

Phone: 703-385-6000 FAX: 703-385-6007 Taxpayer ID#: \_\_\_\_\_

1 **SECTION 2.0**  
2 **ALTERNATIVES**

3 **2.1 INTRODUCTION**

4 The Army proposes to implement the PAL program at Fort Belvoir. This is the Army’s Preferred  
5 Alternative. The Army would convey specified lodging facilities to Rest Easy. The Army would  
6 also grant a 50-year lease of the land underlying the existing facilities, as well as other land for  
7 construction of new lodging facilities. Rest Easy would be expected to meet Fort Belvoir’s  
8 lodging requirements by operating and maintaining the existing facilities, as well as renovating  
9 inadequate facilities and constructing new ones.

10 Implementing the PAL program at Fort Belvoir would entail constructing new lodging facilities  
11 and renovating existing facilities. When siting facilities, garrison commanders take into account  
12 the following criteria: availability of developable land, consistency with the land use allocations  
13 of the installation’s master plan, compatibility with adjacent functions, proximity to relevant  
14 community services (e.g., Commissary, Post Exchange [PX], and recreation and entertainment  
15 venues), and avoidance of evident environmental issues (e.g., protected species, cultural  
16 resources, past hazardous waste sites, and the like). Fort Belvoir officials also gave substantial  
17 weight to the proximity of new lodging facilities to existing lodging facilities and their required  
18 support functions to enable efficient and cost-effective management of operations. These criteria  
19 resulted in the siting locations identified in Figure 2-1.

20 This section presents the Preferred Alternative and the No Action Alternative. It also identifies  
21 alternatives considered, but eliminated from detailed study.

22 **2.2 NO ACTION ALTERNATIVE**

23 Inclusion of the No Action Alternative, prescribed by CEQ regulations, serves as a baseline  
24 against which the impacts of the Preferred Alternative and other alternatives can be evaluated.

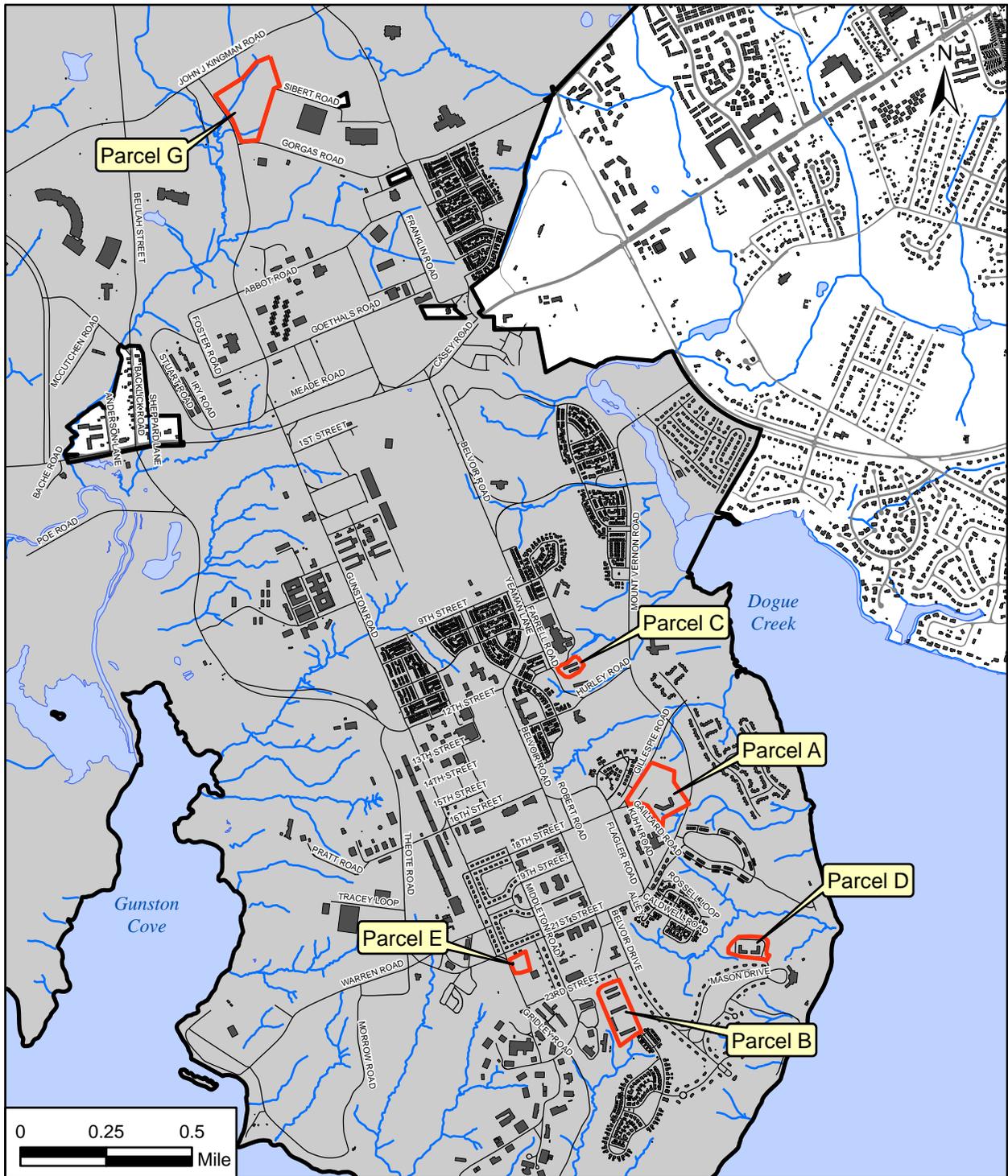
25 Under the No Action Alternative, the Army would not implement the PAL program at Fort  
26 Belvoir. The Army would continue to provide lodging through the use of facilities funded by  
27 Congressional appropriations and by Army Lodging resources that rely on the use of  
28 nonappropriated funds. On the basis of historical trends, it is assumed that the amount of  
29 Congressional funding for personnel on temporary duty would not change and that maintenance  
30 backlogs would remain at present levels or continue to increase. In the absence of implementing  
31 the PAL program, the Army would forego opportunities to leverage private-sector financing for  
32 the lodging function. Quality of life for personnel using the lodging facilities would in all  
33 likelihood decline based on current funding levels.

34 **2.3 PREFERRED ALTERNATIVE**

35 **2.3.1 Descriptions of Existing Lodging and Available Land**

36 Fort Belvoir provides on-post transient lodging services through the use of 526 lodging units in  
37 11 buildings located in the southern part of the South Post in the cantonment area. For the  
38 purposes of this project, the lodging units and areas available for new construction have been  
39 grouped into six distinct parcels of land, labeled A, B, C, D, E, and G.<sup>5</sup> Table 2-1 identifies the  
40

<sup>5</sup> Initially seven individual parcels, labeled A through G, were identified for consideration as part of the PAL lodging footprint. During the planning and footprint approval process, Parcel F was eliminated from further consideration. To maintain consistency throughout the process, the original parcel labels have been maintained; therefore, one parcel label appears to be missing.



# Site Map

Figure 2-1

Source: Fort Belvoir GIS, 2009.

**Table 2-1  
Existing Lodging Facilities, Fort Belvoir**

Parcel	Size (acres)	Building(s)	Building name	Year built	Lodging units	Notes
Parcel A	4	470	Knadle Hall	1975	219	Main lodging building; best condition of all lodging buildings
Parcel B	2.8	505 506 507 508 509	Fairfax Village	1956 1956 1969 1969 1969	45 29 42 42 35	
Parcel C	1.5	806 807	PCS Family Lodging	1959	9 16	
Parcel D	2.3	80 81	Historic BOQs	1948 1948	44 44	Contribute to historic district
Parcel E	<1	172	Thermo-Con House	1949	1	NRHP eligible; Virginia landmark
<b>Total lodging units</b>					526	

Note: NRHP = National Register of Historic Places.

2

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existing lodging inventory by parcel. Figures 2-2 through 2-7 provide more detailed views of each parcel. Figure 2-8 shows photographs of the representative sample of the lodging structures.

5  
6  
7

The following provides a description of each of the parcels containing existing lodging facilities, as well as the parcel of land being made available to Rest Easy for the siting of a new lodging facility.

8  
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10  
11

**Parcel A.** Parcel A contains Knadle Hall (Building 470), the primary lodging facility at Fort Belvoir and the one in the best condition of the buildings in the lodging inventory, and parking associated with Knadle Hall. The parcel contains approximately 4 acres of land that is partially bounded by Gillespie and Gaillard roads.

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14

**Parcel B.** Parcel B contains Buildings 505–509 and associated parking. It encompasses approximately 2.8 acres west of Forney Loop. Parts of the Fort Belvoir Historic District lie north and east of the parcel. The group of buildings is designated *Fairfax Village*.

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17

**Parcel C.** Parcel C contains Buildings 806 and 807, which are designated *Permanent Change of Station Family Lodging*. The parcel encompasses approximately 1.5 acres of land. The two buildings are just east of Farrel Road.

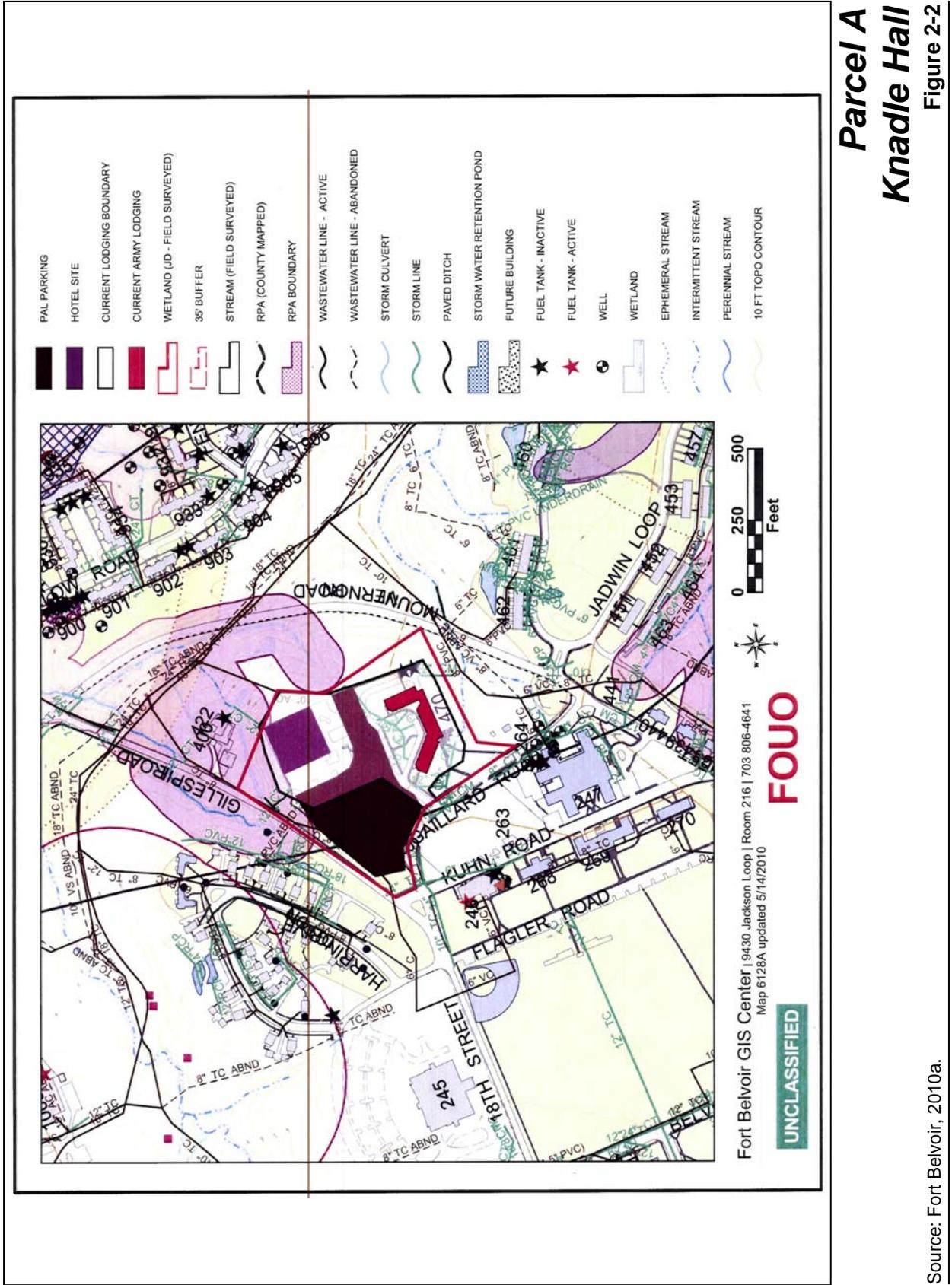
18  
19  
20  
21

**Parcel D.** Parcel D contains Buildings 80 and 81, which are Historic Bachelor Officer's Quarters. These buildings are considered contributing elements of the Fort Belvoir Historic District but are not included on the National Registry of Historic Places (NRHP). The parcel encompasses approximately 2.3 acres of land off Schulz Drive.

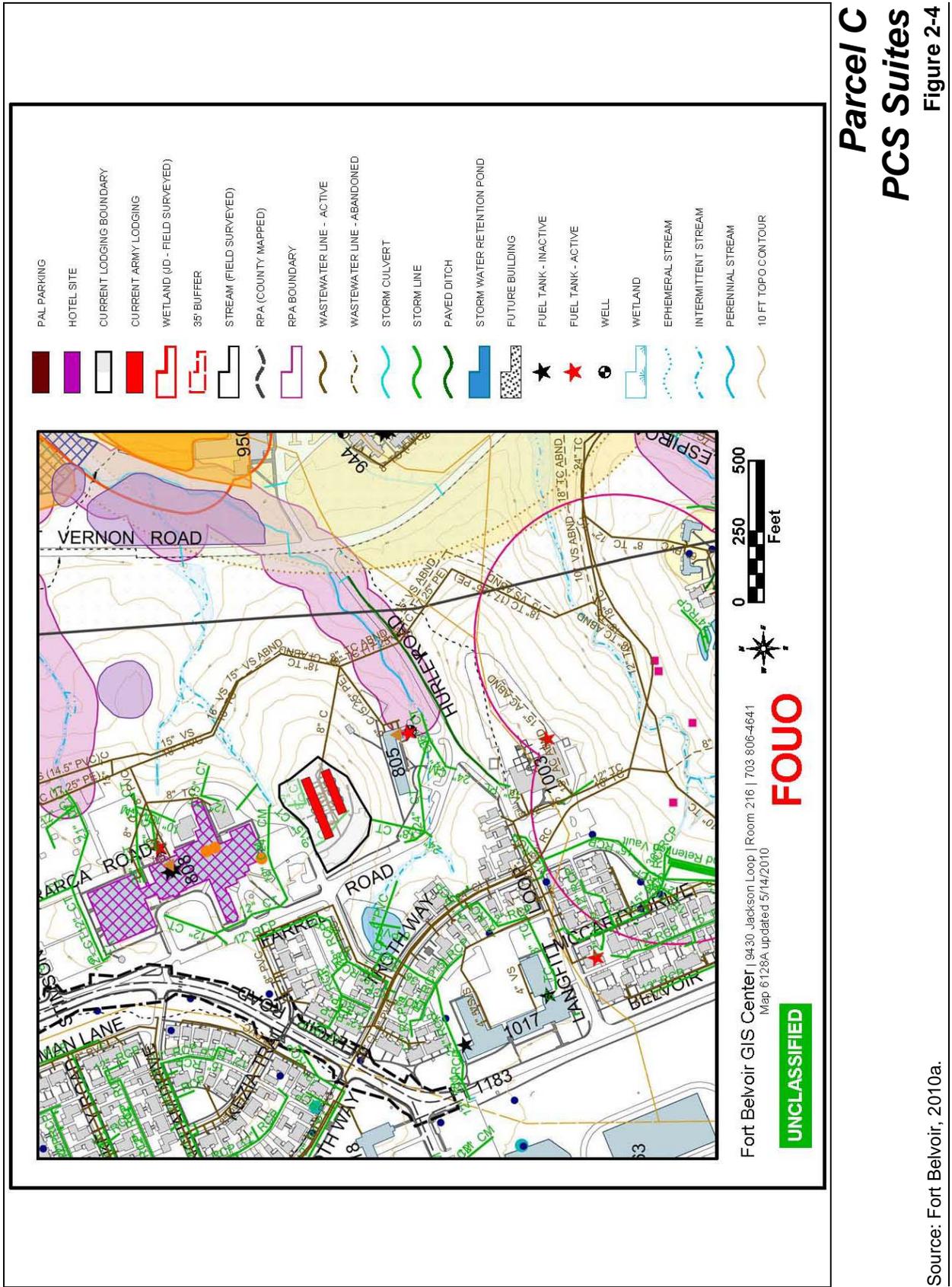
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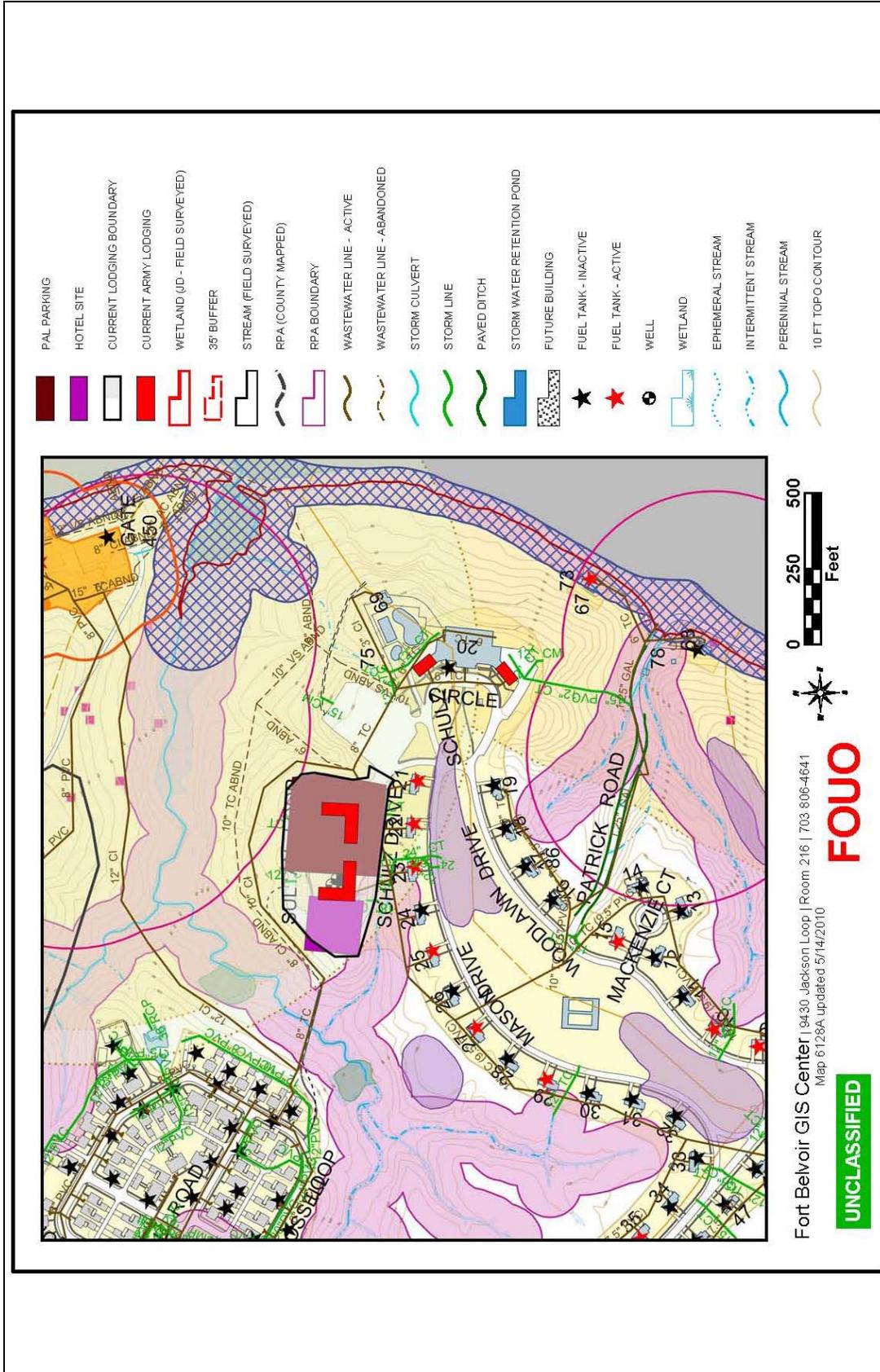
**Parcel E.** Parcel E consists of less than one acre of land near the intersection of Gunston Road and 21<sup>st</sup> Street. Building 172, the Thermo-Con House, is the only structure on the parcel. Thermo-Con was a material made of chemically treated concrete and it illustrates an

