

Draft William Beaumont Army Medical Center Replacement Environmental Assessment Fort Bliss, Texas

July 2010



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DRAFT WILLIAM BEAUMONT ARMY MEDICAL CENTER
HOSPITAL REPLACEMENT ENVIRONMENTAL ASSESSMENT
FORT BLISS, TEXAS

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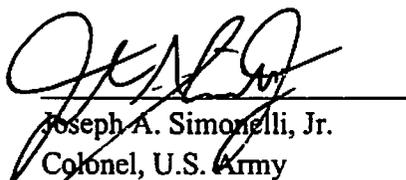


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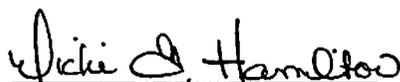


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LIST OF ACRONYMS

AAF	Army Air Field
ACHP	Advisory Council on Historic Preservation
ADT	average daily traffic
APZ	Accident Potential Zone
ASAMS	Automated Staffing Assessment Model
AST	aboveground storage tank
ATC	Air Traffic Control
AUTODIN	automated digital network
BCT	Brigade Combat Teams
BMP	best management practices
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CAB	Combat Aviation Brigade
CEQ	Council on Environmental Quality
CFH	cubic feet per hour
CFR	Code of Federal Regulations
CO	Carbon monoxide
CS/CSS	Combat Service/Combat Service Support
dB	decibel
dBA	A-weighted decibel scale
DCA	Directorate of Community Activities
DNL	Day-Night Sound Level
DOC	Directorate of Contracting
DoD	Department of Defense
DPW	Directorate of Public Works
DRM	Directorate of Resource Management
DRMO	Defense Reutilization and Marketing Office
DSN	Defense Switched Network
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPCC	El Paso Community College
EPCRA	Emergency Planning and Community Right-to-Know Act
EPEC	El Paso Electric Company

EPNG	El Paso Natural Gas Company
EPWU	El Paso Water Utilities
ESA	Endangered Species Act of 1973
FAA	Federal Aviation Administration
FBTC	Fort Bliss Training Complex
FNSI	Finding of No Significant Impact
GTA	Grow the Army
HAP	hazardous air pollution
HFPA	Health Facility Planning Agency
HWMP	Hazardous Waste Management Plan
HWSF	hazardous waste storage facility
ICRMP	Integrated Cultural Resources Management Plan
ICUZ	Installation Compatible Use Zone
IGBPS	Integrated Global Presence Basing Strategy
INRMP	Integrated Natural Resources Management Plan
IONMP	Installation Operational Noise Management Program
ISDN	Integrated Switch Digital Network
ISWM	Integrated Solid Waste Management
LEED	Leadership in Energy and Environmental Design
LOS	level of service
LQG	Large Quantity Generator
LUPZ	Land Use Planning Zone
MEDCOM	U.S. Army Medical Command
MEDEVAC	medical evacuation
MGD	million gallons daily
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NO _x	Nitrogen oxide
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NZ	noise zone
O ₃	ozone
PA	Programmatic Agreement

Pb	lead
PM ₁₀	particulate matter of diameter 10 microns or less
PM _{2.5}	particulate matter of diameter 2.5 microns or less
POL	petroleum, oils and lubricants
QSD	Quantity Safety Distance
RCI	Residential Community Initiative
RCRA	Resource Conservation and Recovery Act
RGMP	Regional Growth Management Plan
ROI	region of influence
RPMP	Real Property Master Plan
RPZ	Runway Protection Zone
SBE	Sustainment Brigade Equivalent
SHPO	State Historic Preservation Officers
SPCCP	Spill Prevention Control & Countermeasure Plan
SO ₂	sulfur dioxide
SEIS	Supplemental Environmental Impact Statement
SWMP	Stormwater Management Plan
TCEQ	Texas Commission on Environmental Quality
TIS	Traffic Impact Study
TMDL	total maximum daily load
tpd	tons per day
TPWD	Texas Parks & Wildlife Department
tpy	tons per year
TSD	Treatment, Storage, and Disposal
U.S.	United States
USAASA	United States Army Aeronautical Services Agency
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
UST	underground storage tank
UXO	unexploded ordnance
VEC	valued environmental concern
VOC	volatile organic compound
WBAMC	William Beaumont Army Medical Center
WRPA	Texas Waste Reduction Policy Act

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1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

This Environmental Assessment (EA) analyzes and describes the potential environmental consequences associated with the Proposed Action to replace the existing 38-year old William Beaumont Army Medical Center (WBAMC) at Fort Bliss in El Paso, Texas. The Proposed Action within this EA is referred to as the “proposed new WBAMC”. The EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations 40 Code of Federal Regulations (CFR) Parts 1500-1508, 32 CFR Part 651, Environmental Analysis of Army Actions, and the NEPA Analysis Guidance Manual. Land use changes to accommodate the development of facilities in the area of the proposed alternative (formerly training areas) were analyzed in the *Fort Bliss, Texas and New Mexico Mission and Master Plan Final Supplemental Programmatic Environmental Impact Statement (Final SEIS)*, for which a Record of Decision (ROD) was signed on 30 April 2007. This EA therefore incorporates the Final SEIS by reference which can be reviewed at <https://www.bliss.army.mil/>.

U.S. Army Garrison Fort Bliss (Fort Bliss) is a multi-mission United States (U.S.) Army installation located on approximately 1.12 million acres in Texas and New Mexico. Figure 1-1 shows the Fort Bliss installation in relation to the surrounding El Paso region. The installation consists of the Cantonment Area and the Fort Bliss Training Complex (FBTC). The Cantonment Area is comprised of the Main Post, the existing WBAMC, and Logan Heights. The FBTC is comprised of three large geographic segments: the South Training Areas, the Doña Ana Range-North Training Areas, and the McGregor Range. The installation was first established in 1849. Since 1957, it has been the home of the U.S. Army Air Defense Artillery Center, Fort Bliss. Its primary mission in the 21st century has been to support the Army’s Air Defense Artillery training and serve as a Power Projection Platform for regular Army, Army Reserve, and Army National Guard troops mobilizing for deployment (U.S. Army, 2007a and 2009).

The existing WBAMC, associated facilities, and parking areas occupy approximately 55 acres in the western end of the existing WBAMC planning area of Fort Bliss (Figure 1-2). The WBAMC provides a full-range of medical services to active military personnel, retirees, and Family Members. The WBAMC also serves some Federal employees with occupational injuries and illnesses, and is one of two trauma centers for El Paso County. The medical center, in conjunction with several troop satellite facilities, serves approximately 400,000 beneficiaries in the southwest region, or 85 to 90 percent of the eligible military beneficiary¹ population (U.S. Army, 2007a).

1.2 Purpose and Need

Department of Defense (DoD) Directive 6000.12, Health Services Operations and Readiness, establishes policy and assigns responsibilities based on Titles 10 and 37 of the United States Code (USC) relating to healthcare distribution for active military bases. The directive requires the DoD to ensure quality care for active duty members, their Family Members, and other authorized personnel. The purpose of the Proposed Action is to provide medical support for the increased population at Fort Bliss of approximately 30,300 military personnel and 3,800 civilian personnel resulting from the stationing of Combat Service/Combat Service Support (CS/CSS) and six Brigade Combat Teams (BCT) in response to the Base Realignment and Closure (BRAC) and Grow the Army (GTA) initiatives (U.S. Army, 2009). Total estimated patient population increases associated with BRAC/GTA initiatives show an end state patient population of approximately 89,000 (34,000 Soldiers, 42,700 Family members and 11,100 retirees).

¹ Military beneficiary is defined as active duty military, retired military, and their dependants.