25  
26



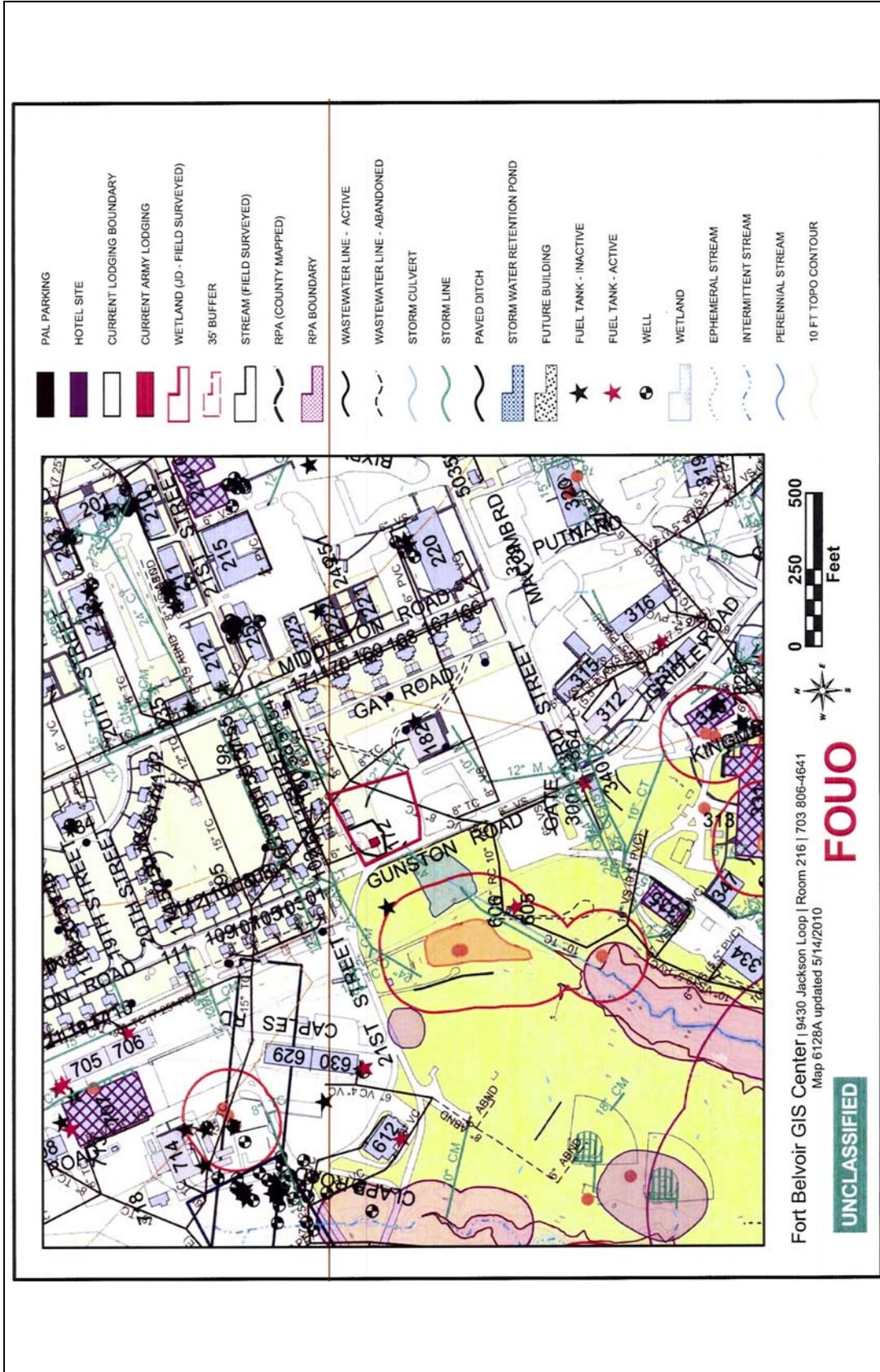






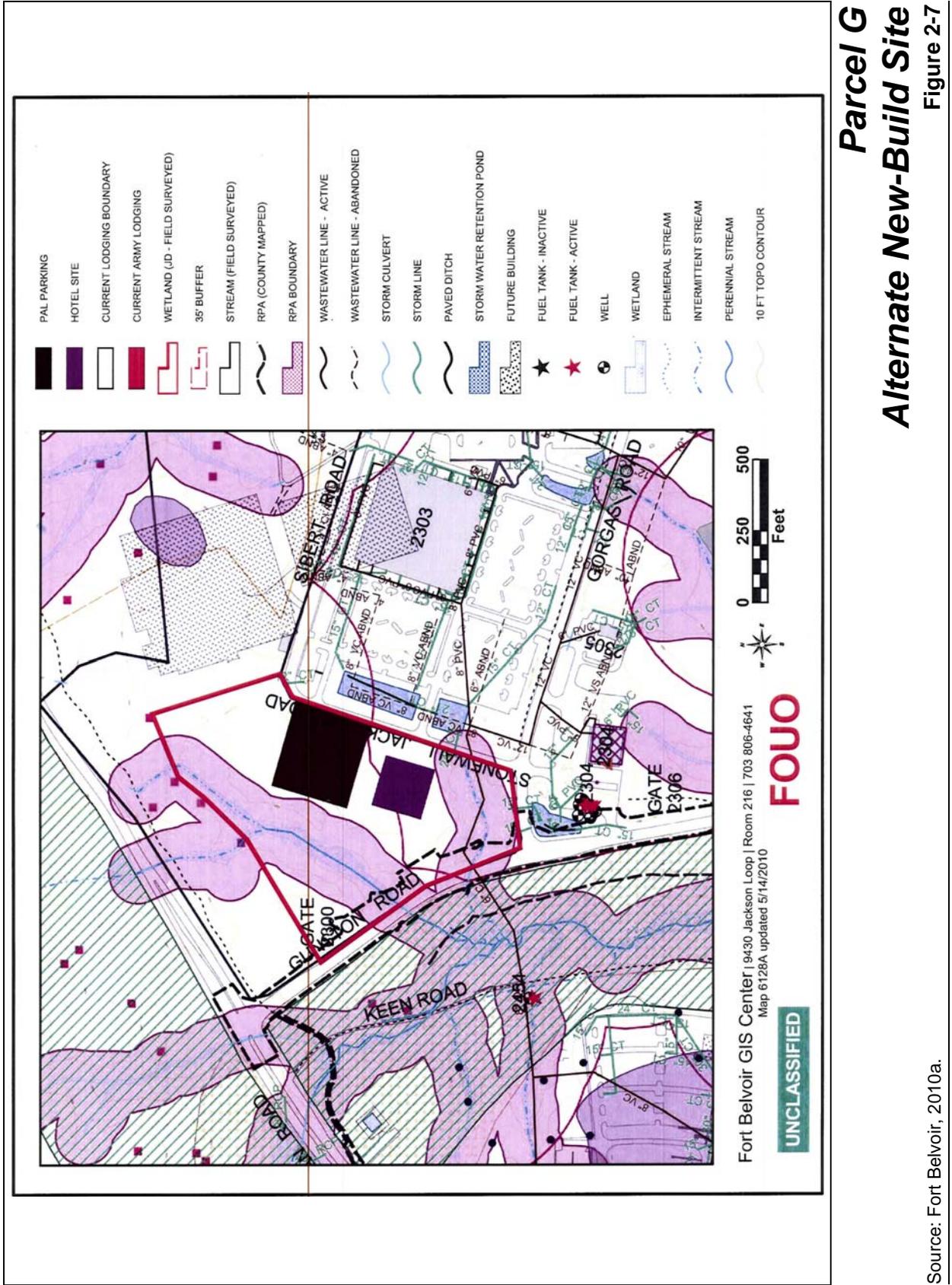
**Parcel D**  
**Historic BOQs**  
**Figure 2-5**

Source: Fort Belvoir, 2010a.



**Parcel E**  
**Thermo-Con House**  
**Figure 2-6**

Source: Fort Belvoir, 2010a.



1

**Figure 2-8. Photographs of Fort Belvoir PAL buildings**

	
<p>Building 470, Knadle Hall (Parcel A)</p>	<p>Buildings 505/506 (Parcel B)</p>
	
<p>Buildings 507-509 (Parcel B)</p>	<p>Buildings 806/807 (Parcel C)</p>
	
<p>Buildings 80/81 (Parcel D)</p>	<p>Building 172 (Parcel E)</p>

2

1 innovative method of construction for low-cost, mass-produced housing. It is the last  
 2 structure of its kind on the East Coast.

3 **Parcel E.** Parcel E consists of less than one acre of land near the intersection of Gunston  
 4 Road and 21<sup>st</sup> Street. Building 172, the Thermo-Con House, is the only structure on the  
 5 parcel. Thermo-Con was a material made of chemically treated concrete and it illustrates an  
 6 innovative method of construction for low-cost, mass-produced housing. It is the last  
 7 structure of its kind on the East Coast.

8 **Parcel G.** Parcel G consists of approximately 3 acres of undeveloped land on the North Post  
 9 near the existing PX. The parcel is roughly triangular in shape and abuts the western edge of  
 10 the parking lot for the existing PX.

11 **2.3.2 Proposed Lodging Actions**

12 Implementing the PAL program at Fort Belvoir would involve short-term hold (STH) lease, long-  
 13 term hold (LTH) lease, and new building construction actions as described in the following  
 14 paragraphs and listed in Table 2-2. Upon conveyance and grants of leases noted in the following,  
 15 IHG would conduct all transient lodging operations as provided for in the lease and consistent  
 16 with the LDMP. The total number of lodging units at Fort Belvoir under the Preferred Alternative  
 17 would increase from 526 to about 539.

18  
 Table 2-2  
 Fort Belvoir PAL Actions

			Lodging units		
Parcel	Acres	Building(s)	Beginning state	End state	PAL action
<b>Parcel A (Knadle Hall) – LTH</b>					
	4	470	219	219	Renovate and maintain in lodging portfolio
		NB	0	200	<b>Preferred</b> new build site; Staybridge Suites
<b>Parcel B (Fairfax Village) – STH/LTH</b>					
	2.8	505	45	0	Renovate for STH, then demolish
		506	29	0	
		507	42	42	
		508	42	42	Renovate and maintain in lodging portfolio
		509	35	35	
<b>Parcel C (PCS Suites) – STH</b>					
	1.5	806	9	0	Renovate for STH, then demolish
		807	16	0	
<b>Parcel D (Historic BOQs) – STH</b>					
	2.3	80	44	0	Renovate for STH, then return to Army
		81	44	0	
<b>Parcel E –LTH</b>					
	<1	172	1	1	Renovate and maintain in lodging inventory as Historic Collection
<b>Parcel G– LTH</b>					
	3	NB	0	200	<b>Alternate</b> new build site; Staybridge Suites

19 Notes: BOQs=Bachelor Officer’s Quarters, N/A = not applicable, NB=New Build, LTH = long-term hold, STH =  
 20 short-term hold, PCS=Permanent Change of Station

1 **STH lease actions.** Initially, all the existing lodging structures (identified in Table 2-1) would be  
2 conveyed to Rest Easy. During the IDP, Rest Easy would begin renovating the existing lodging  
3 structures and continue to operate them as lodging facilities. Renovations would include making  
4 the necessary life safety upgrades or modifications as required per safety regulations and updating  
5 the interiors (e.g., linens and décor). Buildings 505 and 506 on Parcel B and the buildings on  
6 Parcel C (Buildings 806 and 807) and Parcel D (Buildings 80 and 81) would be conveyed to Rest  
7 Easy under a short-term (5-year) lease. These lodging units would be used during the IDP to  
8 maintain an appropriate number of available rooms while some of the other lodging structures  
9 undergo renovations and new lodging is being built. At the end of the IDP or as the new hotels  
10 become operational, these lodging units would be either demolished or retained, and the land  
11 would revert back to Fort Belvoir.<sup>6</sup> More detailed information on these parcels is provided in  
12 Tables 2-1 and 2-2. Parcels B, C, and D are shown Figures 2-3, 2-4, and 2-5.

13 **LTH lease actions and new construction.** The existing lodging and land on Parcel A (Knadle  
14 Hall, Building 470) (Figure 2-2); all of the land and Buildings 507, 508, and 509 on Parcel B  
15 (Figure 2-3); and Building 172 and the land on Parcel E would be conveyed to Rest Easy under a  
16 50-year lease. Rest Easy would renovate these buildings, rebrand them, and continue to operate  
17 them as lodging facilities during the 50-year lease period. Renovations would include making the  
18 necessary life safety upgrades or modifications as required per safety regulations, updating the  
19 interiors (e.g., linens and décor), adding some recreational facilities and improved public spaces  
20 for guests, and making exterior structural modifications associated with rebranding the buildings  
21 as Holiday Inn Express, The Historic Collection, or IHG Army hotels.

22 Building 172 on Parcel E, the only structure in the lodging inventory eligible for the NRHP,  
23 would be renovated in strict accordance with the historic property requirements identified in the  
24 deed of conveyance. Rest Easy would maintain the structure and brand it as the Historic  
25 Collection. It is possible that Parcel E and Building 172 might not be conveyed to Rest Easy or  
26 that Rest Easy might use it only during the IDP and then return it to the Army once the new hotel  
27 becomes operational. For the purposes of analysis, the EA assumes that Parcel E and Building  
28 172 would be conveyed to Rest Easy and managed by IHG for the entire 50-year lease period.

29 Rest Easy plans to replace much of the outdated lodging infrastructure at Fort Belvoir by building  
30 one additional hotel—a 200-room Staybridge Suites. The Army would grant Rest Easy a 50-year  
31 lease of Parcel A, which currently contains Knadle Hall, for the construction of the Staybridge  
32 Suites. If for some reason Parcel A is not a suitable site for construction of the 200-room hotel,  
33 the hotel would be constructed on Parcel G, which consists of approximately 3 acres on the North  
34 Post near the PX.

35 Note that all potential alternative construction sites for new lodging facilities are included within  
36 the Preferred Alternative analysis in Section 3.0, rather than being analyzed as separate  
37 alternatives for implementing the Preferred Alternative.

## 38 **2.4 ALTERNATIVES ELIMINATED FROM DETAILED STUDY**

39 **Sources of lodging services.** The Army now provides transient lodging to Soldiers, their  
40 dependents, and other authorized patrons. In lieu of privatizing the function, the Army could  
41 choose to discontinue all lodging operations on Army installations. This would require  
42 prospective lodging patrons to rely entirely on private-sector hotels and motels for their lodging.  
43 Currently, in many cases, lodging for personnel using unaccompanied personnel housing is

<sup>6</sup> For the purposes of analysis, it is assumed that the buildings on Parcel C and Buildings 505 and 506 on Parcel B would be demolished. The installation, however, might choose to keep the buildings for non-lodging purposes, in which case Rest Easy would return them to the Army's inventory at the end of the IDP.

1 located near their temporary duty site. Many of the current occupants of Army lodging are  
2 attending Army schools located on-post. Eliminating on-post lodging would lengthen the  
3 students' workdays because of commuting, increase their transportation costs (absent specific  
4 authorization, personnel on temporary duty are ineligible for rental vehicle reimbursement), and,  
5 in some instances, cause them to encounter shortages of lodging in adjacent communities. At Fort  
6 Belvoir, termination of the Army's lodging program would result in abandoning 11 buildings that  
7 have a total of 526 lodging rooms. The Army would incur substantial costs to convert all of these  
8 buildings to alternative uses. The combination of idling of the facilities until alternative uses  
9 could be determined and the time needed to achieve such alternative uses would contravene the  
10 Army's policy to manage its resources to optimal potential. For these reasons, this alternative is  
11 not feasible and is not evaluated in detail in this EA.



Douglas W. Domenech  
Secretary of Natural Resources

David A. Johnson  
Director

COMMONWEALTH of VIRGINIA  
DEPARTMENT OF CONSERVATION AND RECREATION

Division of Natural Heritage  
217 Governor Street  
Richmond, Virginia 23219-2010  
(804) 786-7951

October 22, 2010

Samuel Pett  
Tetra Tech, Inc  
10306 Eaton Place, Suite 340  
Fairfax, VA 22030-2201

Re: #100510, Army Lodging Buildings

Dear Mr. Pett:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

**Parcels A, B, C, and D**

Biotics documents the presence of natural heritage resources in the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

**Parcel G**

According to our records the Pohick/Accotink Wetland Conservation Site is downstream of the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Pohick/Accotink Wetland Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resources of concern at this site are:

Wood turtle	<i>Glyptemys insculpta</i>	G4/S2/NL/LT
River bulrush	<i>Schoenoplectus fluviatilis</i>	G5/S2/NL/NL
Tidal Freshwater Marsh		G3/SNR/NL/NL

*State Parks • Soil and Water Conservation • Natural Heritage • Outdoor Recreation Planning  
Chesapeake Bay Local Assistance • Dam Safety and Floodplain Management • Land Conservation*

The Wood turtle ranges from southeastern Canada, south to the Great Lake states and New England. In Virginia, it is known from northern counties within the Potomac River drainage (NatureServe, 2009). The Wood turtle inhabits areas with clear streams with adjacent forested floodplains and nearby fields, wet meadows, and farmlands (Buhlmann et al., 2008; Mitchell, 1994). Since this species overwinters on the bottoms of creeks and streams, a primary habitat requirement is the presence of water (Mitchell, 1994).

Threats to the wood turtle include habitat fragmentation, urbanization, and automobile or farm machinery mortality (Buhlmann et al., 2008). Please note that the Wood turtle is currently classified as threatened by the Virginia Department of Game and Inland Fisheries (VDGIF).

River bulrush, a state-rare plant species, inhabits fresh tidal marshes of the coastal plain of Virginia. This species forms predominantly sterile colonies that spread by rhizomes. Water pollution and sedimentation, sea level rise, and invasive species such as *Phragmites australis* pose the greatest threats to populations of this sedge. Nine populations of river bulrush are believed to be extant in Virginia.

Tidal freshwater marshes occur along the Atlantic Coast from Maine to Virginia. Its southern limit is the intertidal portion of the James River in east-central Virginia. In the southern part of the range (northern Virginia, Maryland, and Delaware), this is the principal mixed freshwater tidal marsh community, forming extensive patches along many tidal rivers. They are subject to diurnal flooding by tides and seasonal and episodic flooding from river discharge. Plant composition of freshwater tidal marshes generally occurs as a mosaic of patches dominated by a few or a single species.

In addition, the Laura's clubtail (*Stylurus laurae*, G4/S2/NL/NL), has been historically documented downstream of the project site. A state rare dragonfly, Laura's clubtail ranges from Ohio south to Florida with westward records to Texas (Kondratieff, 2000). In Virginia, there are records across the Piedmont and west to the Ridge and Valley region. Its habitat consists of moderated gradient streams with many shallow riffles and runs (NatureServe, 2009). Though somewhat tolerant of decreased water quality, threats include activities which alter the water flow or substrate such as: impoundments, channelization, dredging, siltation, agricultural non-point pollution, and municipal and industrial pollution. In addition, timber harvest may increase siltation and cause a decrease in dissolved oxygen as canopy cover is removed and water temperature rises (NatureServe, 2009).

Due to the status of the Wood turtle, DCR recommends coordination with the VDGIF in order to ensure compliance with protected species legislation. To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR also recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations.

## Parcel E

According to the information currently in our files, this site is located within the Area T-17 Ravine Conservation Site. Area T-17 Ravine Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resource of concern at this site is:

*Stygobromus phreaticus*                      Northern Virginia well amphipod                      G2G3/S1/SOC/NL

The northern Virginia well amphipod is a distinctive species of subterranean crustacean that has a very limited range. It has been documented at only three sites, including historical collections obtained from wells in Alexandria (1921) and Vienna (1948) in northern Virginia (suburbs of Washington, D.C.). The exact locations of both collection sites are unknown, but they are presumed to have been destroyed by

subsequent urbanization. The only recent collections (1996 and 2003) are from a ravine seepage habitat on the Fort Belvoir Military Reservation in Fairfax County, Virginia. Please note that this species is tracked as a species of concern by the United States Fish and Wildlife Service (USFWS); however, this designation does not have any official legal status.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation (DCR), DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

Our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

A fee of \$575.00 has been assessed for the service of providing this information. Please find enclosed an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, **DCR - Division of Natural Heritage, 217 Governor Street Richmond, VA 23219**. Payment is due within thirty days of the invoice date. Please note the change of address for remittance of payment as of July 1, 2008. Late payment may result in the suspension of project review service for future projects.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Shirl Dressler at (804) 367-6913.

Should you have any questions or concerns, feel free to contact me at (804) 692-0984. Thank you for the opportunity to comment on this project.

Sincerely,



Alli Baird, LA, ASLA  
Coastal Zone Locality Liaison

CC: Amy Ewing, VDGIF  
Tylan Dean, USFWS

## Literature Cited

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**DEPARTMENT OF THE ARMY**  
US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR  
9820 FLAGLER ROAD, SUITE 213  
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO  
ATTENTION OF

**NOV 15 2010**

Directorate of Public Works

**SUBJECT:** Section 106 Consultation, Privatization of Army Lodging (PAL), Fort Belvoir, Virginia

Mr. Marc Holma  
Architectural Historian  
Department of Historic Resources  
2801 Kensington Avenue  
Richmond, Virginia 23221

Dear Mr. Holma:

Fort Belvoir proposes to lease lands and transfer ownership of certain lodging related buildings to a private developer, Rest Easy LLC (Rest Easy) as part of the Privatization of Army Lodging (PAL) initiative. Rest Easy is a special purpose entity consisting of Actus Lend Lease (Actus) and InterContinental Hotel Group (IHG). Through PAL, Fort Belvoir would grant a combination of short and long term ground leases.

Fort Belvoir defines the undertaking as the leasing and conveyance of certain Federal properties to a private entity as outlined below:

**Parcel A:** Is an irregularly shaped, four acre parcel located to the southeast of the intersection of Gillespie and Gaillard Roads. The parcel contains Building 470. Rest Easy would be granted a 50 year ground lease and ownership of Building 470. Building 470 would be renovated and added to the permanent lodging portfolio and a new lodging facility would be constructed on the parcel (see enclosed map).

**Parcel B:** Is a rectangular, two-and-one-eighth acre parcel located along the west side of Forney Loop Road to the south of 23<sup>rd</sup> Street. The parcel contains Buildings 505-509. Rest Easy would be granted ownership of all five buildings. Rest Easy would be granted a 5-year ground lease on lands under buildings 505 and 506 and a 50-year ground lease on lands under Buildings 507-509. Buildings 505 and 506 would be demolished following completion of a new lodging facility; Buildings 507-509 would be renovated and added to the permanent lodging portfolio (see enclosed map).

**Parcel C:** Is a square, one-and-one-half acre parcel located to the southeast of the intersection of Petrarca and Farrell Roads. The parcel contains Buildings 806 and 807. Rest Easy would be granted a 5-year ground lease and ownership of the buildings. The buildings would be demolished following construction of a new lodging facility (see enclosed map).

**“LEADERS IN EXCELLENCE”**

**Parcel D:** Is a rectangular, two-and-one-third acre parcel located on Sulton Loop within Belvoir Village. The parcel contains Buildings 80 and 81. Rest Easy would be granted a 5-year lease on the grounds and buildings (see enclosed map).

**Parcel E:** Is a square, less than one acre parcel located along the east side of Gunston Road south of 21<sup>st</sup> Street. The parcel contains Building 172 (Thermo-Con House). Rest Easy would be granted a 50-year ground lease and ownership of Building 172. Building 172 would be renovated and added to the permanent lodging portfolio (see enclosed map).

**Parcel G:** Is an irregularly shaped, undeveloped, three acre parcel located to the northeast of the intersection of Gunston and Gorgas Roads to the west of the Commissary/Post Exchange complex. In the event that a new lodging facility cannot be constructed at Parcel A, Rest Easy would be granted a 50-year ground lease on this parcel for the construction of a new lodging facility (see enclosed map).

In accordance with 36CFR800.3(c) and (f) Fort Belvoir has identified the Virginia State Historic Preservation Office and Fairfax County Department of Planning and Zoning (Fairfax County) as consulting parties. Fort Belvoir will utilize the National Environmental Policy Act compliance process to involve the public in the consultation process [36CFR800.3(e)].

Fort Belvoir defines the Area of Potential Effect (APE) for this undertaking as the bounds of the six transfer parcels (map enclosed) [36CFR800.4(a)]. Fort Belvoir has undertaken historic resource identification efforts within the area of potential effect. No archeological resources are present within the APE. Two archeological resources (44FX1675 and 44FX1928) have been identified within 200 feet of the APE. Site 44FX1675 was evaluated in 1989 and determined ineligible for National Register listing, Site 44FX1928 was evaluated in 2008 and recommended for further study.

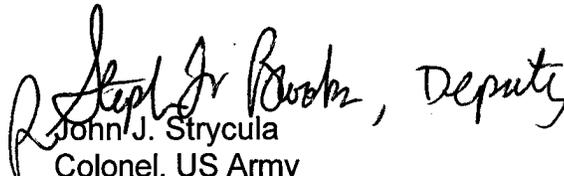
Fort Belvoir has identified eleven architectural resources within the APE. Seven of the buildings (505-509, 806-807) were constructed as unaccompanied personnel housing and are covered by the *Program Comment for Cold War Era Unaccompanied Personnel Housing 1946-1974* (Program Comment). Four of these buildings (505, 506, 806 and 807) were individually surveyed by Fort Belvoir and determined ineligible for National Register listing. Fort Belvoir will comply with all relevant requirements of the Program Comment during the transfer of subject buildings out of Federal ownership. Buildings 80 and 81 have been determined to be contributing resources to the National Register-eligible Fort Belvoir Historic District. Building 172 (Thermo-Con House) has been determined individually eligible for National Register listing. The final building to

be transferred (Building 470) was constructed in 1975 and is not considered eligible for National Register listing as a building less than 50 years of age.

36 CFR 800.5(a)(2)(vii) defines the transfer, lease or sale of property out of Federal ownership without adequate and legally enforceable restriction or conditions as an adverse effect. Fort Belvoir will use the National Environmental Policy Act process for Section 106 purposes for this undertaking in accordance with 36 CFR 800.8(c). Please provide comments on Fort Belvoir APE definition, historic resource and consulting party identification as outlined above. Copies of this correspondence have been submitted to the Virginia State Historic Preservation Office, Fairfax County and the Advisory Council on Historic Preservation.

Point of contact is Bill Sanders, Director of Public Works, at 703-806-3017.

Sincerely,

  
John J. Strycula  
Colonel, US Army  
Commanding

Enclosure



**DEPARTMENT OF THE ARMY**  
US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR  
9820 FLAGLER ROAD, SUITE 213  
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO  
ATTENTION OF

NOV 15 2010

Directorate of Public Works

SUBJECT: Section 106 Consultation, Privatization of Army Lodging (PAL), Fort Belvoir, Virginia

Katharine Kerr  
Advisory Council on  
Historic Preservation  
1100 Pennsylvania Avenue  
Suite 803  
Washington, DC 20004

Dear Ms. Kerr:

Fort Belvoir proposes to lease lands and transfer ownership of certain lodging related buildings to a private developer, Rest Easy LLC (Rest Easy) as part of the Privatization of Army Lodging (PAL) initiative. Rest Easy is a special purpose entity consisting of Actus Lend Lease (Actus) and InterContinental Hotel Group (IHG). Through PAL, Fort Belvoir would grant a combination of short and long term ground leases.

Fort Belvoir defines the undertaking as the leasing and conveyance of certain Federal properties to a private entity as outlined below:

**Parcel A:** Is an irregularly shaped, four acre parcel located to the southeast of the intersection of Gillespie and Gaillard Roads. The parcel contains Building 470. Rest Easy would be granted a 50 year ground lease and ownership of Building 470. Building 470 would be renovated and added to the permanent lodging portfolio and a new lodging facility would be constructed on the parcel (see enclosed map).

**Parcel B:** Is a rectangular, two-and-one-eighth acre parcel located along the west side of Forney Loop Road to the south of 23<sup>rd</sup> Street. The parcel contains Buildings 505-509. Rest Easy would be granted ownership of all five buildings. Rest Easy would be granted a 5-year ground lease on lands under buildings 505 and 506 and a 50-year ground lease on lands under Buildings 507-509. Buildings 505 and 506 would be demolished following completion of a new lodging facility; Buildings 507-509 would be renovated and added to the permanent lodging portfolio (see enclosed map).

**Parcel C:** Is a square, one-and-one-half acre parcel located to the southeast of the intersection of Petrarca and Farrell Roads. The parcel contains Buildings 806 and 807. Rest Easy would be granted a 5-year ground lease

**“LEADERS IN EXCELLENCE”**

and ownership of the buildings. The buildings would be demolished following construction of a new lodging facility (see enclosed map).

**Parcel D:** Is a rectangular, two-and-one-third acre parcel located on Sulton Loop within Belvoir Village. The parcel contains Buildings 80 and 81. Rest Easy would be granted a 5-year lease on the grounds and buildings (see enclosed map).

**Parcel E:** Is a square, less than one acre parcel located along the east side of Gunston Road south of 21<sup>st</sup> Street. The parcel contains Building 172 (Thermo-Con House). Rest Easy would be granted a 50-year ground lease and ownership of Building 172. Building 172 would be renovated and added to the permanent lodging portfolio (see enclosed map).

**Parcel G:** Is an irregularly shaped, undeveloped, three acre parcel located to the northeast of the intersection of Gunston and Gorgas Roads to the west of the Commissary/Post Exchange complex. In the event that a new lodging facility cannot be constructed at Parcel A, Rest Easy would be granted a 50-year ground lease on this parcel for the construction of a new lodging facility (see enclosed map).

In accordance with 36CFR800.3(c) and (f) Fort Belvoir has identified the Virginia State Historic Preservation Office and Fairfax County Department of Planning and Zoning (Fairfax County) as consulting parties. Fort Belvoir will utilize the National Environmental Policy Act compliance process to involve the public in the consultation process [36CFR800.3(e)].

Fort Belvoir defines the Area of Potential Effect (APE) for this undertaking as the bounds of the six transfer parcels (map enclosed) [36CFR800.4(a)]. Fort Belvoir has undertaken historic resource identification efforts within the area of potential effect. No archeological resources are present within the APE. Two archeological resources (44FX1675 and 44FX1928) have been identified within 200 feet of the APE. Site 44FX1675 was evaluated in 1989 and determined ineligible for National Register listing, Site 44FX1928 was evaluated in 2008 and recommended for further study.

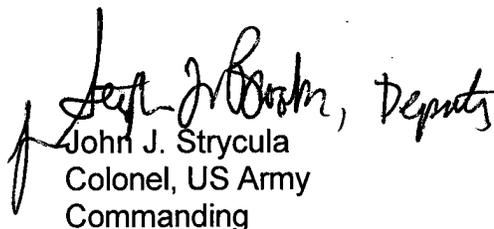
Fort Belvoir has identified eleven architectural resources within the APE. Seven of the buildings (505-509, 806-807) were constructed as unaccompanied personnel housing and are covered by the *Program Comment for Cold War Era Unaccompanied Personnel Housing 1946-1974* (Program Comment). Four of these buildings (505, 506, 806 and 807) were individually surveyed by Fort Belvoir and determined ineligible for National Register listing. Fort Belvoir will comply with all relevant requirements of the Program Comment during the transfer of subject buildings out of Federal ownership. Buildings 80 and 81 have been determined to be contributing resources to the National

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Point of contact is Bill Sanders, Director of Public Works, at 703-806-3017.

Sincerely,

  
John J. Strycula  
Colonel, US Army  
Commanding

Enclosure



**DEPARTMENT OF THE ARMY**  
US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR  
9820 FLAGLER ROAD, SUITE 213  
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO  
ATTENTION OF

NOV 15 2010

Directorate of Public Works

SUBJECT: Section 106 Consultation, Privatization of Army Lodging (PAL), Fort Belvoir, Virginia

Ms. Linda Cornish Blank  
Historic Preservation Planner  
Fairfax County, Department of Planning & Zoning  
12055 Government Center Pkwy, Suite 730  
Fairfax, Virginia 22035

Dear Ms. Blank:

Fort Belvoir proposes to lease lands and transfer ownership of certain lodging related buildings to a private developer, Rest Easy LLC (Rest Easy) as part of the Privatization of Army Lodging (PAL) initiative. Rest Easy is a special purpose entity consisting of Actus Lend Lease (Actus) and InterContinental Hotel Group (IHG). Through PAL, Fort Belvoir would grant a combination of short and long term ground leases.

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**“LEADERS IN EXCELLENCE”**

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In accordance with 36CFR800.3(c) and (f) Fort Belvoir has identified the Virginia State Historic Preservation Office and Fairfax County Department of Planning and Zoning (Fairfax County) as consulting parties. Fort Belvoir will utilize the National Environmental Policy Act compliance process to involve the public in the consultation process [36CFR800.3(e)].

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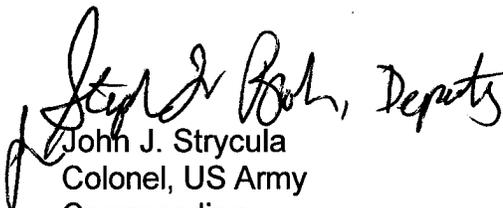
Fort Belvoir has identified eleven architectural resources within the APE. Seven of the buildings (505-509, 806-807) were constructed as unaccompanied personnel housing and are covered by the *Program Comment for Cold War Era Unaccompanied Personnel Housing 1946-1974* (Program Comment). Four of these buildings (505, 506, 806 and 807) were individually surveyed by Fort Belvoir and determined ineligible for National Register listing. Fort Belvoir will comply with all relevant requirements of the Program Comment during the transfer of subject buildings out of Federal ownership. Buildings 80 and 81 have been determined to be contributing resources to the National

Register-eligible Fort Belvoir Historic District. Building 172 (Thermo-Con House) has been determined individually eligible for National Register listing. The final building to be transferred (Building 470) was constructed in 1975 and is not considered eligible for National Register listing as a building less than 50 years of age.

36 CFR 800.5(a)(2)(vii) defines the transfer, lease or sale of property out of Federal ownership without adequate and legally enforceable restriction or conditions as an adverse effect. Fort Belvoir will use the National Environmental Policy Act process for Section 106 purposes for this undertaking in accordance with 36 CFR 800.8(c). Please provide comments on Fort Belvoir APE definition, historic resource and consulting party identification as outlined above. Copies of this correspondence have been submitted to the Virginia State Historic Preservation Office, Fairfax County and the Advisory Council on Historic Preservation.

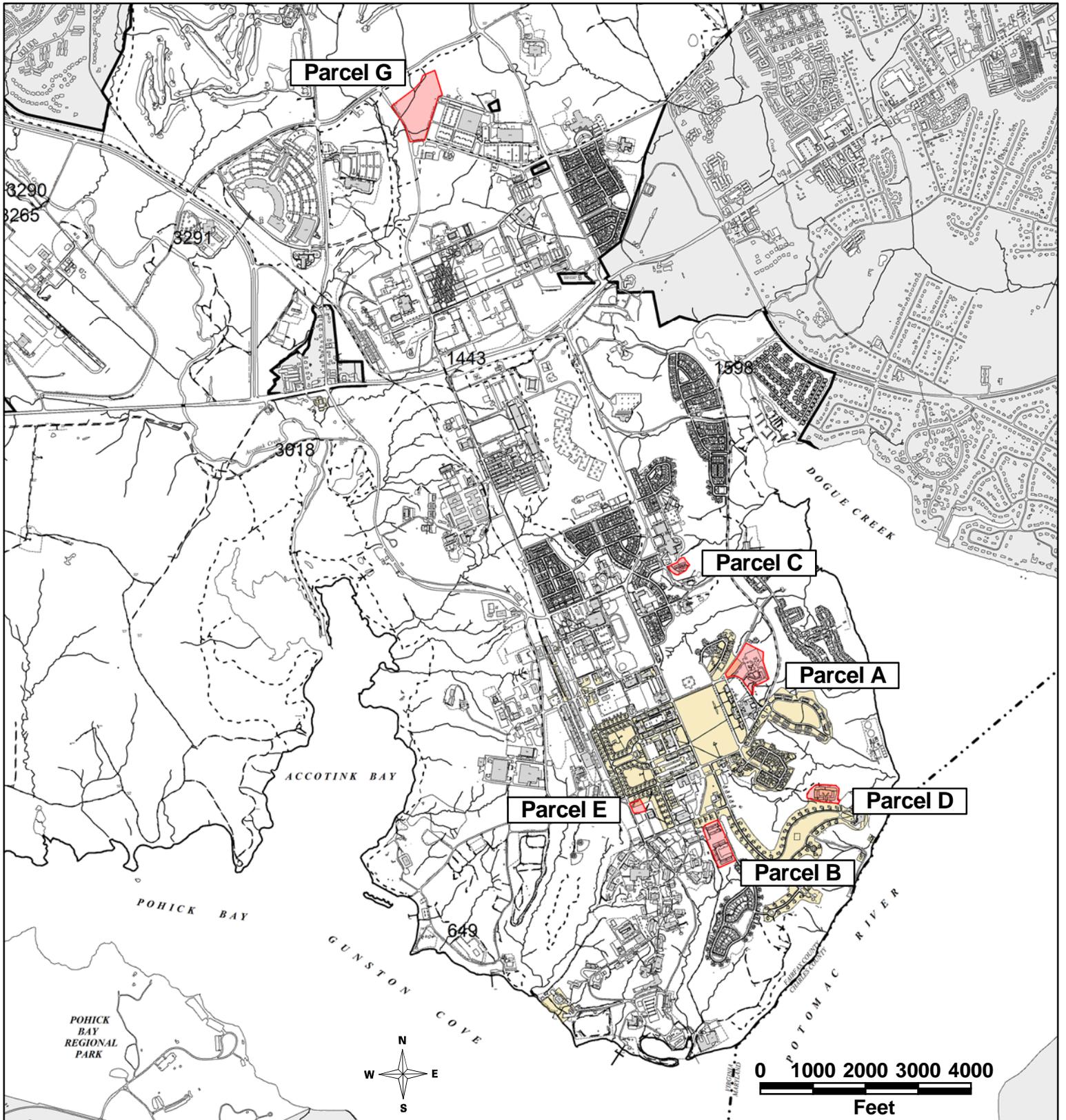
Point of contact is Bill Sanders, Director of Public Works, at 703-806-3017.

Sincerely,

  
John J. Strycula  
Colonel, US Army  
Commanding

Enclosure

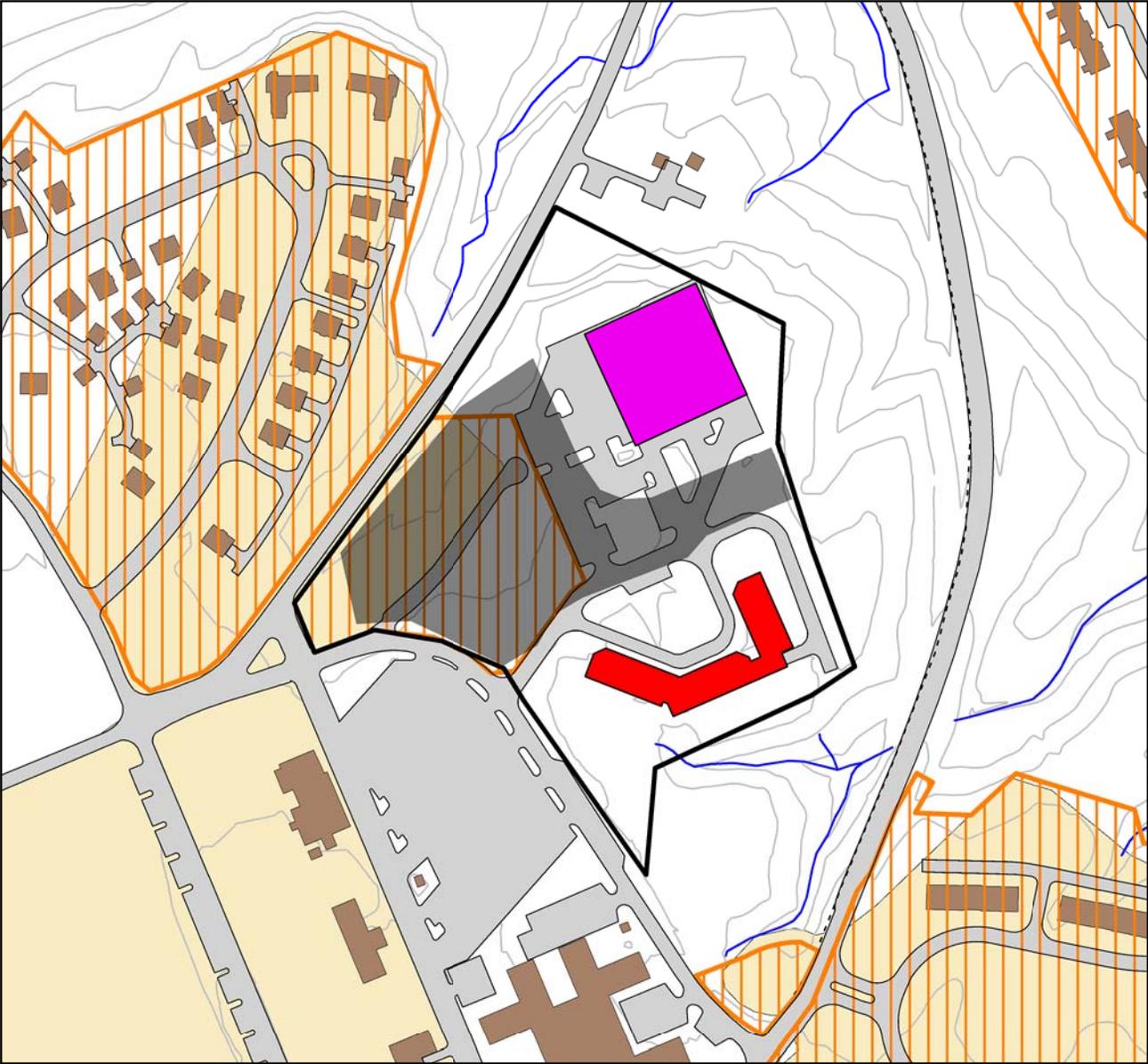
# PRIVATIZATION OF ARMY LODGING, FORT BELVOIR AREA OF PTENTIAL EFFECT



## LEGEND

- |   |                       |   |        |  |                   |
|---|-----------------------|---|--------|--|-------------------|
|  | PROPOSED PAL PARCEL   |  | ROAD   |  | SURFACE WATER     |
|  | INSTALLATION PROPERTY |  | STREAM |  | HISTORIC DISTRICT |

**PARCEL A  
KNADLE HALL**

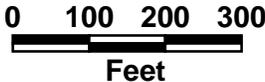


-  PARCEL BOUNDARY
-  PROPOSED PARKING
-  PROPOSED HOTEL
-  EXISTING LODGING
-  ARCHEOLOGICAL SITE (NR INELIGIBLE)
-  ARCHEOLOGICAL SITE (NR ELIGIBLE)
-  ARCHEOLOGICAL SITE (REQUIRES RESEARCH)
-  CURRENT LEASE AREAS
-  PAVED AREAS
-  STREAMS
-  TOPOGRAPHY (10FT CONTOUR)
-  HISTORIC DISTRICT