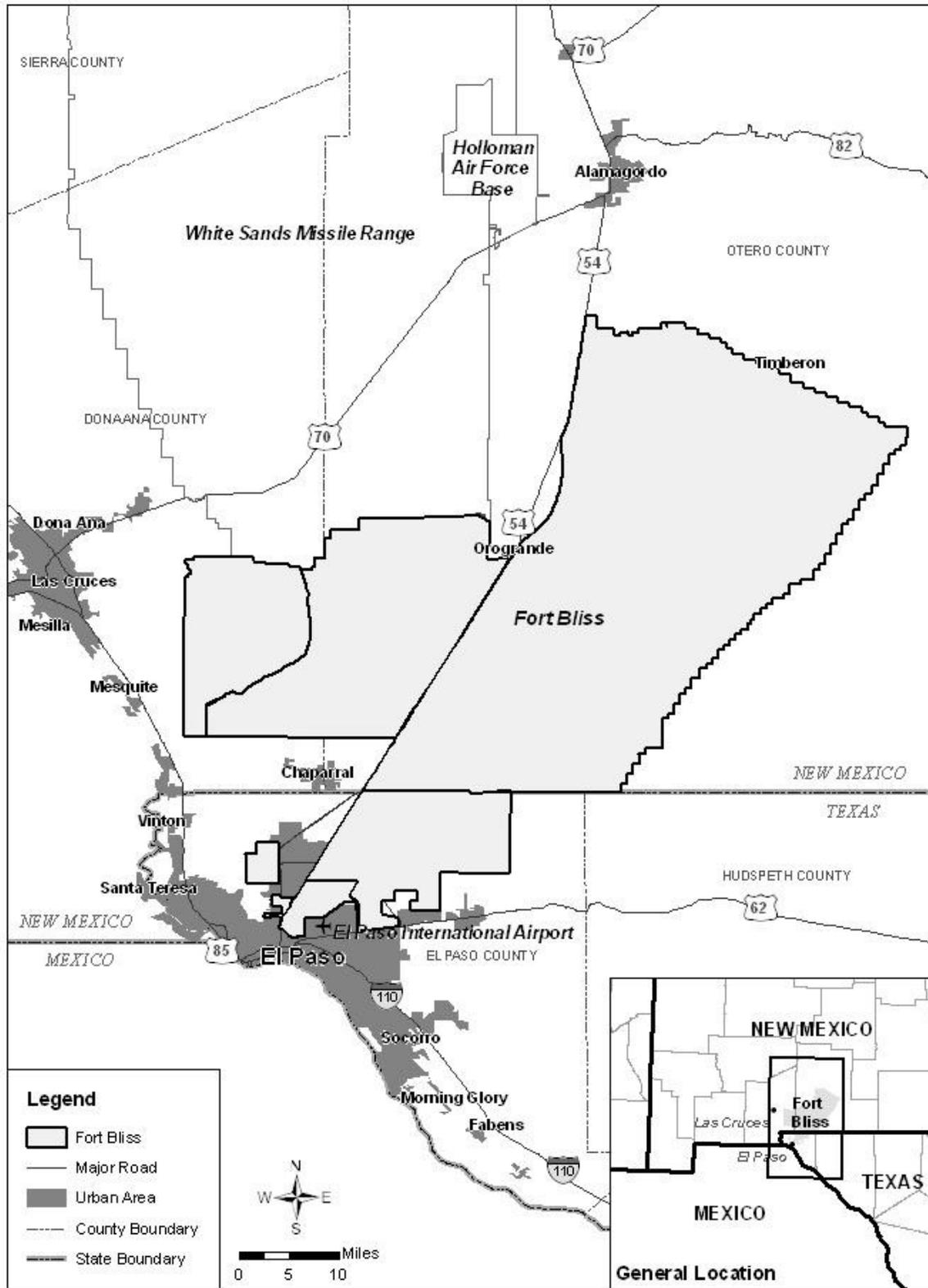


Figure 1-1. Regional Location

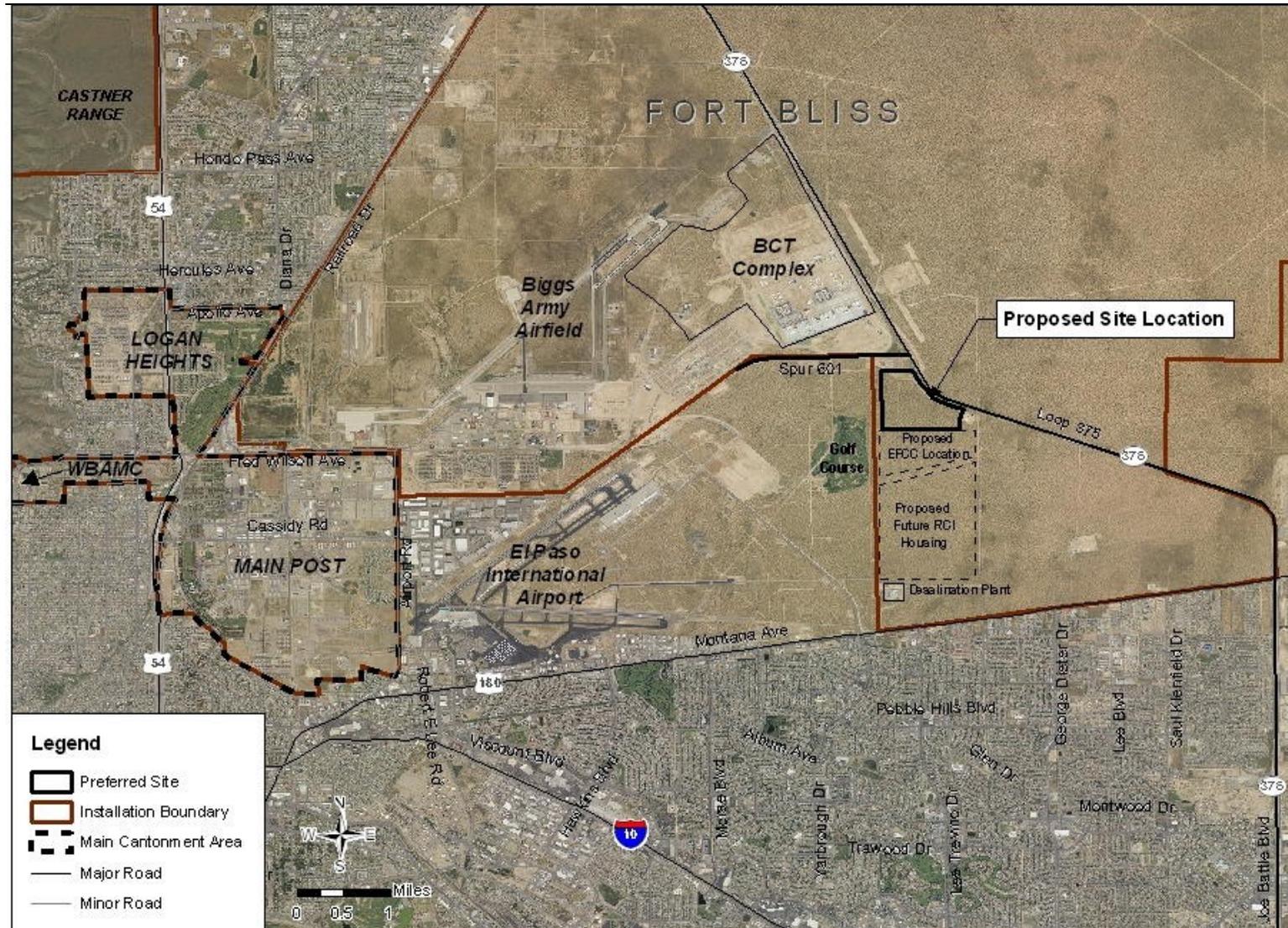


Figure 1-2. Project Location

The existing WBAMC (Figure 1-3) has limitations in expanding its current location to serve this increase in troop population (see Section 2.5.3). Overall room for expansion at the existing WBAMC is furthermore constrained by the South Franklin Mountain to the west and north, suburbs of El Paso to the south, and Fort Bliss Family housing to the east.



Figure 1-3. Existing WBAMC (viewed from South) *Note that the facility abuts the foothills of the Franklin Mountains on the Left which Limits Expansion to the West)*

1.3 Decisions to be Supported

At the conclusion of the NEPA process, the Commander, U.S. Army Garrison Fort Bliss in conjunction with The Army Surgeon General, will decide whether to proceed with the Proposed Action. Technical, economic, environmental, and social issues, and the Proposed Action's ability to meet the purpose and need for the project, will be taken into consideration. The decision will be documented either in a Finding of No Significant Impact (FNSI) or in a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS). If the decision is reached to issue a FNSI, the Army may construct the Proposed Action consistent with the EA. If specific future project components change and it is determined that they cannot be appropriately tiered from this document, a separate environmental analysis would be conducted for those components.

1.4 Related Environmental Documentation

The following documents are among those that guide the management of environmental resources at Fort Bliss. These documents were reviewed for guidance and information relevant to this EA.

1.4.1 Draft Fort Bliss Army Growth and Force Structure Realignment Environmental Impact Statement

Fort Bliss is currently preparing an EIS that analyzes the implementation of Fort Bliss land use changes and training infrastructure improvements to support the GTA stationing decision. Units considered in the stationing decision include three types of BCTs – Heavy BCTs, Infantry BCTs, and Stryker BCTs – along with the required support from Artillery (Fires) Brigades, Sustainment Brigade Equivalents (SBEs), and Combat Aviation Brigades (CABs) (U.S. Army, 2009). As the EIS document has not been finalized, this action is still waiting on a Record of Decision that will select an alternative for implementation.

1.4.2 Final Supplemental Programmatic Environmental Impact Statement

In 2007, Fort Bliss published the Final SEIS that outlined the potential changes derived from the BRAC and Integrated Global Presence Basing Strategy (IGBPS) decisions. The SEIS analyzed the land use changes that would be required to accommodate the increased troop numbers at the installation. Additions to the existing WBAMC were mentioned as one of several projects in Alternative 1; however, the additions were described as upgrades to the existing medical center, not as a new stand-alone structure (U.S. Army, 2007a).

1.4.3 Real Property Master Plan

In 2006, several components of the *Fort Bliss Real Property Master Plan* (RPMP) were released (USACE, 2006a). In an effort to direct future construction at Fort Bliss, the RPMP included a Long Range Component, a Capital Investment Strategy/Short Range Component, and an Installation Design Guide. The report included a systematic comparison of existing on-post facilities with the projected facility requirements; however, it excluded changes from GTA and BRAC, as the document was completed prior to those decisions being made. Guiding principles of the *Real Property Master Plan* were considered where relevant to the Proposed Action in this EA.

1.4.4 Integrated Natural Resources Management Plan

The *Integrated Natural Resources Management Plan* (INRMP) guides the implementation of a natural resources program at Fort Bliss to ensure that the installation complies with applicable environmental laws and regulations (U.S. Army, 2001a). The INRMP describes the procedures and best management practices (BMPs) used at Fort Bliss to ensure that impacts to the environment from construction, training, and operational activities are reduced.

1.4.5 Integrated Cultural Resources Management Plan

The *Integrated Cultural Resources Management Plan* (ICRMP) provides an overview of the archaeological and architectural history of Fort Bliss, and presents the management procedures for archaeological sites, traditional cultural properties, and structures eligible for the National Register of Historic Places (NRHP). The ICRMP (U.S. Army, 2008c) assists Fort Bliss in its efforts to comply with Section 106 of the National Historic Preservation Act of 1966, as amended.

1.4.6 Stormwater Management Plan

The *Stormwater Management Plan* (SWMP) was created to satisfy the regulatory requirements for a Texas stormwater permit (U.S. Army, 2007b). The SWMP identifies several storm drainage system areas at Fort Bliss, and outlines the BMPs used at the installation to prevent excessive runoff into the storm sewer system.

1.4.7 Installation Hazardous Waste Management Plan

The *Installation Hazardous Waste Management Plan* (U.S. Army, 2008a) outlines the types of hazardous materials stored at Fort Bliss, the hazardous waste generated from its operations, and the standard operating procedures (SOPs) used to manage, store, and remove waste from the installation.

1.4.8 Pest Management Plan

The *Pest Management Plan* (U.S. Army, 2008b) describes the installation's pest management requirements, outlines the resources necessary for surveillance and control, and describes the administrative, safety, and environmental requirements of the pest management program.

1.5 Scoping Process and Interagency Coordination

In accordance with NEPA, a scoping process was conducted to aid in determining the scope of issues to be addressed and to identify the significant issues related to the Proposed Action. Agency input was used to guide the preparation of this EA and evaluate environmental consequences. The following agencies and governments were consulted during the development of this EA:

- Texas Department of Transportation
- El Paso Metropolitan Planning Organization Office
- El Paso International Airport
- City of El Paso, Planning Division and Engineering Department
- State Historic Preservation Office

At meetings with the first four agencies listed above, information concerning traffic impacts was discussed. Discussions included the project site location, the extent of the traffic counts, traffic volumes, affected roadway networks, the need to reserve roadway rights-of-way (ROWs) from existing roadways in the airport property, and the need for future development of an interchange on State Loop-375 to serve the area south of the proposed new WBAMC site. None of these parties expressed objections to the proposed project. They requested to be kept informed of any future Fort Bliss developments in the area.

Coordination with the State Historic Preservation Officers (SHPO) of Texas and New Mexico regarding the proposed project on Fort Bliss was conducted in accordance with the ICRMP and a Programmatic Agreement (PA) executed by these parties, the Advisory Council on Historic Preservation, and the Army. This Draft EA has been submitted to the Texas SHPO to comply with Section 106 in accordance with the PA. The potential for cultural resource impacts is discussed in Section 3.11.

This Draft EA was also provided to the United States Fish and Wildlife Service (USFWS) and the Texas Department of Parks and Wildlife (TDPW) to comply with Section 7 of the ESA. The potential for sensitive species is discussed in Section 3.7.

1.6 Public Review Process

A 30-day public review period will be conducted on the Draft EA. Fort Bliss published announcements in the Fort Bliss *Monitor* and El Paso *Times* regarding the availability of the Draft EA, the duration of the

public comment period, and how to obtain information about the Draft EA and provide comments. Copies of the Draft EA have been placed at the following libraries in El Paso: Richard Burges Regional Library, 9600 Dyer Street; the Irving Schwartz Branch Library, 1865 Dean Martin Drive; the Clardy Fox Branch Library, 5515 Robert Alva Avenue; and the Doris van Doren Regional Branch Library, 551 Redd Road, UTEP Library 500 W. University Avenue. The EA can also be reviewed on Fort Bliss's website at the following URL address: <https://www.bliss.army.mil>.

Comments regarding the Draft EA can be submitted by e-mail, john.f.barrera@conus.army.mil, or mailed to:

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2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Chapter 2 describes the alternatives for meeting the purpose and need of the Proposed Action. This chapter also discusses the site selection and alternatives screening process.

2.1 Description of the No Action Alternative

The No Action Alternative provides the baseline environmental conditions for comparison with the impacts of the Proposed Action in satisfaction of CEQ NEPA regulations. Under the No Action Alternative, the WBAMC replacement would not be constructed, and the existing WBAMC would continue to serve the Fort Bliss installation's medical care needs. This status quo alternative would not support the expected increase in demand on medical services delivery, because existing facilities are geographically constrained for future expansion. Therefore, additional Soldiers and Family members would exceed current capacity of existing medical treatment services. Shortfalls in capacity would be made up through longer wait times and rerouting patients to other medical facilities in the region.

2.2 Description of the Proposed Action Alternative

Under the Proposed Action, U.S. Army Medical Command (MEDCOM) would construct and operate the proposed new WBAMC at a new location on Fort Bliss. The new WBAMC would replace the existing WBAMC; WBAMC units would be transitioned over to the proposed new WBAMC upon anticipated completion in 2016. For this reason, the existing hospital cannot be razed and a new larger facility constructed in its' place. After the proposed new WBAMC becomes fully operational, the existing WBAMC could be repurposed or demolished to provide space for other uses. Approximately 200 acres would be required to construct the necessary buildings, roads, and parking lots. The action would replace and relocate all of the existing activities supported by the existing WBAMC to the proposed new WBAMC consisting of a complex of four new buildings (Table 2-1), either separate or conjoined, on a landscaped campus with parking lots connected by new internal roadways. The square footage in the table also includes the necessary space for the potential collocating of the Veterans Administration (VA) hospital within the proposed new medical center. The environmental consequences analysis within Chapter 3, therefore, examines the maximum population scenario at the proposed new WBAMC which includes VA relocation onsite.

Table 2-1. Buildings Included in the Proposed Action

Building	Occupied Space (gross square feet) ¹	Footprint Size (square feet) ²	Staff Occupancy
Inpatient Hospital	750,000	200,000	2,000
Outpatient Clinics	750,000	200,000	1,000
Administration	230,000	75,000	200
Clinical Investigations	30,000	30,000	20
Total	1,760,000	505,000	3,220

¹Occupied square feet indicates the internal square footage of the proposed new WBAMC

²Footprint size indicates the external footprint of the proposed new WBAMC

Note: As the project is in preliminary planning stages of detailed design, height and layout of the proposed new WBAMC has not been determined

The WBAMC replacement would also include a main access control point (gated entrance) for vehicles and pedestrians, a central utility plant, and a helipad. Electrical lines, as well as water and sewer pipelines, would be constructed to serve the new facilities.

In conformance with the intent of Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance, the replacement medical center would be constructed with the ability to obtain a mandated minimum Leadership in Energy and Environmental Design (LEED) Green Building Rating System “Silver” Certification as defined by the U.S. Green Building Council; however, the goal of the project would be to obtain “Gold” certification.

The site layout has not yet been defined, nor have the buildings and structures been designed. Therefore, for the purposes of this EA, it is assumed that the entire site acreage would be disturbed in the process of constructing the replacement medical center and, when finally completed, the proposed new WBAMC with associated infrastructure and landscaping would occupy the entire project site. Force protection setbacks would also be incorporated into site design. The construction of the center is scheduled to commence in Fiscal Year 2011 and be completed in Fiscal Year 2016.

The Proposed Action would be planned and constructed by MEDCOM, basing its decisions on staffing and patient needs modeled by its Automated Staffing Assessment Model (ASAMS). The ASAMS uses historical and current workload data, projected staff gains and losses, and anticipated size of the patient population to determine the numbers of doctors, nurses, specialists, and other staff needed to efficiently run a DoD medical facility.

During construction of the replacement medical center, the existing WBAMC would continue to operate and serve as the principal medical center. Upon anticipated completion in 2016, WBAMC units would be transitioned over to the proposed new WBAMC.