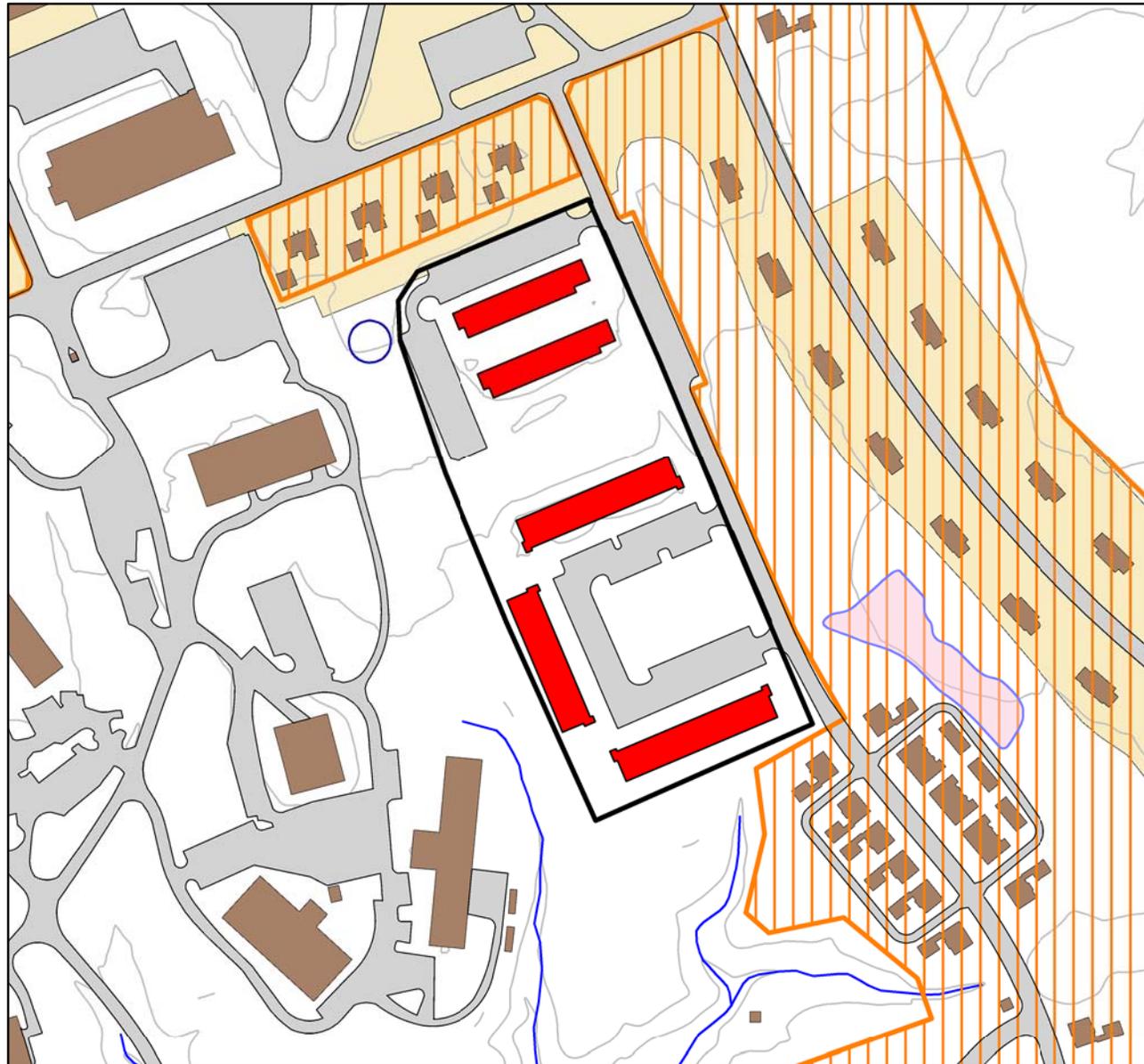
**FORT BELVOIR GIS CENTER**  
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 MAP UPDATED: 09/28/2010

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**UNCLASSIFIED**



**PARCEL B  
FAIRFAX VILLAGE**

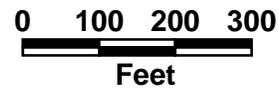


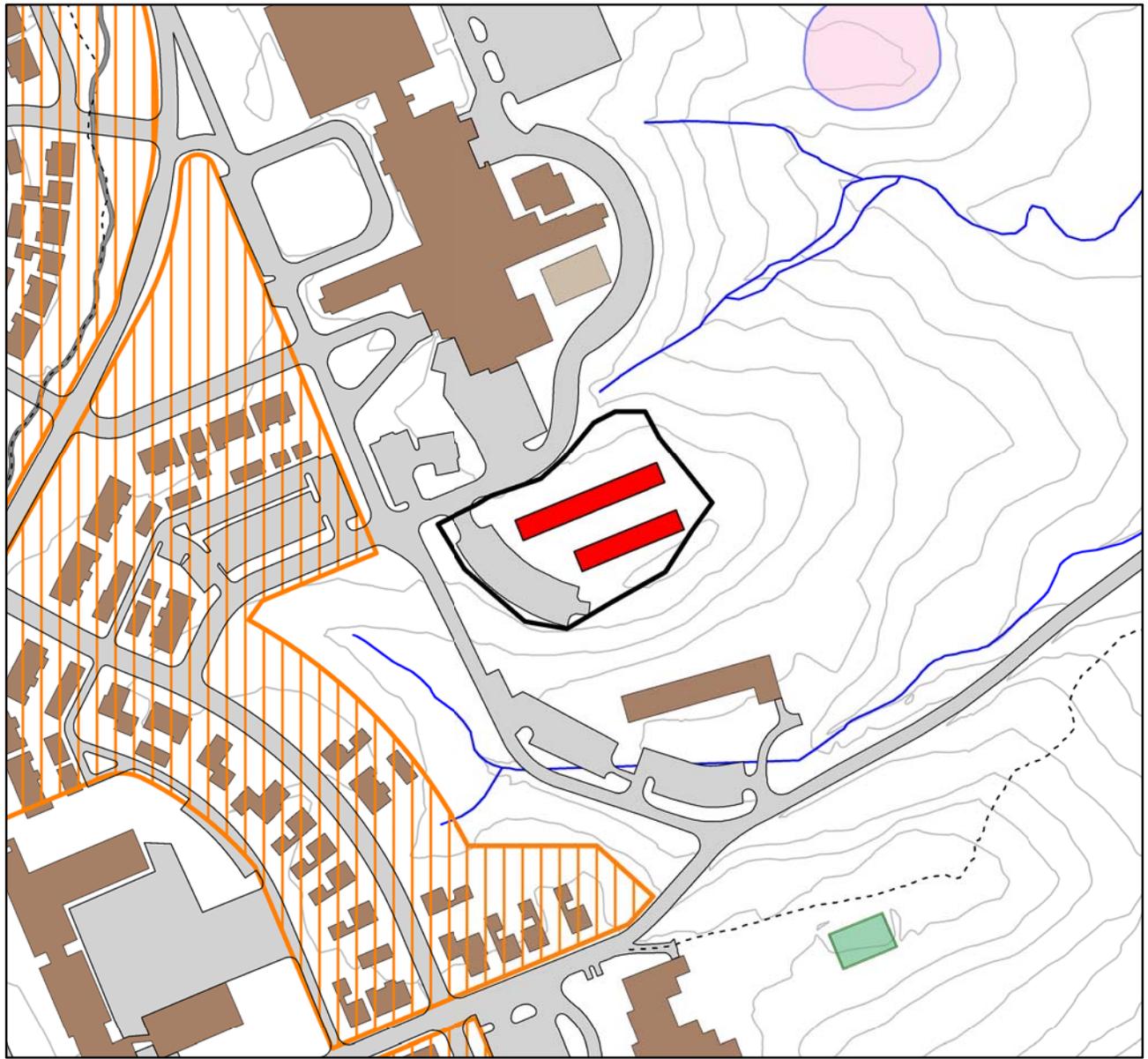
-  PARCEL BOUNDARY
-  EXISTING LODGING
-  ARCHEOLOGICAL SITE (NR INELIGIBLE)
-  ARCHEOLOGICAL SITE (NR ELIGIBLE)
-  ARCHEOLOGICAL SITE (REQUIRES RESEARCH)
-  CURRENT LEASE AREAS
-  PAVED AREAS
-  STREAMS
-  TOPOGRAPHY (10FT CONTOUR)
-  HISTORIC DISTRICT

**FORT BELVOIR GIS CENTER**  
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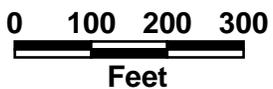
**PARCEL C  
PCS SUITES**

-  PARCEL BOUNDARY
-  PROPOSED PARKING
-  PROPOSED HOTEL
-  EXISTING LODGING
-  ARCHEOLOGICAL SITE (NR INELIGIBLE)
-  ARCHEOLOGICAL SITE (NR ELIGIBLE)
-  ARCHEOLOGICAL SITE (REQUIRES RESEARCH)
-  CURRENT LEASE AREAS
-  PAVED AREAS
-  STREAMS
-  TOPOGRAPHY (10FT CONTOUR)
-  HISTORIC DISTRICT

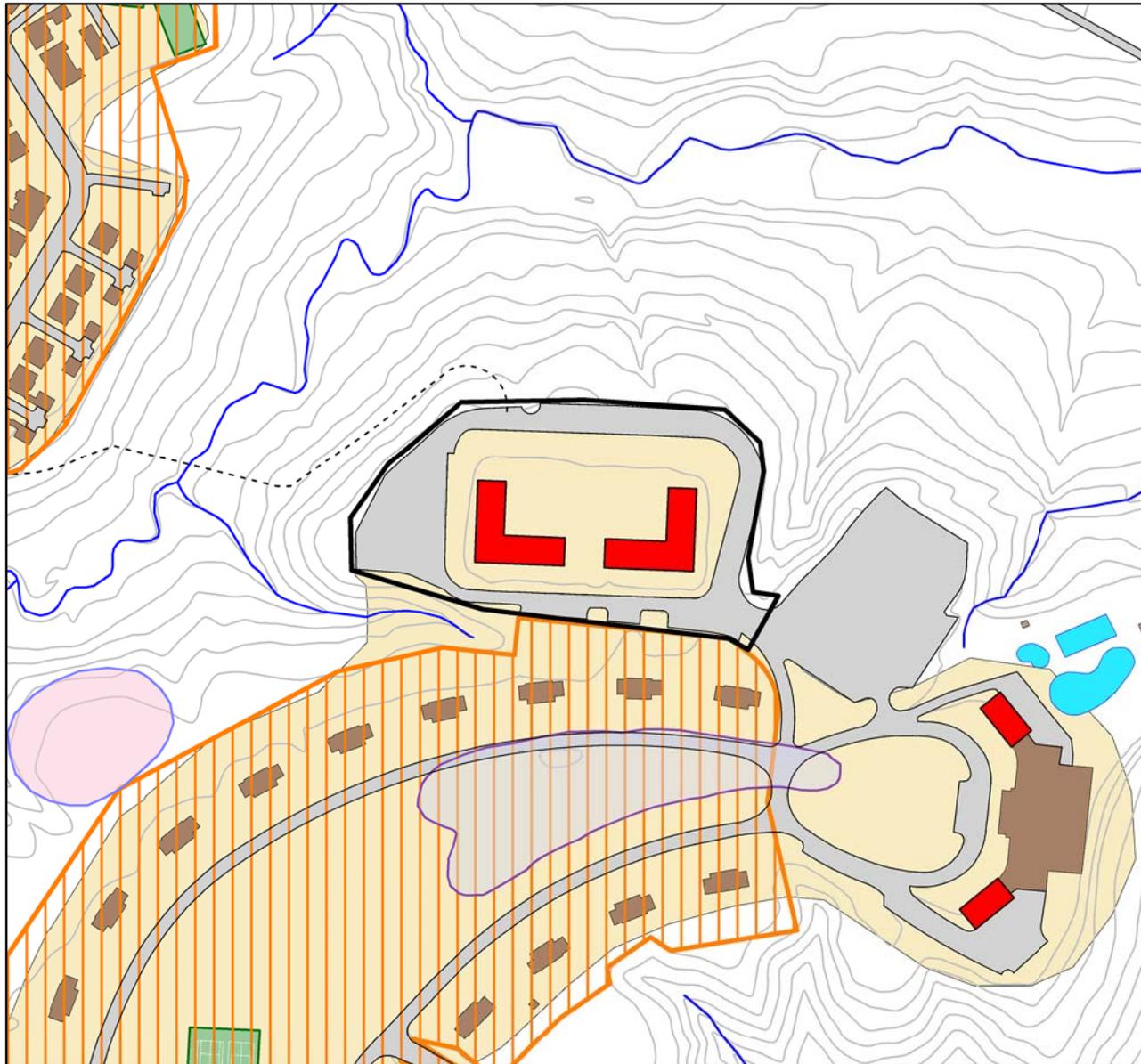
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## PARCEL D HISTORIC BOQS

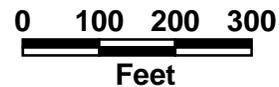


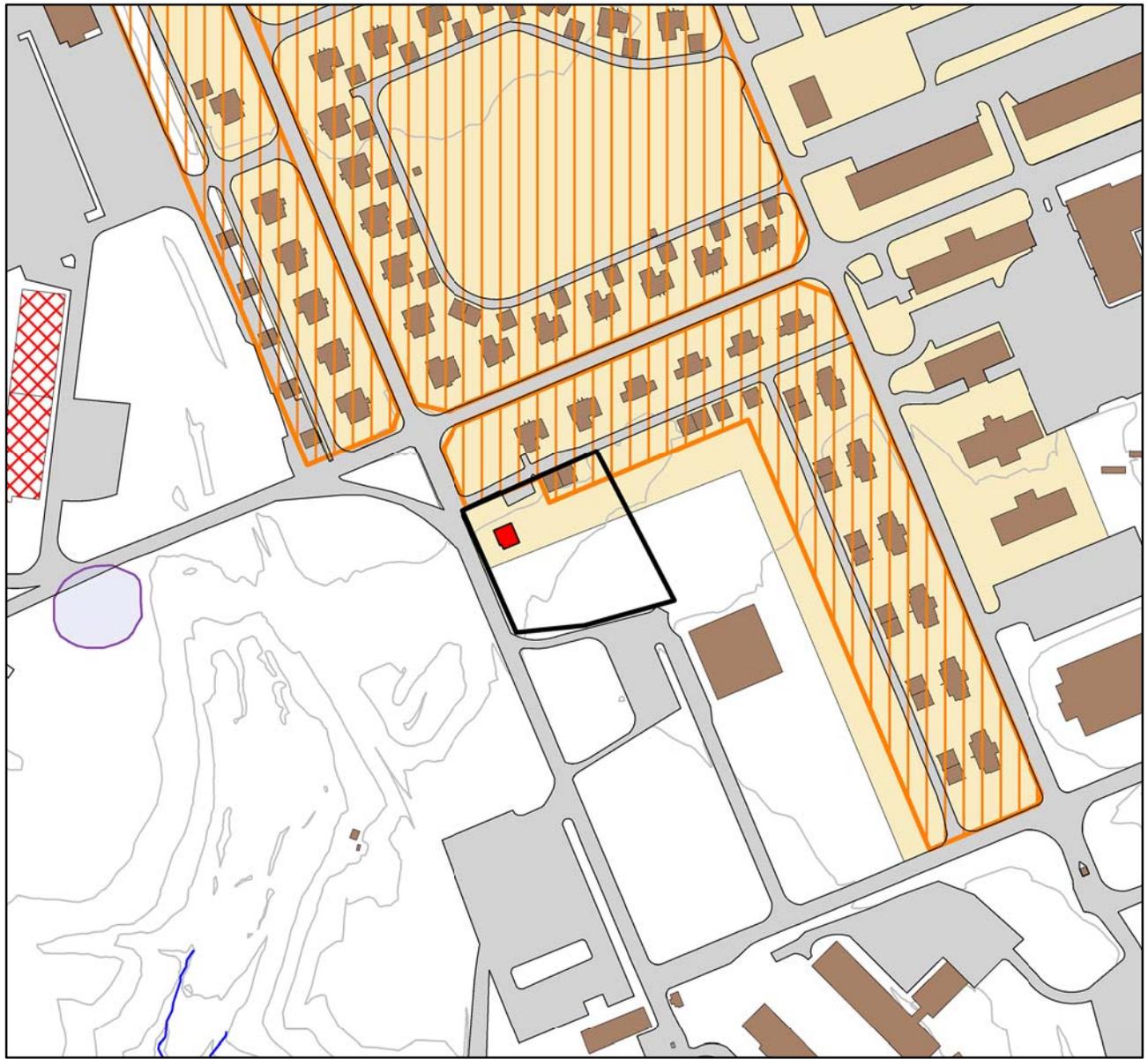
-  PARCEL BOUNDARY
-  EXISTING LODGING
-  ARCHEOLOGICAL SITE (NR INELIGIBLE)
-  ARCHEOLOGICAL SITE (NR ELIGIBLE)
-  ARCHEOLOGICAL SITE (REQUIRES RESEARCH)
-  CURRENT LEASE AREAS
-  PAVED AREAS
-  STREAMS
-  TOPOGRAPHY (10FT CONTOUR)
-  HISTORIC DISTRICT

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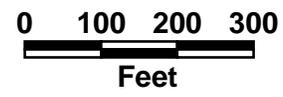


- PARCEL E  
THERMO-CON HOUSE**
-  PARCEL BOUNDARY
  -  PROPOSED PARKING
  -  PROPOSED HOTEL
  -  EXISTING LODGING
  -  ARCHEOLOGICAL SITE (NR INELIGIBLE)
  -  ARCHEOLOGICAL SITE (NR ELIGIBLE)
  -  ARCHEOLOGICAL SITE (REQUIRES RESEARCH)
  -  CURRENT LEASE AREAS
  -  PAVED AREAS
  -  STREAMS
  -  TOPOGRAPHY (10FT CONTOUR)
  -  HISTORIC DISTRICT

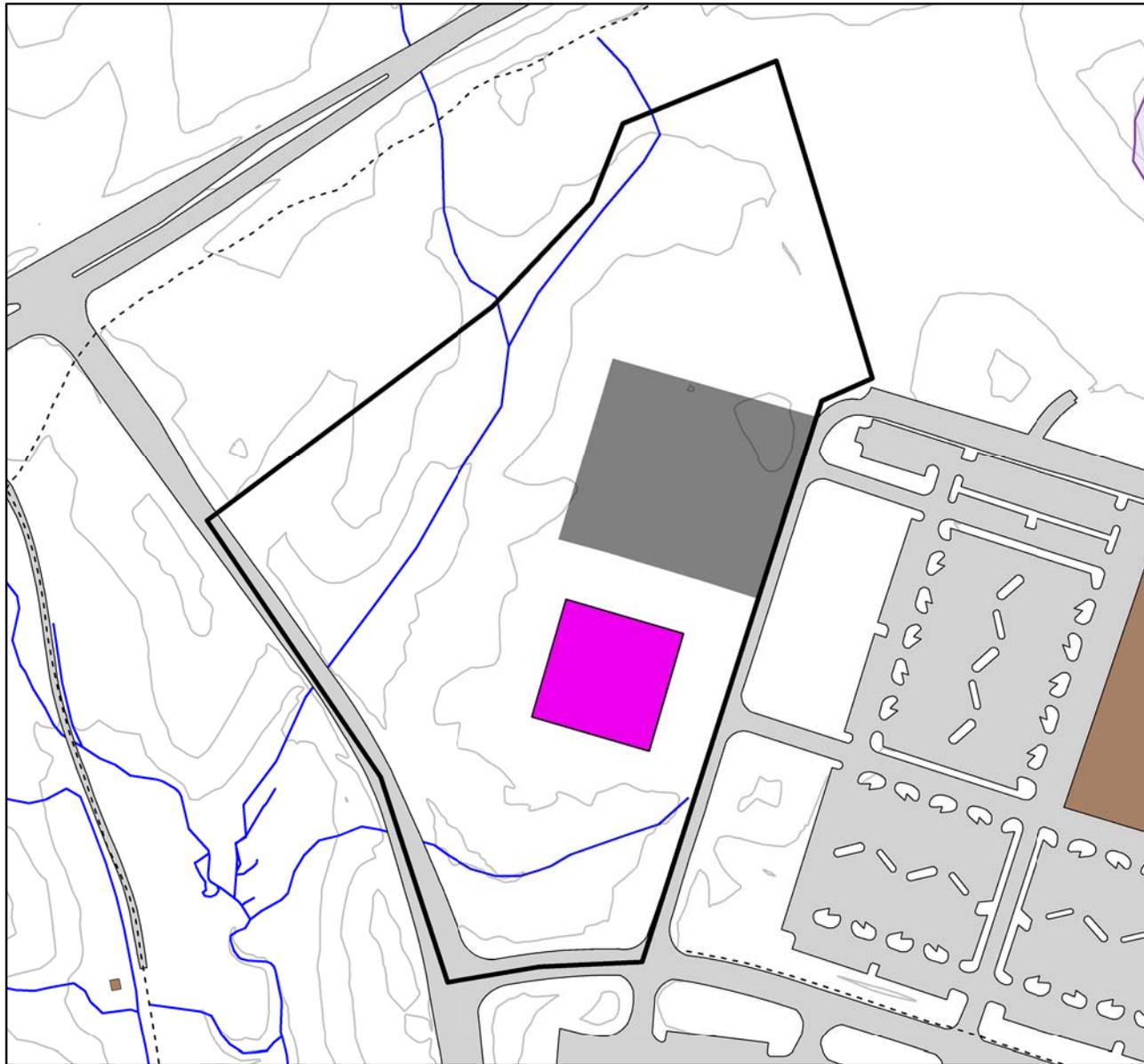
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**PARCEL G  
ALTERNATE NEW-BUILD SITE**

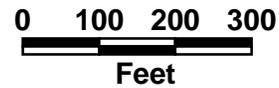


-  PARCEL BOUNDARY
-  PROPOSED PARKING
-  PROPOSED HOTEL
-  EXISTING LODGING
-  ARCHEOLOGICAL SITE (NR INELIGIBLE)
-  ARCHEOLOGICAL SITE (NR ELIGIBLE)
-  ARCHEOLOGICAL SITE (REQUIRES RESEARCH)
-  CURRENT LEASE AREAS
-  PAVED AREAS
-  STREAMS
-  TOPOGRAPHY (10FT CONTOUR)
-  HISTORIC DISTRICT

**FORT BELVOIR GIS CENTER**  
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 MAP UPDATED: 09/28/2010

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**APPENDIX B**  
**Record of Non-Applicability (RONA) and Emission Calculations**

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**RECORD OF NON-APPLICABILITY**

In Accordance with the Clean Air Act - General Conformity Rule For  
The Proposed Privatization of Army Lodging, Fort Belvoir, Virginia

December 10, 2010

The Army proposes to privatize the ownership and operations of its lodging at Fort Belvoir, Virginia. The Army would convey specified lodging facilities to Intercontinental Hotels Group (IHG). The Army would also grant 50-year leases of the land underlying the existing facilities, as well as other land for construction of new lodging facilities. IHG would be expected to meet Fort Belvoir's lodging requirements through operation and maintenance of the existing facilities, as well as by renovating inadequate facilities and constructing new ones. As a result of the action, the lodging inventory at Fort Belvoir would increase from 526 units to 539 units. The action would generate new direct and indirect emissions from the construction and operation of the additional facilities.

General Conformity under the Clean Air Act, Section 176 has been evaluated according to the requirements of Title 40 of the *Code of Federal Regulations* Part 93, Subpart B. The requirements of this rule are applicable to the action because:

The highest total annual direct and indirect emissions from this proposed action or any of the alternatives have been estimated at 6.2 tons of nitrous oxides (NO<sub>x</sub>), 1.5 tons of volatile organic compounds (VOCs), 0.6 tons fine particulate matter (PM<sub>2.5</sub>), and <0.01 tons sulfur dioxide (SO<sub>2</sub>) per year, which would be below the applicability threshold values of 50 tons VOCs and 100 tons for SO<sub>2</sub>, PM<sub>2.5</sub>, and NO<sub>x</sub>, and would not be *regionally significant*.

Supported documentation and emission estimates:

- Are attached
- Appear in the National Environmental Policy Act documentation
- Other (not necessary)

Maria A. Keen  
Signature

FB DPW EORD  
Title

7 Jan 11  
Date

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**Table B-1 Heavy Equipment Use**

Equipment Type	Number of Units	Days on Site	Hours Per Day	Operating Hours
Excavators Composite	1	115	4	460
Rollers Composite	1	173	8	1384
Rubber Tired Dozers Composite	1	115	8	920
Plate Compactors Composite	2	115	4	920
Trenchers Composite	1	58	8	464
Air Compressors	1	115	4	460
Cement & Mortar Mixers	1	115	6	690
Cranes	1	115	7	805
Generator Sets	1	115	4	460
Tractors/Loaders/Backhoes	2	230	7	3220
Pavers Composite	1	58	8	464
Paving Equipment	2	58	8	928

**Table B-2 Heavy Equipment Emission Factors (lbs/hour)**

Equipment	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Excavators Composite	0.5828	1.3249	0.1695	0.0013	0.0727	0.0727	119.6
Rollers Composite	0.4341	0.8607	0.1328	0.0008	0.0601	0.0601	67.1
Rubber Tired Dozers Composite	1.5961	3.2672	0.3644	0.0025	0.1409	0.1409	239.1
Plate Compactors Composite	0.0263	0.0328	0.0052	0.0001	0.0021	0.0021	4.3
Trenchers Composite	0.5080	0.8237	0.1851	0.0007	0.0688	0.0688	58.7
Air Compressors	0.3782	0.7980	0.1232	0.0007	0.0563	0.0563	63.6
Cement and Mortar Mixers	0.0447	0.0658	0.0113	0.0001	0.0044	0.0044	7.2
Cranes	0.6011	1.6100	0.1778	0.0014	0.0715	0.0715	128.7
Generator Sets	0.3461	0.6980	0.1075	0.0007	0.0430	0.0430	61.0
Tractors/Loaders/Backhoes	0.4063	0.7746	0.1204	0.0008	0.0599	0.0599	66.8
Pavers Composite	0.5874	1.0796	0.1963	0.0009	0.0769	0.0769	77.9
Paving Equipment	0.0532	0.1061	0.0166	0.0002	0.0063	0.0063	12.6

Source: CARB 2007a and 2007b.

**Table B-3 Heavy Equipment Emissions (Tons per Year)**

Equipment	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Excavators Composite	0.1341	0.3047	0.0390	0.0003	0.0167	0.0167	27.5037
Rollers Composite	0.3004	0.5956	0.0919	0.0005	0.0416	0.0416	46.4006
Rubber Tired Dozers Composite	0.7342	1.5029	0.1676	0.0011	0.0648	0.0648	109.9886
Plate Compactors Composite	0.0121	0.0151	0.0024	0.0000	0.0010	0.0010	1.9843
Trenchers Composite	0.1179	0.1911	0.0429	0.0002	0.0160	0.0160	13.6233
Air Compressors	0.0870	0.1835	0.0283	0.0002	0.0130	0.0130	14.6297
Cement and Mortar Mixers	0.0154	0.0227	0.0039	0.0000	0.0015	0.0015	2.5006
Cranes	0.2419	0.6480	0.0716	0.0006	0.0288	0.0288	51.7885
Generator Sets	0.0796	0.1605	0.0247	0.0002	0.0099	0.0099	14.0283
Tractors/Loaders/Backhoes	0.6542	1.2470	0.1939	0.0012	0.0964	0.0964	107.5583
Pavers Composite	0.1363	0.2505	0.0455	0.0002	0.0178	0.0178	18.0811
Paving Equipment	0.0247	0.0492	0.0077	0.0001	0.0029	0.0029	5.8593
<b>Total</b>	<b>2.54</b>	<b>5.17</b>	<b>0.72</b>	<b>0.0046</b>	<b>0.31</b>	<b>0.31</b>	<b>413.95</b>

**Table B-4 Painting**

VOC Content	0.84	lbs/gallon	
Coverage	400	sqft/gallon	
Emission Factor	0.0021	lbs/sqft	
Building/Facility	Wall Surface	VOC [lbs]	VOC [tpy]
All Buildings Combined	303000	636.3	0.318
<b>Total</b>	<b>303000</b>	<b>636.30</b>	<b>0.32</b>

Note: Emissions from other architectural coatings (i.e. adhesives, concrete coatings and form release compounds, roofing materials, etc) are expected to be minute.

**Table B-5 Delivery of Equipment and Supplies**

Number of Deliveries	4						
Number of Trips	2						
Miles Per Trip	30						
Days of Construction	230						
Total Miles	55200						
Pollutant	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Emission Factor (lbs/mile)	0.0219	0.0237	0.0030	0.0000	0.0009	0.0007	2.7
Total Emissions (lbs)	1211.59	1308.93	165.20	1.42	47.26	40.81	150112.8
Total Emissions (tpy)	0.61	0.65	0.08	0.0007	0.02	0.02	75.06

Source: CARB 2007a.

**Table B-6 Paving Off Gasses**

VOC Emissions Factor	2.62	lbs/acre	
Building/Facility	Area [acres]	VOC [lbs]	VOC [tpy]
All Combined Parking	2.03	5.32	0.0027
Total	2.03	5.32	0.0027

Source: SCAQMD 1993.

**Table B-7 Surface Disturbance**

TSP Emissions	80	lb/acre				
PM <sub>10</sub> /TSP	0.45					
PM <sub>2.5</sub> /PM <sub>10</sub>	0.15					
Period of Disturbance	30	days				
Capture Fraction	0.5					
	Area [acres]	TSP[lbs]	PM <sub>10</sub> [lbs]	PM <sub>10</sub> [tons]	PM <sub>2.5</sub> [lbs]	PM <sub>2.5</sub> [tons]
	5.5	13238	5957	2.98	447	0.22
Total	5.5	13238	5957	2.98	447	0.22

Sources: USEPA 1995 and USEPA 2005.

**Table B-8 Worker Commutes**

Number of Workers	50						
Number of Trips	2						
Miles Per Trip	30						
Days of Construction	230						
Total Miles	690000						
Pollutant	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Emission Factor (lbs/mile)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001	1.1
Total Emissions (lbs)	7278.42	760.99	744.64	7.42	58.69	36.52	758677.3
Total Emissions (tpy)	3.64	0.38	0.37	0.0037	0.03	0.02	379.34

Source: CARB 2007a.

**Table B-9 Total Construction and Demolition Emissions (tons per Year)**

Activity/Source	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Construction Equipment	2.54	5.17	0.72	0.0046	0.31	0.31	413.95
Painting	0.00	0.00	0.32	0.0000	0.00	0.00	0.00
Delivery of Equipment and Supplies	0.61	0.65	0.08	0.0007	0.02	0.02	75.06
Paving Off Gasses	0.00	0.00	0.00	0.0000	0.00	0.00	0.00
Surface Disturbance	0.00	0.00	0.00	0.0000	2.98	0.22	0.00
Worker Commutes	3.64	0.38	0.37	0.0037	0.03	0.02	379.34
Total Construction Emissions	6.78	6.21	1.50	0.0090	3.34	0.57	868.34

**Table B-10 Boiler Emissions (Net)**

Gross Area	9750.00	sf				
Heating Requirements	99000.00	btu/sf				
Total Annual Heat Required	965.25	MMBTU				
Heating Value	150.00	MMBTu/1000 Gallons				
Total #2 Oil Used	6.44	10 <sup>3</sup> Gallons				
Pollutant	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Emission Factor (lb/1000 gal)	5.00	24.00	2.49	0.10	2.00	2.00
Total Emissions (tons)	<b>0.02</b>	<b>0.08</b>	<b>0.01</b>	<b>&lt;0.01</b>	<b>0.01</b>	<b>0.01</b>

1. Emission factors for all pollutants were obtained from U.S. EPA's AP-42, Section 1.3. Conservatively assume that PM<sub>10</sub> = PM. Other fuels such as natural gas may be used - #2 oil was used to represent the worst case.

2. Assumed sulfur concentration 1%

3. Heating requirements obtained from Commercial Buildings Energy Consumption Survey, USDOE 2003.

**Table B-11 Patrons Trips (Net)**

Number of Patrons	13.00					
Number of Trips	8.70					
Miles Per Trip	60.00					
Days of Training	24.00					
Total Miles	162864.00					
Pollutant	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Emission Factor (lbs/mile)	0.01	0.00	0.00	0.00	0.00	0.00
Total Emissions (lbs)	1717.96	179.62	175.76	1.75	13.85	8.62
Total Emissions (tons)	<b>0.86</b>	<b>0.09</b>	<b>0.09</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>

Source: CARB 2007a.

Note: As the total number of units would remain the same, the total number of employees on Fort Belvoir is not expected to change appreciably with the proposed action.

**Table B-12 Net Operational Emissions (tons)**

Activity/Source	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Boiler Emissions	0.02	0.08	0.01	0.00	0.01	0.01
Patron Trips	0.86	0.09	0.09	0.00	0.01	0.00
Total Operational Emissions	<b>0.88</b>	<b>0.17</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>

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## **Appendix C**

### **Coastal Zone Management Act (CZMA) Consistency Determination for the Proposed Implementation of the Privatization of Army Lodging Program at Fort Belvoir, Virginia**

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## Coastal Zone Management Act (CZMA) Consistency Determination for Proposed Implementation of the Privatization of Army Lodging Program at Fort Belvoir, Virginia

The discussion in this Appendix provides the Commonwealth of Virginia with the Consistency Determination under CZMA section 307(c) (1) and Title 15 of the *Code of Federal Regulations* (CFR) Part 930, subpart C, for implementation of the Privatization of Army Lodging (PAL) program at Fort Belvoir. The information in this Consistency Determination is provided pursuant to 15 CFR 930.39. The Proposed Action involves those activities described below.

*[The following paragraphs of text summarize the proposed federal activity. A full description of the proposed activity may be found in the **Environmental Assessment (EA) for the Implementation of the Privatization of Army Lodging Program at Fort Belvoir, Virginia**, which is incorporated by reference into this Consistency Determination].*

The Army proposes to implement the PAL program at Fort Belvoir as part of the Military Housing Privatization Initiative. The PAL program is an initiative to improve facilities and services for transient lodging users. The proposed action is to transfer operation of the transient lodging to the private sector under a long-term lease. The Army would convey specified lodging units to Rest Easy LLC, a private-sector special purpose entity created by the Army's development partner, Actus Lend Lease, to execute the lease. The Army also would grant a 50-year lease of the land underlying the existing facilities, as well as other land for construction of new lodging facilities. Rest Easy would be expected to meet Fort Belvoir's lodging requirements by operating and maintaining the existing facilities, as well as renovating inadequate facilities and constructing new ones. The facilities and proposed lodging actions are described in Section 2 of the EA.

Implementing the PAL program at Fort Belvoir would entail constructing new lodging facilities and renovating existing facilities. Fort Belvoir provides on-post transient lodging services through the use of 534 lodging units in 12 buildings located in the southern part of the South Post in the cantonment area. For the purposes of this project, the lodging units and areas available for new construction have been grouped into five distinct parcels of land, as described in Section 2.3 of the EA. Implementing the PAL program at Fort Belvoir would involve short-term hold (5-year) lease, long-term hold (50-year) lease, and new building construction actions. The total number of lodging units at Fort Belvoir under the proposed action would increase from 534 to about 538. Initially, the existing lodging structures identified in Table 2-1 of the EA would be conveyed to Rest Easy. During the 5-year initial development period, Rest Easy would begin renovating the existing lodging structures and continue to operate them as lodging facilities. Lodging units conveyed to Rest Easy under the short-term hold lease would be used during the initial development period to maintain an appropriate number of available rooms while some of the other lodging structures undergo renovations and new lodging is being built. At the end of the initial development period, or as the new hotels become operational, these lodging units would be either demolished or retained, and the land would revert back to Fort Belvoir. Lodging units conveyed to Rest Easy under the long-term lease would be renovated; rebranded as Holiday Inn Express or Intercontinental Hotel Group Army hotels; and operated as lodging facilities during the 50-year lease period. Rest Easy plans to replace much of the outdated lodging infrastructure at Fort Belvoir by building one additional hotel—a 200-room Staybridge Suites, on Parcel A or Parcel G, as described in Section 2.3.2 of the EA.

## Consistency Determination

The Virginia Coastal Zone Management Program brings together a series of laws and policies pertaining to the protection of Virginia's coastal zone. These laws and policies regulate the following areas: tidal and nontidal wetlands, fisheries, subaqueous lands, dunes, point source air pollution, point source water pollution, nonpoint source water pollution, shoreline sanitation, and coastal lands management. Applicable enforceable policies of the Virginia Coastal Zone Management Program are described in the left column of Table C-1 below.

The Army has determined that the implementation of the PAL program at Fort Belvoir would have no or minor effects on the land or water uses or natural resources of Virginia as described in the right column of Table C-1. This column also identifies actions in accordance with federal and state regulations that would minimize or offset effects. In its comments on the *Draft Environmental Impact Statement (EIS) for Implementation of 2005 Base Realignment and Closure (BRAC) Recommendation and Related Army Actions at Fort Belvoir, Virginia*<sup>1</sup> and the *Draft General Conformity Determination (GCD) for Implementation of 2005 Base Realignment and Closure (BRAC) Recommendations and Related Army Actions at Fort Belvoir, Virginia*,<sup>2</sup> Virginia Department of Environmental Quality (VDEQ) objected to the Army's determination of consistency on the basis of insufficient information required to determine the consistency of the proposed BRAC projects with the Air Pollution Control enforceable policy of the Virginia Coastal Program. To mitigate these concerns, the Army has identified additional measures for air quality that were specified in Section 4.4.2.3 of the EIS that were approved by VDEQ. Identical or comparable measures would be employed as necessary for implementation of the PAL program to ensure consistency of the PAL program with the Air Pollution Control enforceable policy of the Virginia Coastal Program.

Based upon the information, data, and analysis, as contained in this EA, the Army finds that the proposed action is consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Zone Management Program. Pursuant to 15 CFR 930.41, the Virginia Coastal Zone Management Program has 60 days from the receipt of this document in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR 930.41(b). Virginia's concurrence will be presumed if its response is not received by the Army no later than the 60th day from receipt of this determination. The Commonwealth's response should be sent to Fort Belvoir Directorate of Public Works, ATTN: PAL Public Comments, 9430 Jackson Loop, Suite 100, Fort Belvoir, VA 22060-5116.

Table C-1 contains a summary analysis of the consistency of the proposed federal activity with the Virginia Coastal Zone Management Program.

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<sup>1</sup> USACE (U.S. Army Corps of Engineers), Mobile District. 2007. *Draft Environmental Impact Statement (EIS) for Implementation of 2005 Base Realignment and Closure (BRAC) Recommendation and Related Army Actions at Fort Belvoir, Virginia*. U.S. Army Corps of Engineers, Mobile District, Mobile, AL. March.

<sup>2</sup> Appendix E.1 of the March 2007 Draft EIS cited in Footnote 1.

**Table C-1**  
**Privatization of Army Lodging (PAL) Coastal Zone Consistency Determination**

<b>Applicable Enforceable Policies<sup>3</sup></b>	<b>Effects of the Federally Proposed Action</b>
<p><b>Tidal and Nontidal Wetlands Management</b></p> <p>The purpose of the wetlands management program is to preserve tidal wetlands, prevent their despoliation, and accommodate economic development in a manner consistent with wetlands preservation.</p> <ul style="list-style-type: none"> <li>(i) The tidal wetlands program is administered by the Marine Resources Commission (Virginia Code §28.2-1301 through §28.2-1320).</li> <li>(ii) The Virginia Water Protection Permit program is administered by the Department of Environmental Quality and includes protection of wetlands, both tidal and non-tidal. This program is authorized by Virginia Code §62.1-44.15.5 and the Water Quality Certification requirements of Section 401 of the Clean Water Act of 1972.</li> </ul>	<p><b>No Effect.</b></p> <p>The proposed action would not affect any tidal wetlands or nontidal wetlands. The Army would prepare and adhere to a Sediment and Erosion Control Plan to minimize sediment runoff to surface waters (also see non-point source pollution control section below) and downstream wetlands and Resource Protection Areas (RPAs) prior to initiation of site preparation and disturbance activities.</p>
<p><b>Fisheries Management</b></p> <p>The program stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities. This program is administered by the Marine Resources Commission (Virginia Code §28.2-200 through §28.2-713) and the Department of Game and Inland Fisheries (Virginia Code §29.1-100 through §29.1-570).</p> <p>The State Tributyltin (TBT) Regulatory Program has been added to the Fisheries Management program. The General Assembly amended the Virginia Pesticide Use and Application Act as it related to the possession, sale, or use of marine antifoulant paints containing TBT. The use of TBT in boat paint constitutes a serious threat to important marine animal species. The TBT program monitors boating activities and boat painting activities to ensure compliance with TBT regulations promulgated pursuant to the amendment. The Marine Resources Commission, Department of Game and Inland Fisheries, and Virginia Department of Agriculture and Consumer Services share enforcement responsibilities (Virginia Code §3.1-249.59 to §3.1-249.62).</p>	<p><b>No Effect.</b></p> <p>The proposed action would not involve building, dumping, or otherwise trespassing on or over, encroaching on, taking or using any material from the beds of the bays, ocean, rivers, streams, or creeks within Virginia. The proposed action would not have a reasonably foreseeable effect on fish spawning, nursery, or feeding grounds, and therefore none on fisheries management.</p> <p>No paints containing Tributyltin will be used under this proposed action.</p>

<sup>3</sup> VDEQ (Virginia Department of Environmental Quality). 2010. *Virginia CZM Program Laws and Enforceable Policies*. <http://www.deq.state.va.us/coastal/laws/pols.html>. Last updated May 17, 2010. Accessed July 2010.