After the proposed new WBAMC becomes fully operational, the existing WBAMC would be repurposed for a new use or demolished to provide space for other uses. A decision for the future of the current building has not yet been reached and will likely not be made until a later date. Decisions relative to the future disposition of the existing WBAMC building and property would be the subject of a separate NEPA review.

2.3 Site Selection Process

The Health Facility Planning Agency (HFPA) of MEDCOM, along with the Fort Bliss Directorate of Public Works (DPW) Master Planning Office, identified the Proposed Action and potential alternatives by examining the anticipated medical needs at Fort Bliss as dictated by the BRAC and GTA decisions and using a sequential site screening process. The following subsections describe the screening process.

2.3.1 Regional Capacity Screening

The WBAMC serves the needs of over 400,000 beneficiaries in the Fort Bliss region. In addition, it has one of two trauma centers in the region. Adjacent to the existing WBAMC is the Veterans Affairs Health Care Center. Additional clinics are located at the troop medical center in the Cantonment, Biggs Army Airfield, and smaller facilities associated with each unit. Excluding WBAMC, El Paso County has seven acute care medical hospitals totaling almost 2,000 beds and four specialty medical centers with about 170 beds (U.S. Army, 2009).

The HFPA examined the existing medical capacity in El Paso, and found that between 1995 and 2004, the El Paso County population increased by 7 percent; however, the number of hospital beds decreased by 4 percent. The number of annual outpatient visits had increased by 59 percent, with an increase of 24 percent in inpatient visits (U.S. Army, 2007a). HFPA concluded that existing hospitals would not be able to accommodate the increased number of military-related patients. Because there are limited medical

resources in the El Paso region, HFWA determined that it would need to increase the capacity at the medical center on Fort Bliss.

2.3.2 General Location Site Screening

Several options were considered on a secondary screening level. The first consideration addressed the potential for expansion of the existing WBAMC by adding on to the existing buildings, replacing parking lots with larger clinics, or by building on land adjacent to the facility. These options were eliminated because the existing WBAMC building would not support an expansion, there is limited parking space at the existing WBAMC already, and the facility property is bounded by the foothills of the Franklin Mountains, and surrounding housing developments.

Another option would require Fort Bliss to build a new medical center on purchased property or to lease suitable replacement facilities in El Paso County. This option was not deemed practicable, because appropriate facilities are not available for lease, and land available for a new facility would not be located in adequate proximity to Fort Bliss, which would increase medical response time. Furthermore, the proposed new WBAMC would require gated access with the ability to effect complete closure in the event of an emergency and within rapid response time from Army security forces. Therefore, acquiring a site on non-military land and away from the installation would not compare favorably with construction on existing Fort Bliss property.

The final option considered the construction of a replacement medical center on existing installation land in a location that would allow expansion at a later date and that would be closer to the new military population centers. New BCT construction would shift the troop population at the base to the east of the Main Cantonment Area and beyond El Paso International Airport. A replacement medical center with expansion capacity located in closer proximity to new and planned housing would ensure that increased numbers of Soldiers and their Families would have adequate medical treatment services at Fort Bliss. After considering the deficiencies of the other options, MEDCOM selected this option for the Proposed Action.

2.3.3 Final Site Screening

To allow space for all of the clinic requirements and supporting structures, HFWA concluded that the medical center would require approximately 200 acres. Four alternative sites were considered, including the preferred site for the Proposed Action and three other locations (see Sections 2.4 and 2.5). Because the physical conditions and natural environment at each of the sites is very similar, the choice between the preferred site and the other alternatives was based on their current land use and accessibility to the user population. The preferred site for the Proposed Action is described in Section 2.4, and the alternative sites are discussed in Section 2.5.

2.4 Preferred Site for the Proposed Action

The preferred site (Figures 2-2 and 2-3) is located near the new BCT facilities and in close proximity to the proposed El Paso Community College (EPCC) and a potential future site for a Residential Community Initiative (RCI) housing development. The 202-acre site (referred to as the “preferred site” “or “site” within this EA) is located between Loop 375 and the Fort Bliss property line to the west, bounded by an undeveloped trail (Yellow Grass Road, Figure 2-4) to the south and Spur 601, which is under construction, to the north. The site is also located south-southeast of the newly constructed BCT complexes, which include barracks, admin and motor pool facilities, a town center, a troop clinic, and other support facilities. The site is located near both the El Paso International Airport and the Biggs

Army Airfield and therefore readily accessible to any emergency incoming or outgoing airlifts that may occur.

2.5 Alternatives Considered and Eliminated from Detailed Study

Three alternative sites for the WBAMC replacement were considered in addition to the No Action Alternative and the preferred site for the Proposed Action. As a result of the screening process discussed in Section 2.3, however, these alternatives were eliminated. Neither location would be a desirable site for a medical center due to land use conflicts, traffic congestion, and inaccessibility to the user population.

2.5.1 Alternative Site 1 – North of Biggs Army Airfield

Alternative Site 1 (see Figure 2-1) is located north of the Biggs Army Airfield, adjacent to Loop 375 and Railroad Drive. This alternative was eliminated because the property would be located in an industrial area that is also used for training, 1.5 miles north of the Fort Bliss installation landfill, and would be in conflict with the current land use classification. The medical center would also not be located in the near proximity of either the Main Cantonment Area or the new BCT complex. The site also contains known archaeological issues and would require archaeological surveys and mitigation of sites.

2.5.2 Alternative Site 2 – Southeastern Corner of Fort Bliss

Alternative Site 2 (see Figure 2-1) is located at the southeastern end of Fort Bliss, near the intersection of Loop 375 and Montana Avenue. This alternative was eliminated because it would be located alongside Montana Avenue, which is already extremely congested (experiencing failed levels of service during peak use). It would also be located farther away from installation barracks and the Main Cantonment Area and therefore less convenient for the military user population. The site also contains known archaeological issues, including one large prehistoric site eligible for the NRHP.

2.5.3 Alternative 3 – Existing WBAMC Site

The Alternative Site 3 involved placement of the proposed new WBAMC on the existing WBAMC site to include the old World War II campus (now a historic district) that was part of the old WBAMC prior to the current facilities being expanded in the 1970s (see Figures 1-2 and 1-3). Constructing at the existing entire WBAMC site would require demolition of the existing structure which would then leave the served population without medical facilities while construction of the new was being completed. This alternative would also require demolition of the existing historic district structures and landscapes which are eligible for listing on the NRHP. Redevelopment of this area would require preservation of the historic character and fabric of the historic district. Modifications or demolition to historic structures or landscapes may result in required mitigation for lost historic resources which can involve extensive coordination issues. Additionally, constructing on the existing site has the following other issues: (1) the historic campus site is only 92 acres and would crimp the design and construction of the proposed new WBAMC if construction occurred while the existing facility remained in operation; (2) the site is on the foothills of the Franklin Mountains and has very uneven topography and it is very difficult to construct in bedrock terrain that necessitates complex design and work criteria; (3) the traffic on Fred Wilson Boulevard and Alabama Street is at capacity and would hinder access to and expansion of the served population; (4) the area surrounding the World War II campus is now residential and expansion would bring a major medical center operation adjacent to housing which would be an incompatible land use; and (5) the site would not be located close to the served population which will be concentrated even further east than currently at East Biggs Army Airfield. Due to these concerns, this alternative was eliminated from further consideration.