**Table C-1, continued**  
**Privatization of Army Lodging (PAL) Coastal Zone Consistency Determination**

<b>Applicable Enforceable Policies</b>	<b>Effects of the Federally Proposed Action</b>
<p><b>Subaqueous Lands Management</b></p> <p>The management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the Department of Environmental Quality, Water Division. The program is administered by the Marine Resources Commission (Virginia Code §28.2-1200 to §28.2-1213).</p>	<p><b>No Effect.</b></p> <p>No subaqueous land use is proposed under this action. This project involves no encroachments in, on, or over state-owned submerged lands.</p>
<p><b>Dunes and Beaches Management</b></p> <p>Dune protection is carried out pursuant to the Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by the Marine Resources Commission (Virginia Code §28.2-1400 through §28.2-1420).</p>	<p><b>No Effect.</b></p> <p>No permanent alteration of or construction upon any coastal primary sand dune will take place under the proposed action.</p>
<p><b>Air Pollution Control</b></p> <p>The program implements the federal Clean Air Act to provide a legally enforceable State Implementation Plan (SIP) for the attainment and maintenance of the National Ambient Air Quality Standards. This program is administered by the State Air Pollution Control Board (Virginia Code §10-1.1300).</p>	<p><b>Minor Effect.</b></p> <p>The action would cause minor increases in emissions within the region. Increases in emissions would conform to the SIP, would be less than the applicability thresholds under the general conformity rules, and would not violate federal, state, or local air regulations. To ensure compliance with the Coastal Zone Management Requirements, the Army would require that contractors implement measures to reduce air quality impacts. These measures would be similar to those that were established to reduce the emissions associated with the overall BRAC action at Fort Belvoir to a level where they could reasonably be accounted for in the SIP. The measures are detailed in a Construction Performance Plan (CPP) provided in the <i>Construction Performance Plan for the Reduction of Air Emissions for Implementation of 2005 Base Realignment and Closure (BRAC) Recommendations and Related Army Actions at Fort Belvoir, Virginia</i> that is Attachment 1 of the <i>Record of Decision for Implementation of 2005 Base Realignment and Closure (BRAC) Recommendations and Related Army Actions at Fort Belvoir, Virginia</i> (USACE Mobile District 2007b). The measures include limiting construction on Code Orange, Red, and Purple ozone days; limiting the use of off-road trucks on the project site; requiring all off-road diesel equipment not meeting Tier 2 or better standards be retrofitted with emission control devices; implementing anti-idling restrictions for both on-road and off-road vehicles and equipment; requiring the use of ultra-low sulfur diesel fuel, alternate fuels, or fuel additives; and meeting new engine standards for off-road vehicles.</p>

**Table C-1, continued**  
**Privatization of Army Lodging (PAL) Coastal Zone Consistency Determination**

<b>Applicable Enforceable Policies</b>	<b>Effects of the Federally Proposed Action</b>
<p><b>Point Source Water Pollution Control</b></p> <p>The point source program is administered by the State Water Control Board pursuant to Virginia Code §62.1-44.15. Point source pollution control is accomplished through the implementation of the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the Virginia Pollutant Discharge Elimination System (VPDES) permit program and Virginia Pollution Abatement permits.</p>	<p><b>Minor Effect.</b></p> <p>Fort Belvoir holds the following VPDES permits: Municipal Separate Storm Sewer System (MS4), wastewater treatment for mobile reverse osmosis water purification units, general permit for stormwater discharges from construction sites, and general permit for stormwater discharges associated with industrial activities. The Army would work with VDEQ to revise permits as necessary while the PAL program is implemented, and would adhere to all conditions of the permits. Stormwater discharged through conveyances, such as separate storm sewers, ditches, channels or other conveyances are considered point sources under the Clean Water Act, and subject to regulation through the National Pollutant Discharge Elimination System permit program. Fort Belvoir's MS4 permit requires any contractor to comply with the installation's permit prior to any construction-related activities. This includes submitting a sediment and erosion control plan to DPW-ENRD when more than 1 acre of ground would be disturbed.</p>
<p><b>Non-point Source Water Pollution Control</b></p> <p>Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by the Department of Conservation and Recreation, Division of Chesapeake Bay Local Assistance (Virginia Code §10.1-560 et seq.). This agency regulates activities in Chesapeake Bay Resource Management Areas and Resource Protection Areas (RPAs) within 84 localities in Virginia's coastal zone.</p>	<p><b>Minor Effect.</b></p> <p>Activities would be required to comply with Fort Belvoir's Stormwater Pollution Prevention Plan (SWPPP) and Virginia Pollutant Discharge Elimination System MS4 permit requirements. Any contractors involved in site preparation or new construction would use erosion, sediment control, and post-construction BMPs as effective stormwater controls. Site-specific stormwater management plans will provide information relevant to each activity. No effects would be expected on any proposed PAL parcels where the only activities are interior and minor exterior building renovations.</p>
<p><b>Shoreline Sanitation</b></p> <p>The purpose of this program is to regulate the installation of septic tanks, set standards concerning soil types suitable for septic tanks, and specify minimum distances that tanks must be placed away from streams, rivers, and other waters of the Commonwealth. This program, which includes shellfish closures due to bacterial contamination, is administered by the Department of Health (Virginia Code §32.1-164 through §32.1-165).</p>	<p><b>No Effect.</b></p> <p>Fort Belvoir relies on its sanitary sewer system and does not employ septic systems.</p>

**Table C-1, continued**  
**Privatization of Army Lodging (PAL) Coastal Zone Consistency Determination**

<b>Applicable Enforceable Policies</b>	<b>Effects of the Federally Proposed Action</b>
<p><b>Coastal Lands Management</b></p> <p>This state-local cooperative program is administered by the Department of Conservation and Recreation's Division of Chesapeake Bay Local Assistance and 84 localities in Tidewater, Virginia, to regulate activities in Chesapeake Bay Resource Management Areas and RPAs in the 84 localities in Virginia's coastal zone. The program was established pursuant to the Chesapeake Bay Preservation Act, Virginia Code §10.1-2100 through §10.1-2114, and Chesapeake Bay Preservation Area Designation and Management Regulations, Virginia Administrative Code (VAC) 9 VAC 10-20-10 et seq.</p>	<p><b>No Effect.</b></p> <p>RPAs are present in the vicinity of, but not on Parcels B and C, and RPAs are present on portions of Parcels A, D, and G (location of RPA boundaries to be field verified, as discussed in Section 3.0). Buffer areas of not less than 100 feet adjacent to and landward of the components listed in 9 VAC 10-20-80 <i>Resource Protection Areas</i> would be adhered to. Site-specific stormwater management plans and sediment and erosion control plans would be developed prior to site disturbance activities, and BMPs would be developed and implemented in accordance with an on-site SWPPP. As mentioned under the Point Source Water Pollution Control section above, Fort Belvoir's MS4 permit requires any contractor to comply with the installation's permit prior to any construction-related activities. This includes submitting a sediment and erosion control plan to DPW-ENRD when more than 1 acre of ground would be disturbed.</p>

**APPENDIX D**  
**Economic Impact Forecast System (EIFS) Model**

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## **ECONOMIC IMPACT FORECAST SYSTEM (EIFS) MODEL**

### **SOCIOECONOMIC IMPACT ASSESSMENT**

Socioeconomic impacts are linked through cause-and-effect relationships. Military payrolls and local procurement contribute to the economic base for the ROI. In this regard, construction and renovation of lodging on Fort Belvoir would have a multiplier effect on the local and regional economy. With the proposed action, direct jobs would be created (e.g., construction jobs), generating new income and increasing personal spending. This spending generally creates secondary jobs, increases business volume, and increases revenues for schools and other social services.

### **THE ECONOMIC IMPACT FORECAST SYSTEM**

The U.S. Army, with the assistance of many academic and professional economists and regional scientists, developed EIFS to address the economic impacts of NEPA-requiring actions and to measure their significance. As a result of its designed applicability, and in the interest of uniformity, EIFS should be used in NEPA assessments. The entire system is designed for the scrutiny of a populace affected by the actions being studied. The algorithms in EIFS are simple and easy to understand, but still have firm, defensible bases in regional economic theory.

EIFS was developed under a joint project of the U.S. Army Corps of Engineers, the U.S. Army Environmental Policy Institute, and the Computer and Information Science Department of Clark Atlanta University. EIFS is implemented as an on-line system supported by the U.S. Army Corps of Engineers, Mobile District. The system is available to anyone with an approved user-id and password. U.S. Army Corps of Engineers staff is available to assist with the use of EIFS.

The databases in EIFS are national in scope and cover the approximately 3,700 counties, parishes, and independent cities that are recognized as reporting units by federal agencies. EIFS allows the user to define an economic ROI by identifying the counties, parishes, or cities to be analyzed. Once the ROI is defined, the system aggregates the data, calculates multipliers and other variables used in the various models in EIFS, and prompts the user for forecast input data.

### **THE EIFS MODEL**

The basis of the EIFS analytical capabilities is the calculation of multipliers that are used to estimate the impacts resulting from Army-related changes in local expenditures or employment. In calculating the multipliers, EIFS uses the economic base model approach, which relies on the ratio of total economic activity to basic economic activity. Basic, in this context, is defined as the production or employment engaged to supply goods and services outside the ROI or by federal activities (such as military installations and their employees). According to economic base theory, the ratio of total income to basic income is measurable (as the multiplier) and sufficiently stable so that future changes in economic activity can be forecast. This technique is especially appropriate for estimating aggregate impacts and makes the economic base model ideal for the EA and EIS process.

The multiplier is interpreted as the total impact on the economy of the region resulting from a unit change in its base sector; for example, a dollar increase in local expenditures due to an expansion of its military installation. EIFS estimates its multipliers using a location quotient approach based on the concentration of industries within the region relative to the industrial concentrations for the nation.

The user inputs into the model the data elements which describe the Army action: the change in expenditures, or dollar volume of the construction project(s); change in civilian or military employment; average annual income of affected civilian or military employees; the percent of civilians expected to relocate due to the Army's action; and the percent of military living on-post. Once these are entered into the EIFS model, a projection of changes in the local economy is provided. These are projected changes in sales volume, income, employment, and population. These four indicator variables are used to measure and evaluate socioeconomic impacts. Sales volume is the direct and indirect change in local business activity and sales (total retail and wholesale trade sales, total selected service receipts, and value-added by manufacturing). Employment is the total change in local employment due to the proposed action, including not only the direct and secondary changes in local employment, but also those personnel who are initially affected by the military action. Income is the total change in local wages and salaries due to the proposed action, which includes the sum of the direct and indirect wages and salaries, plus the income of the civilian and military personnel affected by the proposed action. Population is the increase or decrease in the local population as a result of the proposed action.

The PAL program at Fort Belvoir would require construction of new lodging and renovation of existing lodging. The current working estimate for the cost of renovation and construction of these facilities (about \$46,870,000) was divided over the projected 5-year initial development period and entered as the change in expenditures (about \$9,374,000 per year). The proposed action would not change the number of military or civilian personnel assigned to Fort Belvoir.

### **THE SIGNIFICANCE OF SOCIOECONOMIC IMPACTS**

Once model projections are obtained, the Rational Threshold Value (RTV) profile allows the user to evaluate the significance of the impacts. This analytical tool reviews the historical trends for the defined region and develops measures of local historical fluctuations in sales volume, income, employment, and population. These evaluations identify the positive and negative changes within which a project can affect the local economy without creating a significant impact. The greatest historical changes define the boundaries that provide a basis for comparing an action's impact on the historical fluctuation in a particular area. Specifically, EIFS sets the boundaries by multiplying the maximum historical deviation of the following variables:

		Increase	Decrease
Sales Volume	X	100%	75%
Income	X	100%	67%
Employment	X	100%	67%
Population	X	100%	50%

These boundaries determine the amount of change that will affect an area. The percentage allowances are arbitrary, but sensible. The maximum positive historical fluctuation is allowed with expansion because economic growth is beneficial. While cases of damaging economic growth have been cited, and although the zero-growth concept is being accepted by many local planning groups, military base reductions and closures generally are more injurious to local economics than are expansion.

The major strengths of the RTV are its specificity to the region under analysis and its basis on actual historical data for the region. The EIFS impact model, in combination with the RTV, has proven successful in addressing perceived socioeconomic impacts. The EIFS model and the RTV technique for measuring the intensity of impacts have been reviewed by economic experts and have been deemed theoretically sound.

The following are the EIFS input and output data for the proposed action and the RTV values for the ROI.

## EIFS REPORT

### PROJECT NAME

Fort Belvoir PAL EA

### STUDY AREA

11001 District of Columbia	51153 Prince William, VA
24009 Calvert, MD	51177 Spotsylvania, VA
24017 Charles, MD	51179 Stafford, VA
24021 Frederick, MD	51510 Alexandria, VA
24031 Montgomery, MD	51600 Fairfax, VA
24033 Prince George's, MD	51610 Falls Church, VA
51013 Arlington, VA	51630 Fredericksburg, VA
51059 Fairfax, VA	51683 Manassas, VA
51061 Fauquier, VA	51685 Manassas Park, VA
51107 Loudoun, VA	

### FORECAST INPUT

Change In Local Expenditures	\$9,374,000
Change In Civilian Employment	0
Average Income of Affected Civilian	\$0
Percent Expected to Relocate	0
Change In Military Employment	0
Average Income of Affected Military	\$0
Percent of Military Living On-post	0

### FORECAST OUTPUT

Employment Multiplier	2.83	
Income Multiplier	2.83	
Sales Volume – Direct	\$9,374,000	
Sales Volume – Induced	\$17,154,420	
Sales Volume – Total	\$26,528,420	0.01%
Income – Direct	\$1,984,455	
Income - Induced	\$3,631,553	
Income – Total (place of work)	\$5,616,008	0.0%
Employment – Direct	41	
Employment – Induced	75	
Employment – Total	116	0.0%
Local Population	0	
Local Off-base Population	0	0%

### RTV SUMMARY

	Sales Volume	Income	Employment	Population
Positive RTV	12.08%	11.60%	3.42%	1.19%
Negative RTV	-4.49%	-3.85%	-2.92%	-0.72%

**RTV DETAILED****SALES VOLUME**

Year	Value	Adj. Value	Change	Deviation	% Deviation
1969	12620351	55150932	0	0	0
1970	13964470	57673263	2522330	-504942	-0.88
1971	15485031	61320723	3647461	620189	1.01
1972	17062798	65350515	4029792	1002520	1.53
1973	18745902	67672704	2322189	-705083	-1.04
1974	20536384	66743248	-929456	-3956728	-5.93
1975	22536608	67159092	415844	-2611428	-3.89
1976	24902753	70225762	3066670	39398	0.06
1977	27489475	72572217	2346455	-680817	-0.94
1978	30361495	74689279	2117062	-910210	-1.22
1979	33718739	74518414	-170864	-3198136	-4.29
1980	37716370	73169760	-1348655	-4375927	-5.98
1981	41752812	73484949	315189	-2712083	-3.69
1982	45028041	74746547	1261598	-1765674	-2.36
1983	49027852	78934842	4188296	1161024	1.47
1984	55110350	84869937	5935094	2907822	3.43
1985	60930041	90785762	5915825	2888553	3.18
1986	66730773	97426931	6641169	3613897	3.71
1987	73713445	114255836	16828905	13801633	12.08
1988	81637227	111026630	-3229206	-6256478	-5.64
1989	88134955	113694089	2667459	-359813	-0.32
1990	93128824	114548455	854367	-2172905	-1.9
1991	96031092	113316684	-1231772	-4259044	-3.76
1992	101747920	115992627	2675944	-351328	-0.3
1993	106815940	118565695	2573068	-454204	-0.38
1994	111291636	120194972	1629277	-1397995	-1.16
1995	115294774	121059507	864536	-2162736	-1.79
1996	120131120	122533740	1474233	-1553039	-1.27
1997	127441548	127441548	4907808	1880536	1.48
1998	136996018	134256100	6814552	3787280	2.82
1999	148729402	142780223	8524122	5496850	3.85
2000	163466276	152023638	9243415	6216143	4.09

**INCOME**

Year	Value	Adj_Value	Change	Deviation	% Deviation
1969	14523081	63465862	0	0	0
1970	16267651	67185400	3719538	107920	0.16
1971	17983467	71214530	4029130	417512	0.59
1972	19736371	75590299	4375769	764151	1.01
1973	21667443	78219467	2629168	-982450	-1.26
1974	23865641	77563333	-656134	-4267752	-5.5
1975	26153806	77938342	375009	-3236609	-4.15
1976	28765155	81117735	3179393	-432225	-0.53
1977	31609196	83448281	2330546	-1281072	-1.54
1978	34885683	85818782	2370501	-1241117	-1.45
1979	38806466	85762291	-56490	-3668108	-4.28
1980	43787476	84947706	-814585	-4426203	-5.21
1981	49262226	86701517	1753811	-1857807	-2.14
1982	53759980	89241565	2540048	-1071570	-1.2
1983	58383424	93997313	4755748	1144130	1.22
1984	65766325	101280138	7282825	3671207	3.62
1985	72310933	107743291	6463153	2851535	2.65
1986	78585130	114734293	6991002	3379384	2.95
1987	86373182	133878428	19144135	15532517	11.6
1988	95607005	130025528	-3852900	-7464518	-5.74
1989	104177786	134389340	4363812	752194	0.56
1990	110601908	136040349	1651009	-1960609	-1.44
1991	115174513	135905919	-134430	-3746048	-2.76
1992	121306396	138289290	2383370	-1228248	-0.89
1993	127746201	141798285	3508995	-102623	-0.07
1994	133949441	144665402	2867117	-744501	-0.51
1995	138888364	145832776	1167374	-2444244	-1.68
1996	145255323	148160427	2327651	-1283967	-0.87
1997	153597016	153597016	5436589	1824971	1.19
1998	165574379	162262895	8665879	5054261	3.11
1999	176952266	169874172	7611277	3999659	2.35
2000	192513591	179037641	9163469	5551851	3.1

**EMPLOYMENT**

Year	Value	Change	Deviation	% Deviation
1969	1574726	0	0	0
1970	1607778	33052	-23873	-1.48
1971	1647945	40167	-16758	-1.02
1972	1698994	51049	-5876	-0.35
1973	1755415	56421	-504	-0.03
1974	1789538	34123	-22802	-1.27
1975	1808135	18597	-38328	-2.12
1976	1838277	30142	-26783	-1.46
1977	1888270	49993	-6932	-0.37
1978	1964835	76565	19640	1
1979	2027907	63072	6147	0.3
1980	2065880	37973	-18952	-0.92
1981	2091744	25864	-31061	-1.48
1982	2095440	3696	-53229	-2.54
1983	2161541	66101	9176	0.42
1984	2297068	135527	78602	3.42
1985	2430182	133114	76189	3.14
1986	2560806	130624	73699	2.88
1987	2697873	137067	80142	2.97
1988	2807645	109772	52847	1.88
1989	2885205	77560	20635	0.72
1990	2921397	36192	-20733	-0.71
1991	2853964	-67433	-124358	-4.36
1992	2844527	-9437	-66362	-2.33
1993	2892893	48366	-8559	-0.3
1994	2929083	36190	-20735	-0.71
1995	2984701	55618	-1307	-0.04
1996	3026387	41686	-15239	-0.5
1997	3092055	65668	8743	0.28
1998	3157148	65093	8168	0.26
1999	3257572	100424	43499	1.34
2000	3396315	138743	81818	2.41

**POPULATION**

Year	Value	Change	Deviation	% Deviation
1969	3041328	0	0	0
1970	3106494	65166	12285	0.4
1971	3158192	51698	-1183	-0.04
1972	3224890	66698	13817	0.43
1973	3242307	17417	-35464	-1.09
1974	3250914	8607	-44274	-1.36
1975	3274956	24042	-28839	-0.88
1976	3292297	17341	-35540	-1.08
1977	3297597	5300	-47581	-1.44
1978	3324437	26840	-26041	-0.78
1979	3329564	5127	-47754	-1.43
1980	3352468	22904	-29977	-0.89
1981	3409642	57174	4293	0.13
1982	3451450	41808	-11073	-0.32
1983	3502848	51398	-1483	-0.04
1984	3577999	75151	22270	0.62
1985	3656821	78822	25941	0.71
1986	3748386	91565	38684	1.03
1987	3846868	98482	45601	1.19
1988	3942314	95446	42565	1.08
1989	4015295	72981	20100	0.5
1990	4064049	48754	-4127	-0.1
1991	4124199	60150	7269	0.18
1992	4187256	63057	10176	0.24
1993	4247488	60232	7351	0.17
1994	4306031	58543	5662	0.13
1995	4357133	51102	-1779	-0.04
1996	4416110	58977	6096	0.14
1997	4479986	63876	10995	0.25
1998	4548824	68838	15957	0.35
1999	4637826	89002	36121	0.78
2000	4733525	95699	42818	0.9

\*\*\*\*\* End of Report \*\*\*\*\*

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**APPENDIX E**  
**Solid Waste Calculations**

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**Table E-1. Fort Belvoir PAL Group B Construction and Demolition Non-hazardous Solid Waste Calculations**

Parcel	Action	Building number	Building or site name	Building square footage	Renovation debris-lb/sq ft	Demolition debris-lb/sq ft	Construction debris-lb/sq ft	Total renovation debris	Total demolition debris	Total construction debris
A	Renovate	470	Knadle Hall	107,446	20			2,148,920		
B	Renovate/demolish	505		24,436	20	115		488,720	2,810,140	
	Renovate/demolish	506		24,436	20	115		488,720	2,810,140	
	Renovate	507		23,184	20			463,680		
	Renovate	508		23,184	20			463,680		
	Renovate	509		20,476	20			409,520		
C	Renovate/demolish	806		9,782	20	115		195,640	1,124,930	
	Renovate/demolish	807		13,108	20	115		262,160	1,507,420	
D	Renovate/return	80		16,979	20			339,580		
	Renovate/return	81		16,979	20			339,580		
A or G	New build/200-room	200	Staybridge Suites	115,000			4.4			506,000
								5,600,200	8,252,630	506,000
								2,800	4,126	253
								Recycled quantity:		
								2,800,100	4,126,315	253,000
								1,400	2,063	127
								Total:		
								1,400	2,063	127
								1,400	2,063	127

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**APPENDIX F**

**Map of Jurisdictional Determination, Parcel G and Surroundings**

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### Wetland and Stream Summary Table

Classification	Length (LF)	Area (SF)	Area (Ac)
Perennial Stream (R3)	890	-	-
Intermittent Stream (R4)	2,647*	-	-
Ephemeral Stream	425*	-	-
Palustrine Forested Wetlands (PFO)	-	145	0.003
<b>Total Wetlands and Streams</b>	<b>3,962*</b>	<b>145</b>	<b>0.003</b>

\*Stream lengths revised per Jurisdictional Determination site visit conducted with the USCAE on May 27, 2009.

### Legend

- Index Contours
- Contours (CI=2')
- Perennial Tributaries (R3)
- Intermittent Tributaries (R4)
- Ephemeral Tributaries
- Palustrine Wetlands (PFO)
- Flag Number
- Datapoint
- Photograph

### NOTES:

- The limits of investigation for the Project includes approximately 107 acres bounded by Kingman Road to the north, Woodlawn Road to the east, Gorgas Road to the south, and Gunston Road to the west at Fort Belvoir, Fairfax County, Virginia. The property includes the existing commissary, PX, parking lots, and stormwater management facilities.
- Topography and existing conditions mapping provided by Bowman Consulting Group, Ltd. (BCG).
- Based on current Chesapeake Bay Preservation Area Maps for Fairfax County (100-3 and 109-1, Revised to August 1, 2005), Resource Protection Areas (RPA) are not mapped within the limits of investigation.
- An evaluation of the tributaries within the limits of investigation was conducted by BCG in June 2008 using the Fairfax County DPWES Perennial Stream Field Identification Protocol (May 2003), as requested by the Directorate of Public Works of Fort Belvoir. The recommended classifications (perennial or non-perennial) were determined from the results of the Perennial Stream and RPA Determination study. These boundaries should be considered preliminary until they have been approved by the U.S. Army Garrison Fort Belvoir.
- The waters of the U.S. boundaries, including wetlands, were delineated by Bowman Consulting Group, Ltd. (BCG) on July 22 and 23, 2008 based on the requirements of the Corps of Engineers' Wetlands Delineation Manual (1987), and represent those areas that will most likely be considered jurisdictional by the U.S. Army Corps of Engineers.
- The flagged wetland and stream boundaries were field-located by BCG in July 2008 using conventional survey methods. The survey information is provided at Virginia State Grid North NAD83, US Survey Feet on this Wetland Delineation Map.
- Per the Jurisdictional Determination site visit conducted by the U.S. Army Corps of Engineers on May 27, 2009, additional stream areas (intermittent and ephemeral) have been added to this Wetland Delineation Map as shown.
- Please refer to the original Wetland Delineation Report prepared by BCG dated August 22, 2008 for more detailed information, including the data sheets and photographs.

### Datapoint Summary Table

Data Point	Mapped Soil Unit*	Hydrophytic Vegetation	Wetland Hydrology	Hydric Soils	Community ID
DP-1	N/A	No	No	Yes	Upland
DP-2	N/A	No	Yes	No	Upland
DP-3	N/A	No	Yes	No	Upland
DP-4	N/A	No	No	No	Upland
DP-5	N/A	No	Yes	No	Upland
DP-6	N/A	No	Yes	No	Upland
DP-7	N/A	No	Yes	No	Upland
DP-8	N/A	No	No	No	Upland
DP-9	N/A	No	No	No	Upland
DP-A1	N/A	No	Yes	No	Upland
DP-BB1	N/A	No	Yes	Yes	Upland
DP-BA1	N/A	Yes	Yes	Yes	PFO
DP-D1	N/A	Yes	No	No	Upland

\* Soils have not been formally mapped by NRCS or Fairfax County within this portion of Fort Belvoir

COUNTY PROJECT NUMBER

PLAN STATUS

8/28/08 Original submission

5/28/09 Revised per JLD site visit with USACE

DATE DESCRIPTION

DESIGN JLF

DRAWN CHKD

SCALE H: 1"=120'

V:

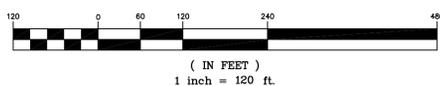
JOB No. 4505-01-001

DATE : August 2008

FILE No.

SHEET 1 OF 1

### GRAPHIC SCALE



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**APPENDIX G**  
**Draft Programmatic Agreement**

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1  
2  
3  
4  
5  
6  
7  
8  
9

**PROGRAMMATIC AGREEMENT  
BETWEEN  
FORT BELVOIR, VIRGINIA  
AND THE  
VIRGINIA STATE HISTORIC PRESERVATION OFFICER  
FOR THE  
PRIVATIZATION OF ARMY LODGING**

10 **1. WHEREAS,** the Army, pursuant to the Military Housing Privatization Initiative (P.L.  
11 104-106, 110 Stat. 544, Title XXVIII, Subtitle A, Section 2801), which amends 10  
12 U.S.C. Chapter 169, by addition of a new Subchapter IV—Alternative Authority for  
13 Acquisition and Improvement of Military Housing, codified at 10 U.S.C. § 2871, et seq.,  
14 has directed Fort Belvoir to solicit proposals from one or more qualified private entities  
15 to construct or renovate, and operate, maintain and manage, all such housing and certain  
16 ancillary facilities for an initial period of 50 years at Fort Belvoir, Virginia, through the  
17 Privatization of Army Lodging Initiative (PAL) (Undertaking); and  
18

19 **2. WHEREAS,** Rest Easy LLC (Partnership) will implement the privatization of portions  
20 of the current Army lodging and ancillary facilities at Fort Belvoir under PAL; and  
21

22 **3. WHEREAS,** the Partnership shall be a separate legal entity formed after  
23 Congressional review of the Fort Belvoir PAL project at closing, the partners of the  
24 Partnership shall be the Department of the Army, acting through the Garrison  
25 Commander of Fort Belvoir, and Rest Easy, LLC; and  
26

27 **4. WHEREAS,** the Partnership shall be granted a Lease of portions of the existing Fort  
28 Belvoir lodging (consisting of Parcels A, B, C, D) and on a parcel of undeveloped land  
29 on Fort Belvoir (Parcel A or G) for new hotel construction, as shown in Attachment A.  
30

31 **5. WHEREAS,** the stipulations of this Programmatic Agreement (Agreement) shall be  
32 made an exhibit to the Lease so that the stipulations become an integral part of the Lease;  
33 and  
34

35 **6. WHEREAS,** following execution of the Lease, Army lodging functions shall  
36 discontinue at Building 172 (Thermo-Con House) and Building 20 (Officer's Club); and  
37

38 **7. WHEREAS,** PAL at Fort Belvoir will result in the transfer of short and long-term  
39 interest in the construction, demolition, renovation, rehabilitation, operation, and  
40 maintenance of lodging and other ancillary facilities at Fort Belvoir (as outlined in  
41 Attachment C) largely independent of direct government control, but intended for the use  
42 by Army personnel and guests; and  
43

44 **8. WHEREAS,** Fort Belvoir has determined that implementation of the Undertaking has  
45 the potential to effect historic properties eligible for listing in the National Register of  
46 Historic Places (NRHP) and has consulted with the Virginia State Historic Preservation

1 Officer (SHPO) in accordance with section 106 of the National Historic Preservation Act  
2 (NHPA), as amended, (16 U.S.C. 470 et.seq.) and the implementing regulations found at  
3 36 CFR Part 800 (rev. 2004); and  
4

5 **9. WHEREAS**, Fort Belvoir in consultation with the SHPO has determined that the Area  
6 of Potential Effects (APE) for the Undertaking is defined as shown in Attachment A; and  
7

8 **10. WHEREAS**, Fort Belvoir has conducted historic property inventory and evaluation  
9 efforts within the APE in consultation with the SHPO in accordance with 36 CFR Part  
10 800.4 and the results of those efforts are outlined in Attachment B; and  
11

12 **11. WHEREAS**, Buildings 505, 506, 507, 508, 509, 806, and 807 were constructed as  
13 unaccompanied personnel housing between 1956 and 1969 and are subject to the  
14 *Program Comment for Cold War Era Unaccompanied Personnel Housing 1946-1974*;  
15 and  
16

17 **12. WHEREAS**, the stipulations of this Agreement are binding on all signatories and  
18 their respective successors and assigns provided that this Agreement will be incorporated  
19 into the Lease as an exhibit such that this Agreement will become binding upon the  
20 Partnership upon the execution of the Lease; and  
21

22 **13. WHEREAS**, Fort Belvoir has invited the Advisory Council on Historic Preservation  
23 (ACHP) to participate in the resolution of adverse effects to properties eligible for listing  
24 in the NRHP pursuant to 36 CFR Part 800.6(a)(1) and the ACHP has declined to  
25 participate as a consulting party in a letter dated December 08, 2010; and  
26

27 **14. WHEREAS**, the Partnership has been provided the opportunity to review and  
28 comment on the draft language of this Agreement and has been invited to concur with  
29 this Agreement pursuant to 36 CFR Part 800.6(c) (3); and  
30

31 **15. WHEREAS**, the Fairfax County, Virginia was contacted and invited to participate,  
32 and opted to participate in letter dated December 09, 2010; and  
33

34 **16. WHEREAS**, the Army has provided the public an opportunity to comment on this  
35 Undertaking through the National Environmental Policy Act process via an Environment  
36 Assessment; and  
37

38 **17. WHEREAS**, Fort Belvoir has completed Section 106 compliance under the NHPA  
39 for Capehart and Wherry Era Housing, World War II Temporary Wooden Buildings,  
40 Cold War Era Unaccompanied Personnel Housing, and World War II and Cold War Era  
41 Ammunition Storage Facilities through the Program Comment for Capehart and Wherry  
42 Era Army Family Housing and Associated Structures and Landscape Features (1949-62),  
43 approved on 31 May 2002 by the ACHP; and the Programmatic Memorandum of  
44 Agreement between the DoD, ACHP, and the National Conference of SHPOs (NCSHPO)  
45 regarding demolition of World War II Temporary Buildings, signed in July 1986, and  
46 amended in May 1991; and the Program Comment for Cold War Era (1946-1974)

1 Unaccompanied Personnel Housing, approved on 21 May 2007 by the ACHP; and the  
2 Program Comment on World War II and Cold War Era (1939-1974) Ammunition Storage  
3 Facilities, approved on 21 May 2007 by the ACHP; and  
4

5 **18. WHEREAS**, Fort Belvoir has completed Section 106 compliance under the NHPA  
6 for the privatization of Family Housing on Fort Belvoir through the Programmatic  
7 Agreement between US Army Garrison Fort Belvoir and the Virginia State Historic  
8 Preservation Officer for the Privatization of Family Housing at Fort Belvoir, VA (RCI  
9 PA) signed 18 August 2003, nothing in this Agreement shall be interpreted as amending,  
10 nullifying, or otherwise changing any term of the existing RCI PA.; and  
11

12 **19. WHEREAS**, Fort Belvoir has completed Section 106 compliance under the NHPA  
13 for the Base Realignment and Closure (BRAC) Related Expansion of Fort Belvoir,  
14 Virginia through the Programmatic Agreement among US Army Garrison Fort Belvoir,  
15 the Virginia State Historic Preservation Officer, the Catawba Tribal Historic Preservation  
16 Officer and the Advisory Council on Historic Preservation for the Base Realignment and  
17 Closure (BRAC) Related Expansion of Fort Belvoir, Virginia (BRAC PA) signed 18  
18 January 2008, nothing in this Agreement shall be interpreted as amending, nullifying, or  
19 otherwise changing any term of the existing BRAC PA; and  
20

21 **NOW THEREFORE**, Fort Belvoir and the SHPO (Signatories) agree that the  
22 Undertaking shall be implemented in accordance with the following stipulations in order  
23 to take into account the effect of the Undertaking on historic properties and this  
24 Agreement, when executed, evidences the Army has taken to into account the effect of  
25 the Undertaking on historic properties and sought ways to avoid, reduce or mitigate  
26 adverse effects as required under Section 106 of the NHPA of 1966, as amended.  
27  
28  
29

## 30 **STIPULATIONS**

31  
32 Fort Belvoir shall ensure that the following measures are carried out:  
33

### 34 **I. PROFESSIONAL QUALIFICATIONS STANDARDS AND BASELINE** 35 **INFORMATION FOR DESIGN DEVELOPMENT**

#### 36 **A. Fort Belvoir Cultural Resource Management Staff.**

- 37  
38  
39 1. Staff shall consist of a Cultural Resource Manager (CRM) at Fort Belvoir. The  
40 Fort Belvoir CRM shall serve as the primary point of contact for this Undertaking  
41 and shall be responsible for all internal Army review and coordination of historic  
42 properties between Fort Belvoir and the SHPO under this Agreement.  
43  
44 2. The Fort Belvoir CRM shall have access to Qualified Staff. For the purposes of  
45 this Agreement, "Qualified Staff" is defined as an individual who meets the  
46 Secretary of the Interior's *Professional Qualification Standards* (48 FR 44716,

1 Sept., 1983). Qualified Staff shall have professional qualifications, training, and  
2 experience relevant to the technical requirements of a given undertaking. For  
3 example: Architectural Historians or Historical Architects will be utilized to  
4 survey historic buildings, while Archaeologists or Anthropologists will be utilized  
5 to perform archaeological investigations.  
6

7 **B. Partnership Cultural Resource Management Staff.** For the purposes of this  
8 Agreement, the Partnership staff shall also utilize individuals, who meet the Secretary of  
9 the Interior's *Professional Qualification Standards* (48 FR 44716, Sept., 1983). The  
10 Partnership's qualified staff shall coordinate the preparation, development and review of  
11 rehabilitation plans, proposed projects and work requirements that affect historic  
12 properties. The Partnership's qualified staff shall act on behalf of the Partnership and  
13 participate in consultations between the Army, the Fort Belvoir CRM, and the SHPO  
14 concerning plans, projects, and work requirements as listed above.  
15

16 **C. Baseline Documentation for Buildings 80 and 81.** Fort Belvoir shall require the  
17 Partnership to document existing interior and exterior conditions of Buildings 80 and 81  
18 in an Existing Conditions Survey and Assessment (ECSA) prior to commencement of  
19 rehabilitation work and submit the document to the Fort Belvoir CRM.  
20

- 21 1. The ECSA shall record all character defining elements that qualify the structure for  
22 the NRHP, interior and exterior, through written materials, available existing  
23 drawings, diagrams and photographs (both current conditions and historic views).  
24 All photographic documentation shall be consistent with the SHPO guidance  
25 found in "Photographic Documentation for National Park Service (NPS) Register  
26 Nominations and Virginia Department of Historic Resources (DHR) Basic  
27 Survey" (Updated September 13, 2006).  
28
- 29 2. The Fort Belvoir CRM shall provide the draft ECSA to the signatories and other  
30 consulting parties of this Agreement for review and comment. The signatories  
31 and other consulting parties shall have thirty (30) days in which to review and  
32 comment on the ECSA. During the thirty (30) day review period rehabilitation  
33 work may proceed on non-historic materials and features.  
34
- 35 3. The Fort Belvoir CRM shall ensure that any comments received from the  
36 signatories and other consulting parties on the draft ECSA within the thirty (30)  
37 day review period shall be considered and incorporated into the final ECSA. If  
38 Fort Belvoir does not received comments from any of the signatories or  
39 consulting parties within the thirty (30) day review period Fort Belvoir may  
40 assume that the non-responding party has no comment. The ECSA shall serve as  
41 a reference of baseline documentation throughout the term of this Agreement and  
42 the term of the Lease.  
43
- 44 4. The Fort Belvoir CRM shall provide the final ECSA to the signatories and other  
45 consulting parties of this Agreement. The final ECSA shall be bound and on  
46 acid-free archival paper.

1 **II. CONVEYANCE ACTIVITIES**

2  
3 **A. Agreement to Become Part of the Lease.** Fort Belvoir shall convey short and long-  
4 term interests in the subject properties to the Partnership by real estate instrument. To  
5 ensure that the Lease shall contain such terms and conditions as necessary and  
6 appropriate to meet the requirements of Section 106 of the NHPA to provide for adequate  
7 consideration and treatment of historic properties that may be affected by the PAL  
8 program, this Agreement in its entirety shall be incorporated into and made part of the  
9 Lease.

10  
11 **B. Background Information Provided by Army.** Before execution of any conveyance  
12 or finalization of the lease for the Undertaking, Fort Belvoir shall provide the Partnership  
13 access to all previously compiled information on any historic properties within the APE  
14 to guide the Partnership in the management and use of the properties. Fort Belvoir shall  
15 indicate that historic properties are subject to alternate and more stringent management  
16 requirements pursuant to Stipulation III.

17  
18 **C. Changes in the Lease.** Renewal of or any modifications to the Lease shall be subject  
19 to consultation among the signatories and other consulting parties to determine whether  
20 such renewal or modifications constitute a new federal undertaking subject to provisions  
21 of the NHPA.

22  
23 **III. HISTORIC PROPERTY MANAGEMENT DURING THE TERM OF THE**  
24 **LEASE**

25  
26 **A. Design Principles**

27  
28 In order to strive to avoid adversely affecting historic properties, Fort Belvoir shall  
29 ensure, to the greatest extent possible, that the Partnership conforms to the *Design*  
30 *Guidelines for Department of Defense Historic Buildings and Districts* and the *Fort*  
31 *Belvoir Installation Design Guide* (Treatment Standards) during the term of the Lease.

32  
33 **B. New Hotel Consultation Process**

34  
35 **1. New Hotel Design Development Process**

36  
37 a. Fort Belvoir shall ensure that the New Hotel is located on its site and  
38 designed in such a manner that conforms to the Treatment Standards to the  
39 greatest extent possible.

40  
41 b. Fort Belvoir shall require the Partnership to submit exterior and  
42 landscaping designs at the initial schematic, 65%, and 98% of design  
43 development stages to the SHPO and other consulting parties. Submittals  
44 to the SHPO and other consulting parties shall consist of the following:

- 45  
46 i) Elevation drawings of the New Hotel exterior.

- 1                   ii).     Site plan, to include landscaping plan.
- 2                   iii).    Narrative description of exterior materials and plantings
- 3                   iv).     Three-dimensional renderings, if available.

4

5                   2. The review of all materials pertaining to the New Hotel shall follow the

6                   “Project Review and Coordination” process described in Stipulation III.D, below.