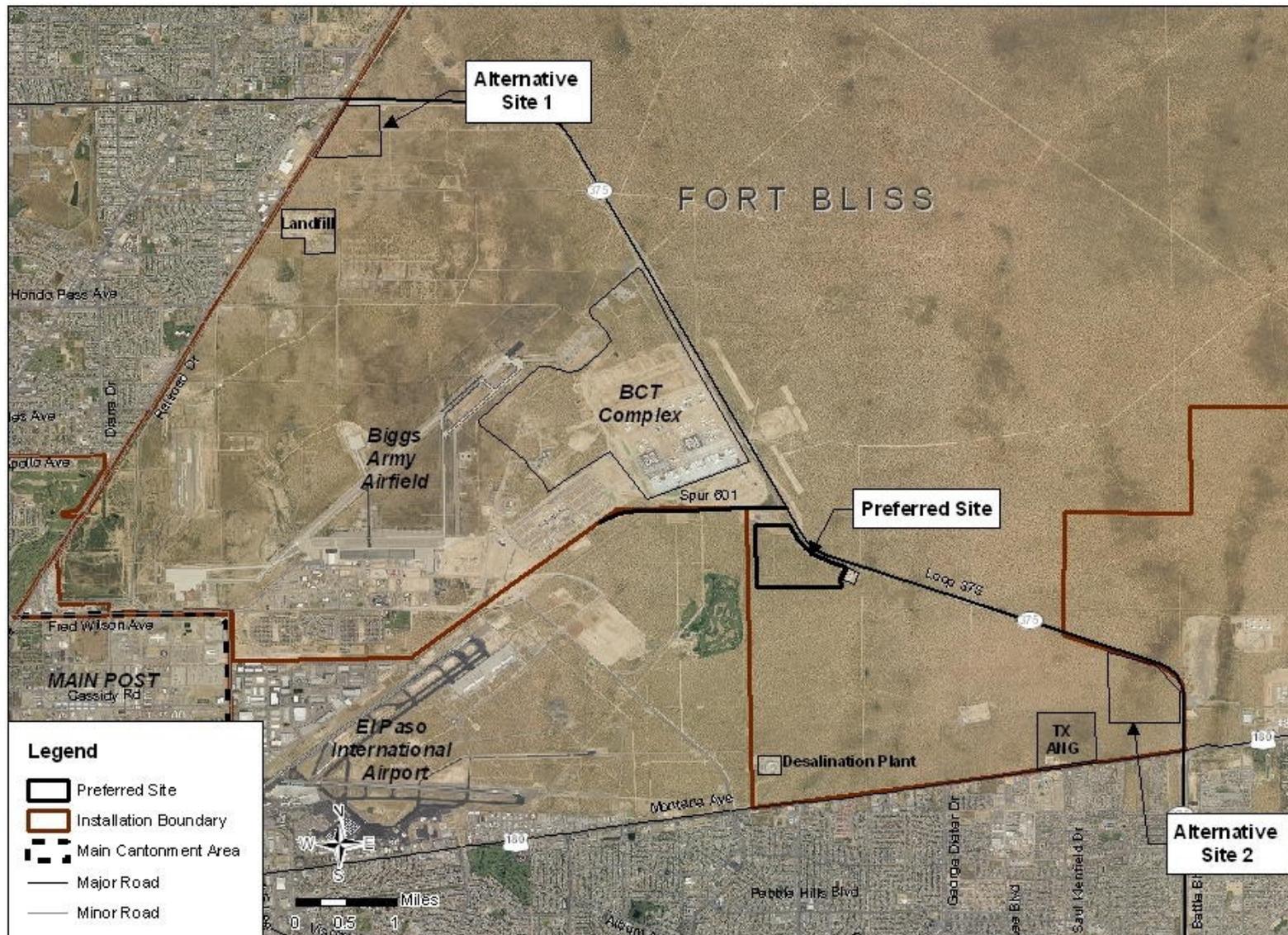


Figure 2-1. Alternative Sites for the Proposed New WBAMC

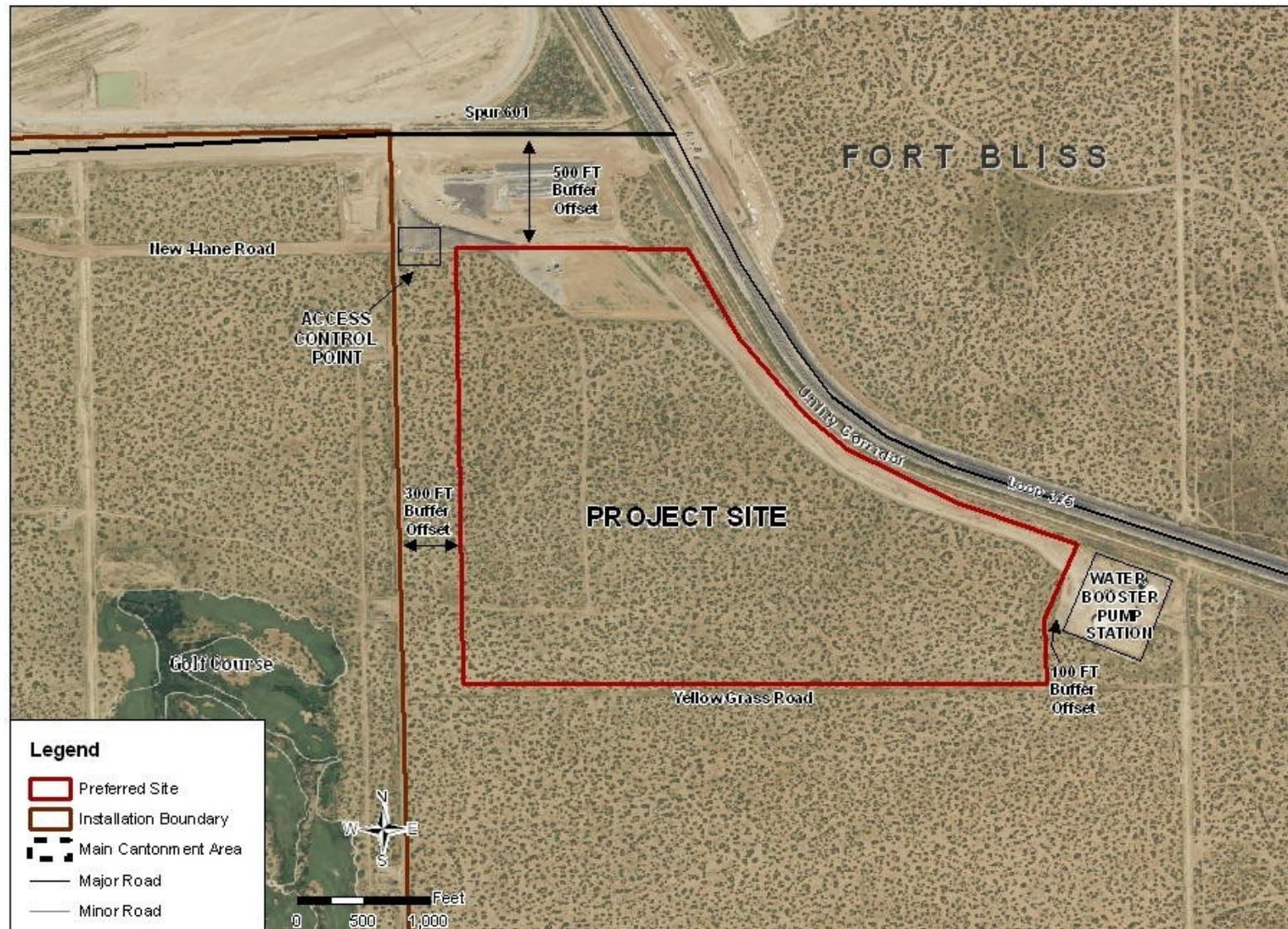


Figure 2-2. Preferred Site for the Proposed New WBAMC



Figure 2-3. Photograph of the Preferred Site for the Proposed New WBAMC (viewed from western boundary looking east)



Figure 2-4. Yellow Grass Road at Southern Boundary of Preferred Site for the Proposed New WBAMC (looking east)

2.6 Summary of Environmental Consequences

This section summarizes the anticipated impacts to the Valued Environmental Components (VECs) on and surrounding Fort Bliss. Table 2-2 compares the potential for environmental consequences of the Proposed Action and No Action Alternative by VEC based on the analyses in Chapter 3. The qualitative terms used in the matrix are generally defined as:

- **None/Negligible** – No measurable impacts are expected to occur.
- **Minor** – Primarily short-term but measurable adverse impacts are expected. Impacts may have slight impact on the resource.
- **Moderate** – Noticeable adverse impacts that would have a measurable effect on a resource and are not short term.
- **Severe** – Adverse impacts would be obvious; both short term and long term, and would have serious consequences on a resource. These impacts would be considered significant unless mitigable to a less-than-significant level.
- **Beneficial** – Impacts would benefit the resource/issue.

Table 2-2. Summary of Potential Environmental Effects for the Proposed Action and No Action Alternative

Resource/Issue	Alternatives	
	Proposed Action	No Action
Land Use	Minor	None
Airspace	Negligible	None
Noise	Minor	None
Air Quality	Minor	None
Geology and Soils	Minor	None
Biological Resources		
Vegetation	Minor	None
Wildlife	Negligible	None
Sensitive Species	Minor	None
Water Resources		
Surface Water and Wetlands	Negligible	None
Groundwater	Minor	None
Utilities		
Potable Water	Minor	None
Sanitary Wastewater	Minor	None
Stormwater	Negligible	None
Communications	Negligible	None
Natural Gas	Minor	None
Electric	Minor	None
Cultural Resources	Negligible	None
Socioeconomics and Environmental Justice	Minor	None

Table 2-2. Summary of Potential Environmental Effects for the Proposed Action and No Action Alternative

Resource/Issue	Alternatives	
	Proposed Action	No Action
Visual Quality and Aesthetics	Minor	None
Hazardous Materials and Waste	Minor	None
Human Health and Safety	Beneficial	Moderate
Traffic and Transportation	Moderate	None

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This Chapter describes the impact assessment methodology, the affected environment (existing conditions), and the environmental consequences for the No Action Alternative and Proposed Action. The affected environment and associated environmental impacts have been determined using the criteria in the *Army NEPA Guidance Manual 2007* (USAEC, 2007). Several resources were determined not to be affected by the Proposed Action; therefore, a detailed analysis of these topics is not presented in this Chapter (see Section 3.1.2).

3.1 Methodology

3.1.1 Data Sources and Region of Influence

The following types of data were used to characterize the affected environment of the preferred site:

- Geographical Information System (GIS): Utility and Ecoclasses data provided by Fort Bliss, Landcover data obtained from the United States Department of Agriculture (USDA).
- Aerial photography: 2008, USDA, National Agriculture Imagery Program.
- Regional and local studies: including Natural Resource Conservation Service (NRCS) Soil Surveys, environmental baseline surveys, previous NEPA documentation, noise studies, and traffic impact studies.
- Fort Bliss management plans including the INRMP, ICRMP, SWMP and Hazardous Waste Management Plan (HWMP).

A region of influence (ROI) was determined for each resource area and was based on the potential impacts to the affected resource. The ROI was generally limited to the specific preferred site (the approximate 202-acre parcel) for the following VECs: geology and soils, biological resources, cultural resources, hazardous materials, and human health and safety as these VECs are directly connected to specific existing conditions at the site and proposed uses at the site. For the remaining VECs, the ROI was generally expanded to include areas within and between the Main Cantonment Area and South Training Areas, and the City of El Paso, Texas.

3.1.2 Impact Thresholds

Context and intensity are taken into consideration in determining a potential impact's significance, as defined in 40 CFR Part 1508.27. The intensity of a potential impact refers to the impact's severity and includes consideration of beneficial and adverse impacts, the level of controversy associated with a project's impacts on human health, whether the action establishes a precedent for future actions with significant effects, the level of uncertainty about project impacts, or whether the action threatens to violate Federal, State, or local law requirements imposed for protection of the environment. In general, the five categories discussed in Section 2.6 were used to determine levels of impacts to resources analyzed within this EA. Impacts that range from none to moderate are considered insignificant. Significant adverse impacts would result from those impacts categorized as severe.

3.2 Land Use

3.2.1 Existing Environment

Fort Bliss occupies 1.12 million acres of lands in Texas and New Mexico. The installation consists of the Main Cantonment Area, Castner Range, and the Fort Bliss Training Complex. The Fort Bliss DPW divided the Main Cantonment Area into four planning areas: Main Post, WBAMC, Logan Heights, and Biggs Army Air Field (AAF). The Main Post, WBAMC, and Logan Heights are essentially built out and surrounded by developed lands in the City of El Paso. Therefore, recent and ongoing expansions of

installation facilities in response to BRAC legislation and Army Transformation initiatives have occurred in the Biggs AAF area to the east.

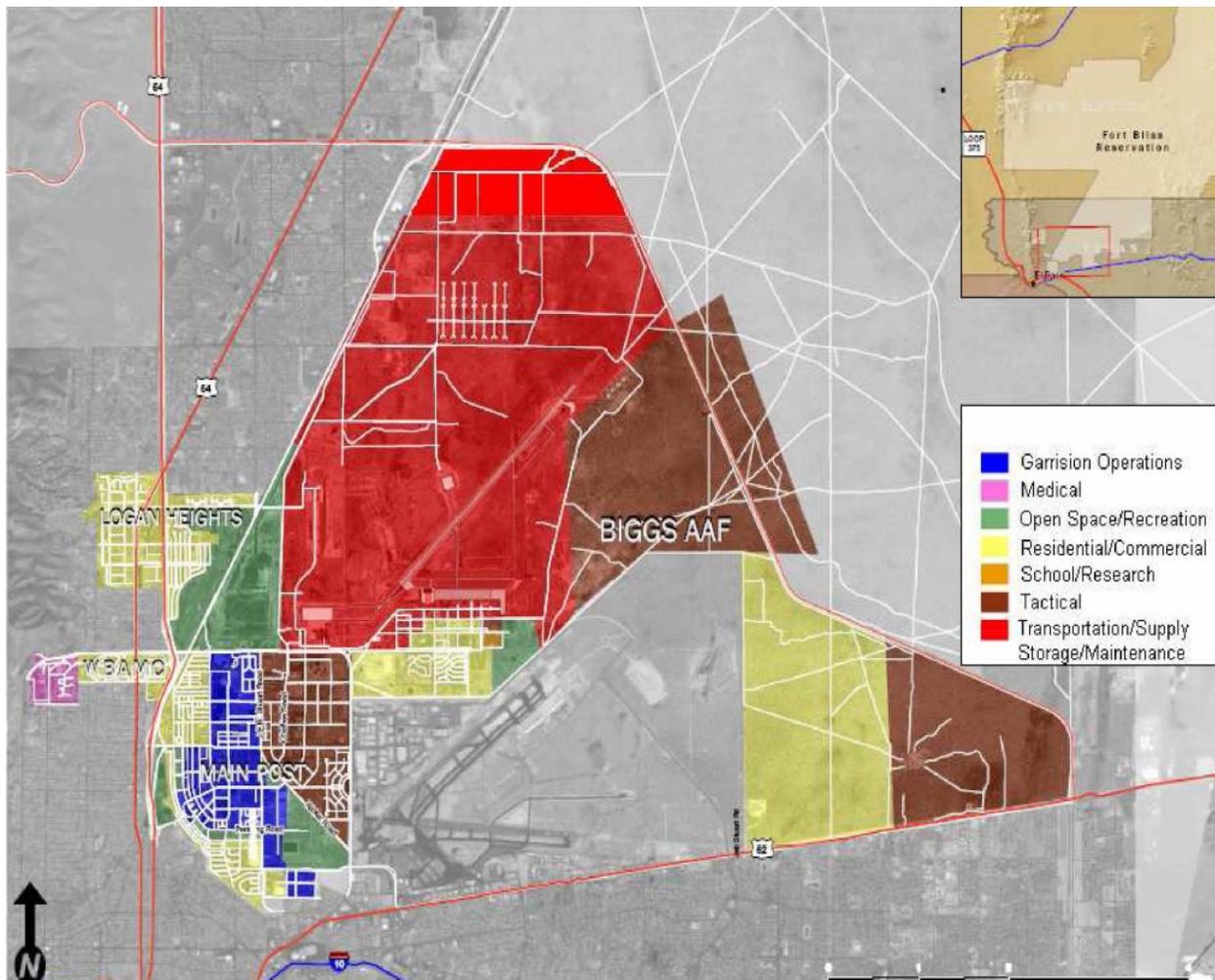
The baseline conditions for land use at Fort Bliss are described in the Fort Bliss RPMP, which reduced the land use categories for the Main Cantonment from 12 originally to 7 for future planning purposes (USACE, 2006a). The reduction reflects the Army-wide trend toward fewer but broader categories that enable more flexibility in land use decisions. The RPMP identifies the existing WBAMC site as “Medical” for existing land use and also “Medical” for future land use. Adjacent properties within the existing WBAMC area west of US 54 are categorized as “Residential/Commercial” for future land use. The preferred site for the proposed new WBAMC is located within the southern part of Area 1B of the South Training Area, currently categorized as Training Area. The RPMP called for future expansion of the Main Cantonment Area as shown in Figure 3.2-1, which categorizes the area encompassing the preferred site as “Residential/Commercial” use. The RPMP also anticipated that future land development at Fort Bliss would continue in the Biggs AAF area.

Recent and planned land uses in the vicinity of the preferred site for the proposed new WBAMC include an El Paso Water Utilities desalination plant near Montana Avenue and Global Reach Drive, a planned Texas Army National Guard facility near Montana Avenue and Loop 375, the proposed EPCC campus directly south of the proposed new WBAMC site, and a proposed RCI housing development south of the college. An El Paso Water Utilities water storage tank is located adjacent to the southeast corner of the site, and groundwater wells for the desalination plant are located on El Paso land just west of the site boundary. A golf course is situated on El Paso land to the southwest of the preferred site.

The Fort Bliss Final SEIS (U.S. Army, 2007a) evaluated four land use alternatives, as well as the No Action Alternative, to address planning needs in response to Army Transformation and BRAC decisions affecting Fort Bliss. All four action alternatives provided for the same expansion of the Main Cantonment Area as proposed in the RPMP. The Army issued its decision in the ROD to implement Alternative 4 of the SEIS, which would (1) support the greatest increase in military and civilian personnel and military Family Members, (2) support the greatest increase in wheeled and tracked vehicles, and (3) provide the largest amount of acreage for off-road vehicle maneuvering. The SEIS did not specifically address the WBAMC other than to state that the hospital would be altered or expanded to support the increase in military population, and additional facilities would be constructed, including a dental clinic.

The following is a list of several of the plans implemented at Fort Bliss to ensure land use compatibility with other existing management plans:

- *Fort Bliss Real Property Master Plan* – addresses how Fort Bliss will plan, develop, and manage its land resources and infrastructure (USACE, 2006a);
- *Fort Bliss, Texas and New Mexico Training Area Development Concept* – provides a process for determining facilities, planning, management, and direction for the short- and long-term development of training areas in the Fort Bliss Training Complex relative to the needs of range complex users (U.S. Army, 1998);
- *Fort Bliss Integrated Training Area Management Program* – implements the Army’s Sustainable Range Program by establishing policies and procedures to achieve optimum, sustainable use of military training and testing lands;
- *Fort Bliss Integrated Natural Resources Management Plan* – provides the basis and criteria for protecting and enhancing natural resources using ecosystem management principles that are consistent with the military mission (U.S. Army, 2001a); and
- *Fort Bliss Integrated Cultural Resources Management Plan* – provides the basis and criteria for protecting and managing the installation’s cultural resources in compliance with various Federal laws and regulations that govern cultural resources and in support of the overall Fort Bliss mission of military training and readiness (U.S. Army, 2008c).



Source: Fort Bliss Real Property Master Plan (USACE, 2006a)

Figure 3.2-1. Future Land Use, Main Cantonment Area, Fort Bliss

3.2.2 Environmental Consequences

3.2.2.1 Proposed Action Alternative

Under the Proposed Action, approximately 202 acres of undeveloped land formerly within South Training Area 1B would be allocated for a proposed new WBAMC to replace the existing WBAMC. The site is located within an area recognized for future expansion of the Main Cantonment Area and is categorized for future Residential/Commercial use in the RPMP. The site is bounded by Spur 601 to the north, Loop 375 to the east, and mostly undeveloped land in the City of El Paso to the west adjacent to the El Paso International Airport. The site is directly north of a proposed East Side Campus for the El Paso Community College on an approximate 200 acre parcel which would be leased by Fort Bliss to the college. The use of the preferred site for a proposed new WBAMC to replace the existing WBAMC would not conflict with the RPMP or the Final SEIS (USACE, 2006a; U.S. Army, 2007a). Furthermore, the proposed new WBAMC would not conflict with existing or proposed uses adjacent to the site. The Proposed Action, therefore, would have a minor adverse impact on land use at Fort Bliss. The proposed new WBAMC would be in line with future expansion of the Main Cantonment Area; however, the proposed new WBAMC would be reclassified as Medical, a change from the Residential/Commercial classification within the RPMP.

3.2.2.2 No Action Alternative

Under the No Action Alternative, the WBAMC would be maintained at the existing site and renovated as practicable and appropriate to support the growing needs of Fort Bliss. However, HFPA has stated that the existing facilities are not adequate to support the increased growth in service population at Fort Bliss. The preferred site for the proposed new WBAMC would remain in its current status until DPW were to allocate the land as the site of another potential project consistent with the Residential/Commercial land use category.

3.3 Airspace

3.3.1 Existing Environment

Fort Bliss has 1,260 square miles of Federal Aviation Administration- (FAA) designated Special Use airspace, with no limit in altitude (USAEC, 2007). The installation has access to this FAA-controlled airspace continuously. Aviation activities occur at Biggs Army Airfield (AAF) and military training activities on McGregor Range and Doña Ana Range–North Training Areas. Biggs AAF mission activities occur within the airspace terminal area under the control of the FAA-operated El Paso Approach Control facility at the El Paso International Airport. As shown in Figure 3.3-1, the Approach Control Area contains elements of controlled airspace, uncontrolled airspace, Restricted Area Special Use Airspace, and Military Training Routes that are used for military operations by the Army and other Department of Defense (DoD) services. There are several public use and private airports in the region as well – the public-use airports within the El Paso Approach Control Area include the El Paso International Airport; West Texas Airport near Horizon City, Texas; and Doña Ana County Airport near Santa Teresa, New Mexico.

Although Biggs AAF and the El Paso International Airport are contiguous, each has distinct airspace and air traffic control operating parameters and procedures. Simultaneous operations typically occur at both airports. However, their proximity to one another and the relationship of their runway configurations can require air traffic considerations, particularly during peak traffic periods or instrument weather conditions in which landings and takeoffs at both facilities may be coordinated and controlled as a single airport.

The closest restricted airspace area to the preferred site is located approximately 15 miles to the northeast. As shown in Figure 3.3-1, the project ROI is within the Class C, D, and E airspace established around Biggs AAF and the El Paso International Airport.

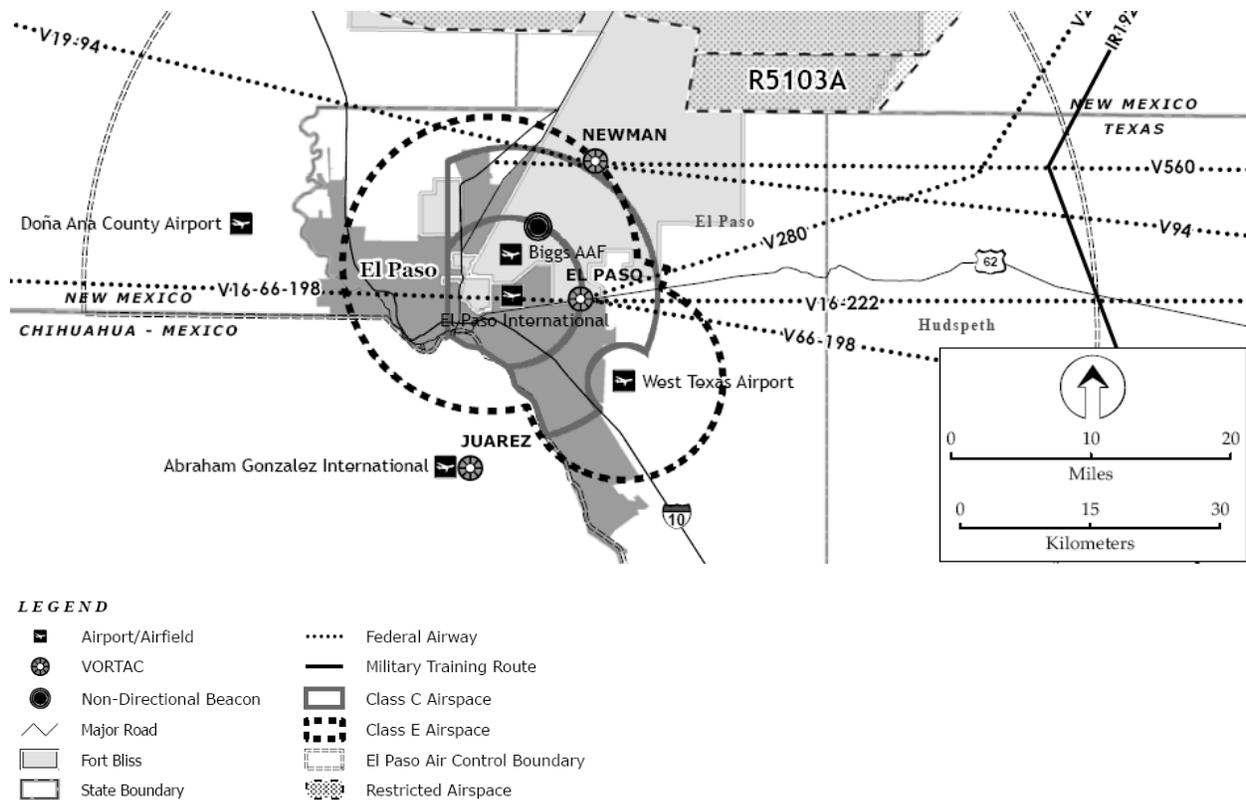


Figure 3.3-1. Airspace Within the Project Region of Influence

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action Alternative

The Proposed Action Alternative would have negligible impacts to the airspace surrounding Biggs AAF and the El Paso International Airport. The preferred site is located approximately 10,000 feet away from the El Paso International Airport and approximately 13,000 feet away from Biggs AAF. Currently, the tallest structure planned within the proposed new WBAMC is 5 stories. According to AirNav (AirNav.com), the traffic pattern for Runway 4-22 at El Paso International Airport is left (north and west) of the proposed site, therefore, departing traffic would not overfly the project site. Approaches, however, may flyover the project site. If approaches were to flyover the project site, the 50:1 slope to clear height restrictions based on proposed project site distance would allow for an approximate 300-foot height structure. As the design of the proposed new WBAMC has not been completed, it is assumed in this analysis that the proposed tallest structure of 5 stories would be approximately 78 feet tall. This height assumes the height of the first story at 18 feet, and the four successive stories of 15 feet. Construction of the proposed complex, therefore, would not be anticipated to impact air operations.

In addition, the proposed new WBAMC landscaping and stormwater drainage would be designed to discourage attraction of birds and other harmful wildlife within the vicinity of the airports (FAA, 2004). Section 3.9 describes the criteria for stormwater retention ponds at the preferred site in more detail.

All structures associated with the proposed new WBAMC would also be built within the United States Army Aeronautical Services Agency (USAASA) and FAA regulations, and outfitted with low aircraft warning lights, as necessary. The building height and location would also be subject to USAASA and FAA review and approval to ensure design of the facility complies with airspace regulations.

During construction, a helipad for the medical evacuation (MEDEVAC) service would be built on the preferred site. The hospital operators would work in concert with the Biggs AAF and El Paso International Airport to coordinate arrivals and departures of the MEDEVAC helicopter which would result in negligible impacts to airspace from existing conditions. Although the overall number of helicopter arrivals and departures would be anticipated to increase as the Fort Bliss population is projected to increase (see Section 3.10.1), overall impacts to airspace would be minor. WBAMC helicopter traffic would continue to be coordinated with the surrounding airports through similar procedures and agreements implemented at the existing WBAMC.

3.3.2.2 No Action Alternative

If the No Action Alternative would be selected, then the new WBAMC would not be constructed at the preferred site. There would be no additional impacts to airspace from the existing WBAMC operating as normal.

3.4 Noise

3.4.1 Affected Environment

Noise, simply defined as unwanted sound, can have an adverse effect on humans and their activities, as well as on the natural environment. The impact of noise is highly dependent upon the characteristics of the noise (e.g., loudness, pitch, time of day, and duration) and the sensitivity (or perception) of the noise receptor. The standard unit of sound amplitude measurement is the decibel (dB); however, since the human ear is not equally sensitive to sound at all frequencies, the A-weighted decibel scale (dBA) is typically used to measure noise as it relates to human sensitivity.

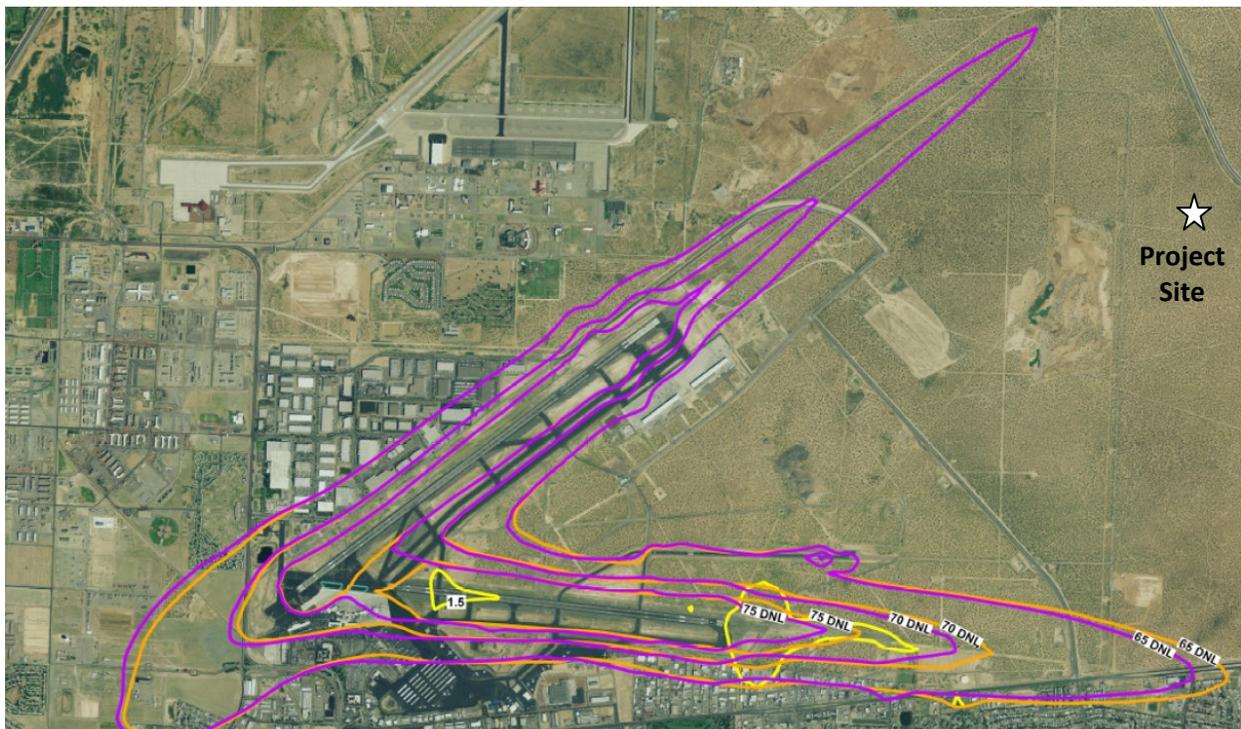
The number of times noise events occur during given periods is also an important consideration in assessing noise impacts. The Day-Night Sound Level (DNL) metric sums all individual noise events that occur in a 24-hour period and averages the resulting level over that period. The DNL is a composite metric representing the maximum noise levels, the duration of the events, the number of events, and the time of day during which they occur. This metric adds 10 dB to those events that occur between 10:00 p.m. and 7:00 a.m. to account for the increased intrusiveness of noise events that occur at night when ambient noise levels are normally lower than during the day. This cumulative metric does not represent the variations in the sound level heard, but it does provide a means of comparing environmental noise exposures when there are multiple noise events to be considered.