7

8    **C. Buildings 80 and 81 Consultation Process**

9

10                  1. Fort Belvoir shall ensure that Buildings 80 and 81 and their surrounding

11                  landscape are rehabilitated in accordance with the rehabilitation section of the

12                  Treatment Standards to the greatest extent possible.

13

14                  2. Fort Belvoir shall require the Partnership to submit information regarding the

15                  rehabilitation of Buildings 80 and 81 and their surrounding landscape at the initial

16                  schematic, 65%, and 98% of design development to the SHPO and other

17                  consulting parties. Submittals to the SHPO and other consulting parties shall

18                  consist of the following:

19

- 20                    i).     Project description and specifications.
  - 21                    ii).    Interior and exterior rehabilitation plans (if applicable).
  - 22                    iii).    Site plan, to include landscaping plan (if applicable).
- 23

24                  3. The review of all materials pertaining to the rehabilitation of Buildings 80 and

25                  81and their surrounding landscape shall follow the “Project Review and

26                  Coordination” process described in Stipulation III.D., below.

27

28    **D. Project Review and Coordination**

29

30    Fort Belvoir shall ensure that projects subject to the terms of the Lease are reviewed and

31    coordinated with the SHPO and other consulting parties pursuant to the following

32    procedures:

33

- 34                  1. Fort Belvoir shall require the Partnership to submit all proposed projects having
- 35                  the potential to effect historic properties within the APE of this Undertaking to the
- 36                  Fort Belvoir CRM.
- 37                    a. The Fort Belvoir CRM shall be responsible for creating and keeping a
- 38                    record of each project review.
- 39                    b. The documentary record of each project review will be maintained in the
- 40                    Fort Belvoir environmental archives.
- 41                  2. The Fort Belvoir CRM or Qualified Staff shall review the project and plans and
- 42                  respond to the Partnership within twenty (20) working days with a determination
- 43                  regarding the potential for an adverse effect on historic properties. If the Fort
- 44
- 45
- 46

- 1 Belvoir CRM determines the project meets the Treatment Standards, the project  
2 may proceed as planned.  
3
- 4 3. The SHPO may at any time request to review and comment on any project  
5 submitted to Fort Belvoir CRM if it has reason to believe that a historic property  
6 may be adversely affected by a proposed undertaking.  
7
  - 8 4. If the Fort Belvoir CRM makes a determination of Adverse Effect, the Fort  
9 Belvoir CRM shall make recommendations to the Partnership for alterations to  
10 the project plans in order to avoid or minimize the adverse effect. These  
11 recommendations shall be made in accordance with the Treatment Standards with  
12 the goal of minimizing the project to a Determination of Conditional No Adverse  
13 Effect, to be forwarded to the SHPO for review and concurrence, and other  
14 consulting parties for review and comment.  
15
  - 16 5. If the Partnership does not accept these recommendations, the Fort Belvoir CRM  
17 shall consult with the SHPO and other consulting parties to this Agreement to  
18 develop and implement a mitigation strategy pursuant to 36 CFR Part 800.6.  
19
  - 20 6. The Fort Belvoir CRM shall provide the SHPO and other consulting parties thirty  
21 (30) days from the receipt of complete project submission materials to review and  
22 comment on the proposed undertaking. The Fort Belvoir CRM shall consider all  
23 comments received from the SHPO and any consulting party during the thirty  
24 (30)-day comment period in its decision-making process. If Fort Belvoir does not  
25 receive comments from the SHPO or any other consulting party during the thirty  
26 (30)-day comment period it may assume that the non-responding party has no  
27 comment.  
28
  - 29 7. Actions listed in Stipulation IV, Exempt Activities, are exempt from the project  
30 review process outlined above.  
31

## 32 **E. Emergency Actions**

- 34 1. Emergency actions are those actions deemed necessary by the Partnership as an  
35 immediate and direct response to an emergency situation, which is a disaster or  
36 emergency declared by the President, tribal government, or the Governor of the  
37 State, or other immediate threats to life or property. Emergency actions under this  
38 Agreement are only those implemented within thirty (30) days from the initiation  
39 of the emergency situation.  
40
- 41 2. If the emergency action has the potential to affect historic properties, the  
42 Partnership shall notify the Fort Belvoir CRM, who shall notify the SHPO and  
43 other consulting parties prior to undertaking the action, when feasible. As part of  
44 the notification, the Partnership shall provide a plan to the Fort Belvoir CRM to  
45 address the emergency. The Fort Belvoir CRM shall review and modify the plan  
46 if necessary and forward it to the SHPO and other consulting parties for review

- 1 and comment. The SHPO and other consulting parties shall have seven (7)  
2 calendar days to review and comment on the plan to address the emergency. If  
3 the SHPO or other consulting parties does not comment or object to the plan  
4 within the review period, the Fort Belvoir CRM shall direct the Partnership to  
5 implement the proposed plan.  
6
- 7 3. If the Partnership is unable to consult with the Fort Belvoir CRM prior to carrying  
8 out emergency actions, the Partnership shall notify the Fort Belvoir CRM, the  
9 SHPO, and other consulting parties within forty-eight (48) hours after the  
10 initiation of the emergency action. This notification shall include a description of  
11 the emergency action taken, the effects of the action(s) to historic properties, and,  
12 where appropriate, any further proposed measures to avoid, minimize, or mitigate  
13 potential adverse effects to historic properties. The SHPO and other consulting  
14 parties shall have seven (7) calendar days to review and comment on the proposal  
15 where further action is required to address the emergency. If the SHPO or other  
16 consulting parties do not object to the plan within the review period, the Fort  
17 Belvoir CRM shall direct the Partnership to implement the proposed plan.  
18
- 19 4. Where possible, such emergency actions shall be undertaken in a manner that  
20 does not foreclose future preservation or restoration of historic properties. Where  
21 such emergency actions may affect Historic Buildings, they shall be undertaken in  
22 a manner that is consistent with the Treatment Standards. In addition, where  
23 possible, such actions shall be done with on-site monitoring by the appropriate  
24 preservation professional who meets, at a minimum, the *Professional*  
25 *Qualifications Standards* in his or her field of expertise.  
26
- 27 5. Where the SHPO and/or any other consulting party have reason to believe that a  
28 historic property may be adversely affected by an emergency action, the party  
29 shall submit a request to the Army to review and comment on that action.  
30
- 31 6. Immediate rescue and salvage operations conducted to preserve life or property  
32 are exempt from these and all other provisions of this Agreement.  
33

#### 34 **F. Status Reports**

35  
36 Fort Belvoir shall report to the SHPO and other consulting parties on the status of the  
37 Undertaking using a report prepared by the Partnership and the Fort Belvoir CRM  
38 annually in the month to be agreed upon by the SHPO, the Partnership, and Fort Belvoir.  
39 This report shall include information on the current condition of the historic properties,  
40 actions taken by the Partnership to maintain the properties in accordance with the  
41 Treatment Standards, and descriptions of unanticipated problems that could affect the  
42 integrity or upkeep of the historic properties, or any other activities or policies that affect  
43 or may affect the historic properties, including the documentation of Fort Belvoir CRM  
44 project reviews carried out under Stipulation III. D , above.  
45  
46

1 **IV. EXEMPT ACTIVITIES**

2  
3 A. The following activities may be carried out without further consultation with the  
4 SHPO, provided that the Fort Belvoir CRM ensures that these activities are consistent  
5 with the Treatment Standards:

- 6  
7 1. General operation and routine and cyclical maintenance to Buildings 80 and 81.  
8  
9 2. Temporary installation of facilities to provide access to Buildings 80 and 81 by  
10 disabled persons provided these changes make no permanent modification to  
11 NRHP-eligible architectural or cultural landscape elements.  
12  
13 3. Any change to the mechanical, electrical, or plumbing systems, basement, or attic  
14 spaces of Buildings 80 and 81, as long as such change does not affect any  
15 significant exterior or interior historic character-defining elements.  
16

17 B. Activities not listed above shall be completed as directed in Stipulation III above. The  
18 replacement of character-defining moldings, doors and windows is not exempt and must  
19 be reviewed using the process outlined in Stipulation III above.  
20

21 C. In the event that the signatories to this Agreement concur in writing that additional  
22 exemptions are appropriate, such exemptions may be enacted in accordance with the  
23 stipulations in this Agreement.  
24

25 **V. CUMULATIVE AFFECTS**

26  
27 The discontinuation of use of Building 172, Thermo-Con House, and portions of Building  
28 20 as lodging facilities constitutes a cumulative effect of this undertaking. Fort Belvoir  
29 shall take the following measures in ensure that those effects are not adverse.  
30

31 **A. Building 20**, the lodging facilities within Building 20 shall continue to be managed by  
32 the Fort Belvoir Directorate of Morale Welfare and Recreation as part of the Officer's  
33 Club facility. Future usage will be consistent with the operations and management of the  
34 Officer's Club and its function.  
35

36 **B. Building 172 (Thermo-Con House)**, Fort Belvoir shall identify an appropriate  
37 adaptive reuse of the Building 172. Fort Belvoir shall consult with the SHPO in  
38 accordance with 36 CFR 800 on any modifications required for the adaptive reuse of  
39 Building 172.  
40

41 **VI. POST REVIEW DISCOVERIES**

42  
43 **A. Unanticipated Discovery.** In the event of unanticipated discovery of archaeological  
44 materials during any of its activities, the Partnership shall immediately stop work in the  
45 area of discovery and notify the Fort Belvoir CRM. The Partnership shall ensure that no  
46 unauthorized personnel have access to the site and no further damage is done to the

1 discovery until Fort Belvoir has complied with 36 CFR 800.13(b) and any other legal  
2 requirements. Failure to report such finds shall be interpreted as willful destruction of  
3 archaeological properties on federal land.

4  
5 **B. Documentation and Reporting.** All archaeological investigations carried out  
6 pursuant to this Agreement shall be conducted by Qualified Staff and shall be consistent  
7 with the Secretary of the Interior's *Standards and Guidelines for Archaeological*  
8 *Documentation* (48 FR 44734-37, September 29, 1983) and the SHPO's Guidelines for  
9 Conducting Cultural Resource Survey in Virginia (rev. 2009) and shall take into account  
10 the ACHP's publications *Recommended Approach for Consultation on Recovery of*  
11 *Significant Information from Archeological Sites* (1999; rev. 2003) and *Section 106*  
12 *Archaeology Guidance* (June 2007) or subsequent revisions or replacements to these  
13 documents. Two (2) copies of all technical reports and a CD-Rom shall be submitted to  
14 the SHPO for review and comment.

## 15 16 **VII. ANTI-DEFICIENCY ACT**

17  
18 The Army's obligations under this Agreement are subject to the availability of appropriated  
19 funds, and the stipulations of this Agreement are subject to provisions of the Anti-  
20 Deficiency Act. The Army shall make reasonable and good faith efforts to secure the  
21 necessary funds to implement its obligations under this Agreement. If compliance with  
22 the Anti-Deficiency Act alters or impairs the Army's ability to implement its obligations  
23 under this Agreement, the Army shall consult in accordance with the amendment and  
24 termination procedures found in Stipulation IX. below.

## 25 26 **VIII. DISPUTE RESOLUTION**

27  
28 A. Should the any party to this Agreement object in writing within thirty (30) days to any  
29 plans or other documents provided by the Army, the Fort Belvoir CRM or others for  
30 review pursuant to this Agreement, Fort Belvoir shall consult with the objecting party to  
31 resolve the objection. If Fort Belvoir determines it cannot resolve the objection, Fort  
32 Belvoir shall forward to the ACHP all dispute-relevant documentation and a  
33 recommended course of action. Within thirty (30) days after receipt of documentation,  
34 the ACHP will either:

- 35  
36 1. Provide Fort Belvoir with recommendations, which Fort Belvoir shall take into  
37 account in reaching a final decision regarding the dispute; or  
38  
39 2. Notify Fort Belvoir that it will or will not comment pursuant to 36 CFR  
40 800.7(c). Fort Belvoir shall take into account any comment the ACHP provides  
41 in response to such request and do so in accordance with 36 CFR 800.7(c)(4) with  
42 reference to the subject of the dispute.

43  
44 B. Any recommendation or comment that the ACHP provides pertains only to the subject  
45 of the dispute. Fort Belvoir's responsibility to carry out all other actions under this  
46 Agreement, other than those disputed, shall not change.

1  
2 C. At any time during implementation of the measures stipulated in this Agreement,  
3 should an objection pertaining to this Agreement be raised by a member of the public,  
4 Fort Belvoir shall notify the SHPO and other consulting parties and take the objection  
5 into account, and shall make a good faith effort to consult with the objector to resolve the  
6 object.

7  
8 **IX. AMENDMENT AND TERMINATION**

9  
10 A. Any signatory to this Agreement can propose that the Agreement be amended,  
11 whereupon Fort Belvoir shall consult with the SHPO to consider such an amendment.  
12 All signatories to the Agreement must agree to the proposed amendment. Any  
13 amendment to this Agreement shall be in effect upon the date of the last signature.

14  
15 B. If a change occurs in the Undertaking that creates new circumstances that Fort Belvoir  
16 must address, or, if Fort Belvoir is unable to carry out the terms of this Agreement, any  
17 signatory to this Agreement may request an amendment in accordance with 36 CFR Part  
18 800.6(c)(7).

19  
20 C. Revisions to the NHPA or 36 CFR Part 800 during the term of the Lease that affect  
21 this Agreement shall require amendment of this Agreement by the signatory parties.

22  
23 D. Any signatory to this Agreement may terminate the Agreement by providing thirty  
24 (30) days written notice to the other signatory party. During the period after notification  
25 and prior to termination, Fort Belvoir and the SHPO shall consult to seek agreement on  
26 amendments or other actions that would avoid termination. In the event of termination,  
27 Fort Belvoir shall negotiate a new PA per 36 CFR Part 800.14(b), or request, consider,  
28 and respond to the ACHP's formal comments per 36 CFR Part 800.7.

29  
30 E. Should the parties to this Agreement not agree on an amendment or in the event of the  
31 Army's failure to comply with the stipulations of this Agreement prior to execution of a  
32 Lease, this Agreement shall be terminated. In such an event, the Army may elect not to  
33 execute a lease that has the potential to adversely affect historic properties until  
34 applicable stipulations of the Agreement are met or until it obtains alternative  
35 documentation from the Council that it has met the requirements of the Act.

36  
37 **X. DURATION AND APPLICABILITY**

38  
39 A. This Agreement shall become effective upon the date of the last signature of a  
40 signatory party.

41  
42 B. This Agreement shall remain in effect for the duration of the Army's Lease with the  
43 Partnership unless previously terminated under the provisions of Stipulation X above. If  
44 the parties to the Lease or their successors agree to extend the Lease, the parties to this  
45 Agreement or their successors shall consult 6 months prior to the expiration of the Lease  
46 on the need to renew or amend this Agreement.

1  
2 C. Fort Belvoir shall incorporate this Agreement into the Lease as an exhibit and it shall  
3 become an integral part of the Lease. The Agreement shall become applicable to Rest  
4 Easy, LLC after the Partnership is formed and upon the execution of the Lease. The  
5 Lease is expected to be a 50-year lease, with an option to renew the lease for twenty-five  
6 (25) more years upon mutual agreement between the parties.  
7

8  
9 Execution of this Agreement by Fort Belvoir and the SHPO, and its submission to the  
10 ACHP in accordance with 36 CFR Part 800.6(b)(1)(iv), shall, pursuant to 36 CFR Part  
11 800.6(c), be considered to be an agreement with the ACHP for the purposes of Section  
12 110(l) of NHPA. Execution and submission of this Agreement, and implementation of its  
13 terms evidence that Fort Belvoir has afforded the ACHP an opportunity to comment on  
14 the Undertaking and its effects on historic properties and that Fort Belvoir has taken into  
15 account the effect of this Undertaking on historic properties and sought ways to avoid,  
16 reduce or mitigate adverse effects as required under Section 106, 110 and 111 of the  
17 NHPA as amended.  
18

19  
20 **FORT BELVOIR, VIRGINIA**  
21

22  
23 \_\_\_\_\_ Date \_\_\_\_\_  
24 John J. Strycula  
25 Colonel, US Army  
26 Commanding  
27

28  
29 **VIRGINIA STATE HISTORIC PRESERVATION OFFICER**  
30

31  
32  
33 \_\_\_\_\_ Date \_\_\_\_\_  
34 Kathleen S. Kilpatrick  
35 State Historic Preservation Officer  
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**CONCUR:**

**REST EASY LLC**

By: RE Managing Member LLC, its managing member,

By: Actus Lend Lease Holdings LLC, its sole member,

\_\_\_\_\_  
Bruce Anderson  
Senior Vice President

Date \_\_\_\_\_

**FAIRFAX COUNTY, VIRGINIA**

\_\_\_\_\_  
Name  
Title

Date \_\_\_\_\_

**ATTACHMENT A**  
**AREA OF POTENTIAL EFFECT MAPS**

**ATTACHMENT B**  
**HISTORIC PROPERTY IDENTIFICATION**

## **HISTORIC PROPERTIES IDENTIFIED WITHIN THE APE**

### **PARCEL A**

#### Archeology

Parcel A has been heavily disturbed by past development, Fort Belvoir has determined that no archeological resources are present.

#### Architecture

Parcel A contains one architectural resource, Building 470. Fort Belvoir has determined that Building 470 (constructed 1975) lacks the unique architectural and/or historic significance for National Register of Historic Places (NRHP) listing as a building less than 50-years of age.

### **PARCEL B**

#### Archeology

Parcel B has been heavily disturbed by past development, Fort Belvoir has determined that no archeological resources are present.

#### Architecture

Parcel B contains five architectural resources, Buildings 505-509. Buildings 505-506 were constructed in 1956 as Unaccompanied Personnel Housing (UPH). Buildings 507-509 were constructed in 1969 as UPH. Fort Belvoir has determined that Buildings 505-509 are covered by the *Program Comment for Cold War Era Unaccompanied Personnel Housing (1946-1974)*.

### **PARCEL C**

#### Archeology

Parcel C has been heavily disturbed by past development, Fort Belvoir has determined that no archeological resources are present.

#### Architecture

Parcel C contains two architectural resources, Buildings 806-807. Buildings 806-807 were constructed in 1959 as UPH. Fort Belvoir has determined that Buildings 806-807 are covered by the *Program Comment for Cold War Era Unaccompanied Personnel Housing (1946-1974)*.

## **PARCEL D**

### Archeology

Parcel D has been heavily disturbed by past development, Fort Belvoir has determined that no archeological resources are present.

### Architecture

Parcel D contains two architectural resources, Buildings 80-81. Buildings 80-81 were constructed in 1947 and 1948, respectively, to serve as UPH. Fort Belvoir has determined that Buildings 80-81 are NRHP-eligible as contributing resources to the Fort Belvoir Historic District. Buildings 80-81 are not covered by the *Program Comment for Cold War Era Unaccompanied Personnel Housing (1946-1974)*.

## **PARCEL G**

### Archeology

Parcel G has been heavily disturbed by past development, Fort Belvoir has determined that no archeological resources are present.

### Architecture

There are no architectural resources present within Parcel G.

## **BUILDING 20**

### Archeology

The land around Building 20 has been heavily disturbed by past development, Fort Belvoir has determined that no archeological resources are present.

### Architecture

Building 20 was constructed in 1934 to serve its current function of Officer's Club. Roughly 10,000 square feet of the building is dedicated to Army lodging. Fort Belvoir has determined that Building 20 is NRHP-eligible as a contributing resource to the Fort Belvoir Historic District.

## **BUILDING 172 (THERMO-CON HOUSE)**

### Archeology

The land around Building 172 has been heavily disturbed by past development, Fort Belvoir has determined that no archeological resources are present.

### Architecture

Building 172 was constructed in 1949 as a prototype for family quarters; it is the only know building of its type in the Army. The building serves as Army lodging for distinguished visitors. Fort Belvoir has determined that Building 172 is individually-eligible for NRHP listing.

**ATTACHMENT C**  
**REAL ESTATE TRANSFER SUMMARY**

**PARCEL A**

The Partnership shall be granted ownership of Building 470. The Partnership shall renovate Building 470 and add it to its permanent lodging portfolio. The Partnership shall be granted a long-term (50-year) ground lease on the 4 acre parcel.

**PARCEL B**

The Partnership shall be granted ownership of Buildings 505-509, a short-term (5-year) ground lease on ## acres of land under and adjacent to buildings 505-506. The Partnership shall demolish building 505-506 at the end of the ground lease. The Partnership shall be granted a long-term (50-year) ground lease on ## acres of land under and adjacent to buildings 507-509. The Partnership shall renovate Buildings 507-509 and add them to its permanent lodging portfolio.

**PARCEL C**

The Partnership shall be granted ownership of buildings 806-807 and a short-term (5-year) ground lease on the 1.5 acre parcel. The partnership shall demolish buildings 806-807 at the end of the ground lease.

**PARCEL D**

The Partnership shall be granted a short-term (5-year) lease on buildings 80-81 and the 2.33 acre parcel. All lands and buildings shall be returned to the government at the end of the ground lease.

**PARCEL G**

In the event that conditions preclude construction of a new hotel facility on Parcel A, the Partnership shall be granted at long-term (50-year) ground lease on the 3 acre parcel.

## **ACRONYMS AND ABBREVIATIONS**

ACM	asbestos-containing material
ANSI	American National Standard Institute
AQCR	Air-Quality Control Region
AQCR 47	National Capital Interstate Air Quality Control Region
BMP	best management practice
BOQ	Bachelor Officer's Quarters
BRAC	Base Realignment and Closure
C&D	construction and demolition
CARB	California Air Resources Board
CBPA	Chesapeake Bay Preservation Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CZM	(Virginia) Coastal Zone Management Program
CZMA	Coastal Zone Management Act
dB	decibel
dBA	A-weighted decibel
DC	District of Columbia
de minimis	of minimal importance
DCR	Virginia Department of Conservation and Recreation
DEQ	Department of Environmental Quality (Virginia)
DNL	day-night Sound Level
DOD	Department of Defense
DPW	Directorate of Public Works
EA	environmental assessment
ECP	Environmental Condition of Property
EIFS	Economic Impact Forecast System
EIS	Environmental Impact Statement
ENRD	Environment and Natural Resources Division
EO	Executive order
FBHD	Fort Belvoir Historic District
FNSI	Finding of No Significant Impact
GHG	greenhouse gas
GIS	geographic information system
Hz	hertz
I	Interstate
ICRMP	Integrated Cultural Resources Management Plan
IDP	initial development period
IHG	InterContinental Hotel Group
IPMP	Integrated Pest Management Plan
IRP	Installation Restoration Program
LBP	lead-based paint
LDMP	Lodging Development Management Plan
L <sub>eq</sub>	equivalent sound level
LTH	long-term hold

MEC	munitions and explosives of concern
MHPI	Military Housing Privatization Initiative
MS4	municipal separate storm sewer system
N/A	not applicable
NAAQS	National Ambient Air Quality Standards
NB	new build
NEPA	National Environmental Policy Act
NO <sub>x</sub>	oxides of nitrogen
NRHP	National Register of Historic Places
OTR	ozone transport region
PA	programmatic agreement
PAL	Privatization of Army Lodging
PCB	polychlorinated biphenyl
PCPI	per capita personal income
PCS	Permanent Change of Station
PIF	Partners in Flight
PM <sub>2.5</sub>	fine particulate matter
PM <sub>10</sub>	particulate matter
PX	Post Exchange
RCI	Residential Communities Initiative
ROI	region of influence
RONA	Record of Non-Applicability
RPA	Resource Protection Area
RTV	rational threshold value
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	oxides of sulfur
STH	short-term hold
SWMU	solid waste management unit
SWPPP	storm water pollution prevention plan
TBT	Tributyltin
TDY	Temporary Duty
tpy	tons per year
U.S.	United States
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
UXO	unexploded ordnance
VAC	Virginia Administrative Code
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VOC	volatile organic compounds
VPDES	Virginia Pollutant Discharge Elimination System
VSI	visual site inspection
VSMP	Virginia Stormwater Management Program