Particular land use receptors, such as schools, residences, and hospitals, are more sensitive to noise than other more industrial uses. Therefore, to assist in land use planning, the Army uses a system whereby the noise impact on the community is translated into noise zones (NZs). Land areas are classified as one of three NZs (NZ I, NZ II, and NZ III), with each zone representing a range of noise exposure levels. NZ I is compatible with most noise-sensitive land uses. NZ II is generally limited to industry, manufacturing, etc. and is normally incompatible with noise-sensitive land uses, such as residences, schools, and medical facilities. NZ III is incompatible with noise-sensitive land uses. In addition to these three noise zones, a more informal zone, known as the Land Use Planning Zone (LUPZ), is used to account for the seasonal variability of certain operations at an installation. The LUPZ provides the installation with a better means to predict possible complaints and meet the public demand for a better description of what will exist during a period of increased operations. Evaluating this zone can create a buffer to encroachment as it signals to planners that encroachment into this area may generate noise complaints.

To reduce the potential of incompatible land uses between the Army and surrounding communities, Fort Bliss implements an Installation Operational Noise Management Program (IONMP). The IONMP provides a strategy for noise management at Fort Bliss, which includes complaint management and

monitoring of both the noise environment and proposed land use changes surrounding the installation and noise abatement procedures (USACHPPM, 2007).

The primary noise sources near the preferred site include road traffic on Loop-375 and aircraft from the neighboring Biggs AAF and the El Paso International Airport. Although aircraft flying to/from these airports can be heard from the preferred site, noise contours for the Biggs AAF and the El Paso International Airport indicate that significant noise levels from aircraft accessing these airports are generally limited within the airport boundary – the 65-DNL contour (lowest contour generated) did not extend into the preferred site (U.S. Army, 2007a). Figure 3.4-1 shows the noise contours generated from the closest airfield, the El Paso International Airport. There are no sensitive noise receptors near the preferred site.



Source: USGS DOQQ; Ricondo & Associates, Inc.

Figure 3.4-1. El Paso International Airport Noise Contours

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action Alternative

During the construction phase, noise level increases would be localized, intermittent, and temporary. These increases would mainly result from the use of heavy construction equipment (e.g., bulldozers, scrapers, dump trucks, and concrete mixers) and the hauling of construction supplies and materials to/from the preferred site. Given the equipment needs of the construction phase, the typical noise levels onsite would be expected to remain within the range of 75 to 90 dBA. Construction noise levels would primarily be limited to the immediate vicinity of the preferred site and would mainly impact the health of the construction workers. However, adherence to appropriate Occupational Safety and Health Act standards (29 CFR 1926.52) would protect the workforce from excessive noise. Since construction-related noise impacts are temporary in nature and would not impact any existing sensitive noise receptors, adverse impacts would be minor in severity during the construction phase.

Implementation of the Proposed Action would increase traffic noise above levels that currently exist on the surrounding roads. Also, an occasional siren from an emergency vehicle and use of the MEDEVAC would increase the noise level, though this would be transitory and short term. The increased noise levels from road traffic resulting from hospital employees (many working on shift schedules), patients, and visitors would be transitory and distributed throughout the day. Overall, it is expected that noise impacts would be minor as the increases would mainly be localized (traffic along the main roads) and would not impact any sensitive receptors. As shown in Figure 3.4-1, the proposed new WBAMC is located outside of the elevated noise levels generated by the El Paso International Airport operations. Furthermore, as the existing noise conditions on the proposed site would be compatible for a hospital, the proposed new WBAMC would be sited in a location that would not be anticipated to adversely affect overnight patients from noise.

3.4.2.2 No Action Alternative

Under the No Action Alternative, the proposed new WBAMC would not be constructed and types and levels of activities in the surrounding ROI would remain the same; therefore, no impacts to noise levels would occur.

3.5 Air Quality

3.5.1 Affected Environment

Under the authority of the Clean Air Act (CAA), the Environmental Protection Agency (EPA) has established Federal air quality standards, known as the National Ambient Air Quality Standards (NAAQS), which represent the maximum allowable atmospheric concentrations to protect public health and welfare. The EPA has set NAAQS for six “criteria” pollutants: ozone (O₃), nitrogen oxide (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), lead (Pb), respirable particulate matter less than or equal to 10 micrometers in diameter (PM₁₀), and respirable particulate matter less than or equal to 2.5 micrometers in diameter (PM_{2.5}). Based on measured ambient criteria pollutant data, the EPA designates areas as having air quality equal to or better than NAAQS (“attainment”), worse than NAAQS (“nonattainment”), or areas recently re-designated as attainment from nonattainment (“maintenance”).

Fort Bliss is located in attainment areas in both Texas and New Mexico and emissions from the installation are currently in compliance with applicable Federal and State air regulations (U.S. Army, 2007a). Although El Paso County, Texas (including Fort Bliss) is classified as being in attainment for all criteria pollutants, part of Fort Bliss is adjacent to the City of El Paso, which is designated as being in *moderate* nonattainment PM₁₀ and a maintenance area for CO. Therefore, in consideration of transportation-related air conformity, Fort Bliss works with the El Paso Metropolitan Planning Organization to ensure that growth and development on the installation are captured in the region’s transportation plans.

Based on the installation’s potential to emit greater than 100 tons per year (tpy) of NO_x, Fort Bliss is considered a major source of air emissions in Texas. The Texas Commission on Environmental Quality (TCEQ) issued a Federal operating permit (Title V permit) to Fort Bliss in January 2007 (permit number RN100210095) based on the installation’s 2004 emissions inventory. Fort Bliss in New Mexico is not considered a major source of emissions and, therefore, an air quality permit is not required from the State. The 2007 emissions inventory for Fort Bliss in Texas, as well as the existing WBAMC boiler emissions, are summarized in Table 3.5-1 (Fort Bliss, 2009).

Table 3.5-1. Baseline Air Emission Inventory for Portions of Fort Bliss in Texas (2007)

Emissions Source	SO ₂ (tpy)	CO (tpy)	NO _x (tpy)	VOC (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	Pb (tpy)	HAPs (tpy)
Fort Bliss, Texas	0.43	38.33	58.67	62.54	7.27	3.66	0.0091	8.16
WBAMC (boilers)	0.02	1.93	2.31	0.13	0.18	0.17	0	0.042

Source: Fort Bliss, 2009a

SO₂ = sulfur dioxide; CO = carbon monoxide; NO₂ = nitrogen dioxide; VOC = volatile organic compound; PM₁₀ = particulate matter of diameter 10 microns or less; PM_{2.5} = particulate matter of diameter 2.5 microns or less; Pb = lead; HAPs = hazardous air pollution; tpy = tons per year

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action Alternative

During construction, fugitive dust emissions (increases in particulate matter) would be the primary cause for air quality degradation; however, adverse impacts from land disturbance activities would be temporary, localized, and minor in severity. Adverse air quality impacts would be minimized through the use of BMPs, such as watering exposed areas during dry periods, tracking control for construction equipment accessing the site, and limiting large area construction activities (e.g., grading) during excessively windy days. With the implementation of BMPs, dust generation is not expected to exceed State regulations. Additional construction-related activities that would impact air quality include traffic associated with workers and material deliveries, usage of heavy construction vehicles/equipment, and usage of diesel generators as a power source. In general, emissions during construction would be localized, short term, and would have a minor adverse impact on the overall air quality of Fort Bliss as the incremental increase of total emissions would be relatively minor compared to the total emissions in the project ROI.

The General Conformity Rule of the CAA requires Federal Actions occurring in nonattainment or maintenance areas to perform a General Conformity applicability analysis. As Fort Bliss is located in an area that is in attainment for all regulated criteria pollutants, this requirement does not apply.

Air quality impacts from the Proposed Action during operation would be generated from air pollutant sources similar to those existing at the WBAMC – these would include emissions from combustion sources (hot water boilers and emergency generators) and the increased use of privately-owned vehicles. Vehicular emissions would increase in the immediate area, along adjacent roads (e.g., Loop-375) (Martinez, 2010); however, these emissions are anticipated to be highly localized, short term, and would have a minor impact on the overall air quality of the region. Thus, air quality impacts related to traffic are considered minor.

Emissions from boilers and emergency generators at the proposed new WBAMC would result in criteria pollutant emissions; however, at this time, details on the number and types of such equipment are unknown. The amount of emissions from the proposed new WBAMC was estimated assuming the quantity of natural gas anticipated to be required for the new facility (approximately 771 therms of natural gas per day) (Fort Bliss, 2009b) and using AP-42 emission factors (EPA, 1995). These emissions for the boilers and an emergency generator are shown in Table 3.5-2.

Table 3.5-2. Estimated Emissions for Mechanical Equipment at the Proposed New WBAMC

Emissions Source	SO ₂ (tpy)	CO (tpy)	NO _x (tpy)	VOC (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	Pb (tpy)	HAPs (tpy)
Boilers ^a	0.01	1.18	1.42	0.08	0.11	0.11	0	0.03
Emission Factors for Emergency generators (lb/hp-hour) ^b	0.00809*Sulfur Content	0.0055	0.024	0.000705 ^c	0.0007	--	--	--
Emergency generator ^d	0.20 ^e	2.69	11.76	0.35	0.34 ^f	--	--	--

Sources: Fort Bliss, 2009a; Fort Bliss, 2009b; EPA, 1995 (AP-42)

a. Based on anticipated use of 771 therms (Fort Bliss, 2009b) (= 771,000 cubic feet) of natural gas per day for boiler at new facility (1 therm=100 cubic feet of gas). Existing hospital boiler used 45,663,000 cubic feet CY2007 (Fort Bliss, 2009a). Ratio of old to new = 1.62. Criteria emissions for new boiler are estimated using Table 3.5-1 values divided by 1.62.

b. Emission factors, EF, from AP-42, Table 3.4-1.

c. Expressed as TOCs

d. Emissions = EF*hours*kW*/1.341 kW per HP/2000 lb per ton. Based on 876 hours of use per year (maximum allowable use) for a 1,500 kW generator

e. Assumed 5 percent natural gas sulfur content (Fort Bliss, 2009a, sheet EC001)

f. Value represents total PM;

SO₂ = sulfur dioxide; CO = carbon monoxide; NO₂ = nitrogen dioxide; VOC = volatile organic compound; TOC=total organic compound; PM₁₀= particulate matter of diameter 10 microns or less; PM_{2.5}= particulate matter of diameter 2.5 microns or less; Pb = lead; HAPs = hazardous air pollution; tpy = tons per year; lb=pound; hp=horsepower

The estimated emissions from the boilers from the new facility would be approximately 3 percent or less of the current emissions from Fort Bliss, Texas, and are expected to result in long-term minor adverse impacts to air quality. Plans for the existing WBAMC hospital are unknown at this time; however, if the existing facility was taken out of commission, the elimination of these existing emissions would offset the additional emissions of the new facility – emissions from the new facility are projected to be approximately 40 percent less than the existing WBAMC’s current emissions due to the proposed new WBAMC using a boiler that consumes less natural gas. Use of an emergency generator would also contribute to increased air pollutants as shown in Table 3.5-2. These estimates are based on the maximum allowable limit for operation of a 1,500-kW emergency generator (assuming the limit would be similar to the existing WBAMC at 876 hours per year) and represent conservative levels of emissions. Typically, the emergency generator would be used only rarely and for short durations. It is currently unknown to what purpose the existing WBAMC building would be utilized in the future; therefore, separate NEPA documentation (including air emissions) would be performed when the building is re-commissioned.

3.5.2.2 No Action Alternative

Under the No Action Alternative, the existing WBAMC would continue current operations and emissions from the existing facility (via the three steam boilers) and there would be no impacts under this alternative. The new, more energy efficient facility would not be constructed to replace the existing facility, and thus net air emissions would not be reduced.

3.6 Geology and Soils

3.6.1 Affected Environment of Proposed Action

Fort Bliss is located in the eastern portion of the Basin and Range Physiographic Province. The area consists of arid valleys that are bordered by gently sloping fans at the edge of the surrounding mountain ranges (U.S. Army, 2007a). The Franklin Mountains are located directly northwest of Fort Bliss and the City of El Paso. The bedrock exposed in the mountain range is a complex mix of granite, metamorphosed sedimentary deposits, marble, shallow ocean deposits and basalt flows. Alluvial material eroded from the mountain range filled the basin and covered the bedrock with thick deposits. There are no bedrock outcrops at the preferred site.

There is no mining activity at the preferred site, although there are several sand, gravel, and building stone quarries that supply building materials throughout the region. Exploration for oil and gas has occurred at Fort Bliss, however the exploratory wells were dry (USACE, 2004). There is a groundwater well field for the El Paso Water Utilities desalination plant directly south of the site boundary.

The soils at Fort Bliss are generally well developed, well drained to excessively well drained, and have formed under arid conditions. They primarily consist of sandy, silty, and gravelly loam that overlies unconsolidated alluvium eroded from the Franklin Mountains. The area surrounding the preferred site consists of mostly level desert soils. The primary soil association at the preferred site is the Mcnew-Copia-Fox Trot complex, 1 to 5 percent slopes. This soil association consists of wind-blown sands over alluvium. It tends to be well drained, with a long depth to the water table (USDA, 2009). All of the soils in the preferred site are considered easily erodible by wind, especially when disturbed. Where soils are deep enough, they can tolerate large amounts of erosion; however, once vegetation is cleared, erosion can overwhelm the soil depth, exposing the coarser parent material. Most of the soils in the South Training Area, where the preferred site is located, are well suited for road construction and small commercial buildings, but the area is also extremely susceptible to wind erosion (U.S. Army, 2007). There are no prime farmland soils, or soils of a statewide importance at or near the preferred site.

3.6.2 Environmental Consequences

3.6.2.1 Proposed Action Alternative

There would be no impacts to the geology from implementing the Proposed Action. Construction on the preferred site would be located on the surface soils and alluvial parent material. The preferred site would be located 8.5 miles east of the Franklin Mountains, so their geological features would not be affected by the Proposed Action Alternative. Construction would not disturb the nearby well stations, and the mineral and gas rights would continue to be closed below the preferred site, so there would be no impact to the mineral rights (USACE, 2004).

The Proposed Action Alternative would result in converting 202 acres of undeveloped land at Fort Bliss into a new center for the WBAMC. Although the placement of the buildings, roads, parking lots and landscaping have not been identified yet, it is expected that the entire site would be disturbed during construction causing adverse impacts to soils. Construction would occur over a 5-year period, therefore, disturbance throughout the preferred site would likely occur over the multi-year process. Preparing the land for construction would include removing existing plants at the site, grading, compacting and stabilizing the soils. Buildings, roads and parking lots would eventually be constructed on top of soils at the preferred site causing a direct loss to soil resources. This direct loss, however, would be considered minor as the soils within the preferred site are typical to the region.

Whenever soils are disturbed, there is an increased chance of erosion due to wind and water actions. Soils at Fort Bliss consist primarily of silt and sand, and therefore, are extremely susceptible to wind erosion, especially when the vegetative cover is removed. Appropriate dust suppression procedures and erosion BMPs would, therefore, be enacted to reduce erosion during construction. Erosion BMPs would include periodic watering of the disturbed soil, and applying soil stabilizers to areas that are not being actively worked.

After construction is complete, areas not covered by hard surfaces (i.e. buildings or pavement) experiencing temporary soil disturbance would be landscaped with local vegetation. The *Real Property Master Plan* describes the policies and procedures that Fort Bliss uses to ensure the landscaping enhances the property, is ecologically appropriate for the area, and reduces dust emissions from open lots. Stabilization of disturbed soils through landscaping would minimize adverse impacts to soils following construction and during operations. Other sections in this EA, including section 3.3, Airspace, and 3.7

Biological, discuss potential impacts to the bird populations as a result from new landscaping in close proximity to the local airports.

3.6.2.2 No Action Alternative

Under the No Action Alternative, the proposed new WBAMC would not be constructed on the new location, so the land and soils would not be disturbed. Erosion at the undisturbed site would continue in its natural state. There would be no impacts to the geology or soils.

3.7 Biological Resources

3.7.1 Affected Environment

Biological resources consist of native or naturalized plants and animals and their habitats. This section focuses on plant and animal species and vegetation types that typify or are important to the function of the ecosystem, are of special societal importance, or are protected under Federal or State law or statute. For the purposes of this evaluation, sensitive biological resources are defined as those plants and animal species listed by the USFWS, under different levels of concern by the State of Texas, or considered sensitive by Fort Bliss.

3.7.1.1 Vegetation

Over 98 percent of Fort Bliss is classified as a shrub-grassland vegetation community. The remaining area is generally classified as woodland or disturbed. Historic land use has transformed grassland communities to shrub-dominated landscapes (U.S. Army, 2001a). The proposed new WBAMC site is characterized as mesquite coppice dunes and sandscrub. This type of plant community is dominated by a honey mesquite shrub (*Prosopis glandulosa*) and Sandsage (*Artemisia filifolia*). Once established, coppice dunes persist with little conversion back to less desertified communities. Figure 3.7-1 contains a view of the typical mesquite coppice dune and sandscrub landscape located within the preferred site.



Figure 3.7-1. Typical Mesquite Coppice Dunes and Sandscrub Characteristic of the Preferred site

Invasive plant species that have become established on Fort Bliss include African rue (*Peganum harmala*), Russian thistle (*Salsola kali*), salt cedar (*Tamarix ramosissima*), Malta thistle (*Centaurea melitensis*), and Johnson grass (*Sorghum halepense*). Fort Bliss completes annual monitoring and distribution of invasive plant species and performs targeted mitigation (U.S. Army, 2001a). These measures have been incorporated into the INRMP, providing necessary recommendations to preserve biological diversity on post.

3.7.1.2 Wildlife

Fort Bliss supports a relatively high faunal diversity. Three hundred thirty-four species of birds, 58 species of mammals, 39 species of reptiles, and 8 species of amphibians are known to occur on Fort Bliss lands (U.S. Army, 2001a).

Due to the proximity of the site to developed areas, wildlife within the preferred site is limited to those species that have adjusted to human activity. Mesquite coppice dune vegetative habitat within the preferred site is generally poor in nature and the site is surrounded by development. Therefore, it is unlikely that the site is able to support a diversity of wildlife.

3.7.1.3 Sensitive Species

At the Federal level, rare species are protected under the ESA of 1973, which prohibits unauthorized taking, possession, sale, and transport of endangered species. Section 7 of the ESA requires all Federal agencies to ensure that any action authorized, funded, or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat.

No Federally-listed threatened or endangered species are known to occur on the preferred site. The Texas horned lizard (*Phrynosoma cornutum*), State-listed as threatened, may occur on the preferred site. Texas horned lizards are always found on the ground and are fond of hot, sandy habitats. The species is common throughout the grassland and desert shrubland on post as Fort Bliss provides thousands of acres of habitat.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action Alternative

Construction of the proposed new WBAMC would result in overall localized and minor adverse impacts to vegetation, primarily due to vegetation loss and conversion throughout the 202-acre site. Construction of new roads and buildings would result in the permanent loss of vegetation. The temporary disturbance to vegetation communities during clearing activities and the transport of dirt and fill material could present opportunities for the introduction and spread of invasive species. Planting of native species to the extent practical in disturbed areas and implementation of invasive species management would help reduce establishment and proliferation of invasive plant species. These procedures are outlined within the INRMP.

Impacts from habitat loss would be anticipated. Overall impacts, however, would be minor and localized to the preferred site as vegetation and habitat quality on the site is low and suitable habitat for any displaced wildlife is plentiful on post. If Texas horned lizards do exist in areas proposed for construction, direct individual impacts could occur to this species within the construction area. Indirect impacts may also occur from a loss of habitat resulting from the establishment of built-up areas. As stated in Section 1.1, the Final SEIS evaluated the potential impacts to land use changes from training to cantonment in the South Training Area, which included the preferred site. The proposed new WBAMC would be a compatible type of development activity tiered off the proposed land use changes analyzed in the Final SEIS. The Final SEIS determined development within this area may reduce local populations of the Texas horned lizard, but regional populations (county or state level) would not be jeopardized. Planned

construction of the proposed new WBAMC would affect approximately 202 acres; however, by comparison there are approximately 95,000 acres of Texas horned lizard habitat in the Texas portion of Fort Bliss alone (U.S. Army, 2007a).

Increased traffic during operation of the proposed new WBAMC would likely result in a small increase in species vehicle mortality; however, impacts are not expected to be significant.

The proposed new WBAMC would be designed to avoid attracting hazardous wildlife. Due to the preferred site's proximity to El Paso International Airport and Biggs AAF, bird air strike hazard (BASH) could increase if features of the proposed new WBAMC attracted bird species to the area. Measures to avoid attracting avian species to the site could be implemented, including using native vegetation, separating trees so as not to create an extended canopy attractive to birds, designing buildings with minimum to no ledges, cornices, flat ledges or other roosting sites; designing buildings with no shady spots under cooling systems, vent systems, or ducting so as not to provide nesting habitat; and discouraging permanent water on the site. In the event of onsite permanent water, bird balls would be installed to camouflage the liquid surface from the air and deter birds and waterfowl from leach ponds. Provided the proposed new WBAMC design meets the requirements of the FAA Advisory Circular 150/5200-33B - *Hazardous Wildlife Attractants On or Near Airports*, the Proposed Action is not anticipated to have an adverse effect on BASH considerations at either airfield.

3.7.2.2 No Action Alternative

Under the No Action Alternative, no construction would occur on the preferred site. Current management practices outlined in the INRMP would continue. Therefore, no impacts to biological resources would be anticipated.

3.8 Water Resources

Fort Bliss is primarily located in the Tularosa-Hueco Basin of the Basin and Range Physiographic Province. The basin drains to the southeast and into the Rio Grande River. The Hueco Bolson Aquifer underlies the Fort Bliss installation and a majority of El Paso, but is also connected to the Tularosa Basin, which extends to the north. The Hueco Bolson's primary recharge area is the eastern edge of the Franklin and Organ Mountains, from mountain runoff that percolates through the alluvial fans. Within the Hueco Bolson Aquifer, a freshwater lens overlies brackish water. This lens is the main source of freshwater, however, the new desalination plant withdraws from the brackish water of the aquifer to treat and provide additional sources of freshwater.

3.8.1 Affected Environment of Proposed Action

3.8.1.1 Surface Water and Wetlands

The closest primary surface water body to Fort Bliss is the Rio Grande River, which flows northwest-southeast alongside El Paso. At its closest point, the Rio Grande flows within seven miles of the preferred site. A slight ridge through the middle of the preferred site directs surface drainage to the northwest and southeast, however, the preferred site topography only varies by 10 feet. There are no natural surface water bodies on the installation. The preferred site is relatively flat, with few gullies or arroyos. No jurisdictional wetlands occur within the preferred site.

The El Paso region takes approximately 24 percent of its drinking water from the Rio Grande River, and withdraws the rest from aquifers in the Hueco and Mesilla Bolsons. The water quality of the Rio Grande River is seasonally dependent on the amount of dissolved solids and salts. When the reservoirs are releasing large amounts of water, the salt content is diluted, and the river meets drinking water quality

standards. During dry periods, recycled water used for upstream irrigation combined with evaporation concentrates the dissolved solids in the Rio Grande River. Sections of the Rio Grande River have been classified as impaired as defined by section 303(d) of the Clean Water Act. The Draft 2010 Texas 303(d) List designates the Rio Grande River as impaired for bacteria, chloride and total dissolved solids from the confluence of the Rio Conchos (Mexico) in Presidio County to Riverside Diversion Dam in El Paso County (TCEQ, 2010). The EPA lists the potential source of impairment from nonpoint sources (e.g. agricultural and stormwater runoff (EPA, 2010b). There were no total maximum daily loads (TMDLs) reported to the EPA by the State.

3.8.1.2 Groundwater

The Hueco Bolson, which underlies the installation, is the primary drinking water source extracted by the El Paso Water Utilities (EPWU), which supplies the City of El Paso, Fort Bliss Main Cantonment Area, and Ciudad Juárez. As a result of high water demand in the region, the aquifer water level has been steadily lowering. To maintain aquifer sustainability and to meet increased growth and regional development, the Hueco Bolson output is being supplemented with water from the Mesilla Bolson aquifer and the Rio Grande River (U.S. Army, 2007a). Section 3.9, Utilities, provides more information on the source of potable drinking water in El Paso.

3.8.2 Environmental Consequences

3.8.2.1 Proposed Action Alternative

3.8.2.1.1 Surface Water and Wetlands

The overall adverse impacts to the surface water and wetlands would be negligible as neither of these resources occur within the preferred site. The increase in impervious surfaces from any future construction completed as a result of the creation of the proposed new WBAMC would potentially cause an indirect impact to surface waters. The additional impervious surface would generate an increased potential of stormwater runoff, which would eventually reach the Rio Grande River. To mediate excessive stormwater runoff, at least one retention pond would be constructed within the preferred site. The northern and western edges of the preferred site would be located within the 10,000 foot buffer area of the Biggs AAF and the El Paso International Airport. FAA rules state that ponds within the buffer area would need to be drained within 48 hours of the storm event to discourage birds and other hazardous wildlife from roosting (FAA, 2004). Although the stormwater design has not been completed for the proposed new WBAMC, placing the retention pond on the southeastern edge of the preferred site, and ensuring that it empties within 48 hours will ensure that the design complies with FAA rules. In addition, abiding by the procedures outlined in the SWMP (U.S. Army, 2008d) would reduce the potential for water quality impacts during construction, would address any increase of impervious surfaces, and would result in negligible impacts from the construction and operation of the Proposed Action.

3.8.2.1.2 Groundwater

The construction and operation of the proposed new WBAMC have the potential to adversely affect groundwater resources. The impact level is dependent on the potential for a contaminant release during construction, or the potential for water demand that exceeds Fort Bliss supply. To prevent contamination of the groundwater, accidental spill BMPs would be adopted so that an accidental release at the construction site would be quickly and efficiently cleaned before it could reach the aquifer resulting in negligible adverse impacts from construction. Although the soils are very well drained to excessively well drained at the preferred site, the water table depth averages approximately 350 feet, which would slow the progression of the spill. A further discussion of hazardous materials and waste is discussed in section 3.13.

During construction, there would be some additional consumption of water, as erosion prevention procedures use water. The transition of medical services from the existing WBAMC hospital to the proposed new WBAMC would not result in a significant increase of aquifer use as the overall level of service being provided would not increase and, therefore, impact would be minor. The proposed new WBAMC would also be constructed to meet at a minimum LEED Silver Certification, which would have a lower water demand than the existing WBAMC. Section 3.9, Utilities, describes the water use at WBAMC in more detail.

3.8.2.2 No Action Alternative

Under the No Action Alternative, the proposed new WBAMC would not be constructed on the 202-acre preferred site. The levels of stormwater runoff, erosion and sedimentation at Fort Bliss would not increase. The undeveloped land would remain at its current state until the installation decides on a new construction project for the site. Therefore no impacts to surface water would occur. In addition, no impacts to groundwater would occur at the preferred site. The WBAMC may, however, need to use more water to supply an increased patient population without the benefits of new low-flow fixtures.

3.9 Utilities

3.9.1 Affected Environment

This section describes the facilities and utilities used for potable water treatment and distribution; wastewater collection and treatment; stormwater systems; communication systems; electric power; and natural gas supplies.

3.9.2 Existing Environment

3.9.2.1 Potable Water

Potable water is currently provided to Fort Bliss from on-post wells and interconnections with the City of El Paso. The majority of water consumed by the installation is obtained from the on-post well fields, which are capable of producing 15.8 million gallons daily (MGD). The City of El Paso can guarantee delivery to Fort Bliss of up to 4.24 MGD; bringing the total water supply available to Fort Bliss to 20 MGD. Due to the emphasis of using on-post water versus city supplied water, Fort Bliss uses very little city water (USACE, 2006a). Water produced by well fields for the installation averaged approximately 4.6 MGD in 2004 and the per capita water consumption for 2004 averaged 266 gallons/day (U.S. Army, 2007a). According to EPWU, the average daily water consumption from the El Paso water system in 2007 was 97.5 MGD (EPWU, 2009a). The existing EPWU system has a treatment capacity of 305 MGD (U.S. Army, 2007a). A new desalination plant has been constructed on Fort Bliss land (approximately two miles south of the preferred site) to treat brackish water from the Hueco Bolson aquifer and to minimize freshwater use. The new facility produces 27.5 MGD of fresh water (EPWU, 2009a). Based on current water demand, the desalination facility increases the EPWU's fresh water production by approximately 25 percent (EPWU, 2009b).

A 48-inch water line runs along the northeast side of Loop 375, supplying water to a large part of Fort Bliss as well as surrounding development (Fort Bliss, 2008). In the near future, this line will feed a 36-inch main (currently under construction) that parallels an existing 48-inch line on the opposite side of the road, adjacent to the preferred site. Water will be pumped from the 48-inch main into the water storage tanks (currently under construction) south of the preferred site, to contribute to the static pressure in water distribution system in the eastern part of Fort Bliss.

3.9.2.2 Sanitary Wastewater

Wastewater generated at Fort Bliss flows through five connections to the City of El Paso's sewer system and is treated in the Haskell Street Wastewater Treatment Plant, which has a treatment capacity of 27.7 MGD and an excess capacity of approximately 14 MGD (EPWU, 2009c). The installation typically uses approximately 10.5 percent of this plant's treatment capacity – in 2004, approximately 2.9 MGD of sewage was generated on post. The City of El Paso has a total of four wastewater treatment facilities (all managed by the EPWU), including the Haskell Street facility, and currently has a combined treatment capacity and a combined excess capacity of 94.2 MGD and 44.7 MGD, respectively (U.S. Army, 2007a). A major gravity sewer near the preferred site was recently constructed to serve the new BCT complexes north of Spur 601 and a vehicle wash facility east of Loop 375.

The TCEQ has delegated primacy to EPWU with regard to compliance requirements of the CWA. EPWU has published Rule #9 to provide enforcement guidance with regard to wastewater discharges and has placed discharge restrictions and limits on wastewater. Fort Bliss has a wastewater discharge agreement with EPWU regarding Industrial Pretreatment (IPT) practices. In response to mercury exceedences, WBAMC installed amalgam/mercury filtration systems. Other additional areas of concern are biohazards discharged into the sewer system (Operating Rooms, autopsy rooms, mechanical rooms, anti-corrosion/de-scaling chemicals/additives used in boilers and chillers). Currently WBAMC's mammography unit still utilizes non-digital radiography technologies that produce silver as a waste product, however, silver is being recovered by a system that captures it before it gets discharged into the sanitary sewer.

3.9.2.3 Stormwater

Precipitation is low throughout most of the project ROI; however, because of the topography and low vegetated states of the land area, most of the precipitation becomes stormwater runoff that ends up in the Rio Grande or slowly filters into the aquifers along various recharge sites such as playa lakes (USACE, 2006a). Furthermore, flash flooding and high alluvial erosion and deposition are problems associated with the terrain during high intensity thunderstorms. Most of the surface water collected in playas is lost to evaporation. Currently, there are no man-made stormwater retention features at the preferred site.

3.9.2.4 Communication Systems

Fort Bliss's communication systems include telephone, optical cable, automated digital network (AUTODIN), microwave, and television systems (U.S. Army, 2007a). Part of the telephones on post are commercial sets linked to the commercial telephone network, the Integrated Switch Digital Network (ISDN), and the Defense Switched Network (DSN). These telephones are complemented by commercially-provided cell phones operating through a tower in the Franklin Mountains. The nearest communication line is approximately 8,000 feet northeast of the preferred site and directly east of BCT1.

3.9.2.5 Electric

Electrical power is supplied to Fort Bliss by El Paso Electric Company (EPEC), which generates electricity from two interconnected plants. An EPEC high-voltage overhead electrical line runs south of the preferred site. EPEC has scheduled a project (to be completed in 2009) to provide redundant power through an additional circuit in this transmission line's ROW. EPEC has a total generating capacity of 840 megawatts (MW) and can purchase an additional 110 MW from the Four Corners Plant. Current peak electricity usage within the EPEC service area is estimated to be approximately 75 percent of available power. Average power consumption, based on standard rates in Army Technical Manual TM-5-811, is approximately 0.3 kilowatts/person, or 10 (MW) (U.S. Army, 2007a). The Main Cantonment Area thus consumes approximately 1 percent of power available from EPEC. There are two electric lines 900 feet

east of the preferred site, which are located within the same ROW corridor. The Newman Vista line is 115kV and the Newman Caliente line just east of the Newman Vista line is 345kV.

3.9.2.6 Natural Gas

The El Paso Natural Gas Company (EPNG) supplies natural gas to Fort Bliss, which is the primary heating fuel at Fort Bliss (USACE, 2006a). A number of distribution points, with an estimated total capacity of 2.5 million cubic feet per hour (CFH), are dispersed on a looped gas distribution network that is owned and maintained by Texas Gas Service. The nearest gas line to the preferred site is located approximately 6,000 feet northwest of the preferred site and southwest of BCT1, which is currently under construction. The average annual gas consumption of the Main Post is estimated at approximately 0.88 million CFH. The Texas Gas Company provides 25.9 billion cubic feet of natural gas per year to 28 cities in Texas, including El Paso (U.S. Army, 2007a). Therefore, the Main Cantonment Area consumes 0.003 percent of the natural gas available from Texas Gas Service.

3.9.3 Environmental Consequences

3.9.3.1 Proposed Action Alternative

3.9.3.1.1 Potable Water

Potable water for the replacement hospital would be supplied by the EPWU and be stored for adequate pressurization and chlorination at the existing water tower located just to the east of the proposed new WBAMC site. This water tower currently supplies water to the BCT complexes at East Fort Bliss. If design analyses indicate pressures would not be sufficient to supply both the hospital and the BCTs, another water tower would be constructed to service the Infantry BCT area that is currently under construction. This additional tower would be located east of Loop 375 and outside the FAA 10,000 foot airport exclusion zone as mandated by FAA Advisory Circular 150/5200-33B .

With an anticipated consumption rate of 0.091 MGD of potable water (includes consumption rate for all phases), it is expected that the on-post well fields would be able to supply this additional demand by the proposed new WBAMC (total) and is expected to result in minor impacts to the existing water system. The anticipated consumption rate represents approximately 2 percent of the water pumped for Fort Bliss in 2004 of 4.6 MGD, 0.1 percent of the EPWU's 2007 average daily demand of 97.5 MGD, and approximately 2 percent of the guaranteed amount allowed for Fort Bliss by the EPWU.

Once construction is completed and units are transition to the proposed new WBAMC, water use at the existing WBAMC would be drastically reduced because the population would have moved to the proposed new WBAMC. In addition, the proposed new WBAMC will be constructed to meet at a minimum LEED Silver Certification standard, which requires fixtures designed to reduce water use. Therefore, there should not be a drastic increased demand in water at the proposed new WBAMC. This would be in concert with El Paso, which is working to enforce water conservation and reclamation.

3.9.3.1.2 Sanitary Wastewater

Sewer access is not known at this time. Once engineering work begins, a specific connection point will be determined. There is an assumption that the sewer connection will be in the location of the existing BCT infrastructure; however, once the engineering work begins on this project, there is a good possibility that it may be determined that the point of connection for the sewer may be at Montana Avenue. If the connection was through the existing BCT infrastructure, tunneling or boring would be required to allow the proposed force main to reach the north side of Spur 601. The capacity of the gravity sewer would be sufficient to carry the additional quantity generated by the proposed new WBAMC. It is anticipated that approximately 0.081 MGD of wastewater would be generated upon full operation of the proposed new

WBAMC (all facilities are constructed and are operating). It is expected that the EPWU's existing wastewater treatment facilities would be able to handle the new wastewater generated by the project and would result in minor impacts to existing systems – the new demand represents 0.6 percent of the excess capacity of the Haskell Street Wastewater Treatment Plant (at approximately 14 MGD) and 0.2 percent of the EPWU's total combined excess capacity (at 44.7 MGD).

Overall discharges into the EPWU system would be similar to those currently occurring from the existing WBAMC campus as described in Section 3.9.2.2. IPT controls would be implemented to maintain compliance with Rule #9. Any new processes that would discharge into the sanitary sewer would be reviewed for potential impact to the IPT Program and discharge limits (i.e. laboratory wastes, etc).

3.9.3.1.3 Stormwater

Stormwater design for the proposed project has not been developed, however, storm drainage for the proposed new WBAMC would be designed to meet standards required by the TCEQ to control runoff from construction sites and developed areas to maintain water quality. This would likely include directing storm runoff from impervious surfaces using a system of gutters, pipes, and swales to a stormwater retention facility within the preferred site. The retention basin(s) would be sized to handle increased runoff resulting from the project. Because of the preferred site's proximity to the El Paso International Airport, design of the retention facility would adhere to FAA requirements for infiltration to avoid hazards associated with wildlife on or near airports (see Section 3.7.2.1). Any stormwater runoff discharged both during and post construction would meet all of the State's stormwater requirements via typical construction BMPs (e.g., silt fence and revegetation of disturbed land); thus, it is expected that overall stormwater impacts would be negligible.

3.9.3.1.4 Communication Systems

The proposed project would require telecommunication and data transmission capabilities in support of various activities at the proposed new WBAMC. Some of these requirements can be addressed with the type of communication services that would normally be provided for a typical administrative facility. Others, such as a proposed tele-radiology system, would require more robust services. A ten gigabyte underground fiber optic cable would be brought to the site from an Area Distribution Node, located approximately 8,000 feet northwest of the preferred site in the vicinity of BCT1 and BCT2 (currently under construction) near the southeast portion of the proposed Town Center site. Because this Area Distribution Node is north of Spur 601, boring or tunneling would be required where it crosses Spur 601 to the preferred site. Negligible impacts are expected to the existing communication system.

3.9.3.1.5 Electric

Electrical connections would be required for the proposed new WBAMC. It is expected that the demand for electricity by the proposed new WBAMC would be met by the existing supplies and would result in minor impacts.

The proposed new WBAMC would be served by a new substation and a 1,500-kVA transformer. Power would be drawn from EPEC's high-voltage overhead electrical line that runs south of the preferred site. To provide additional redundancy in electrical power supply, a back-up generator would also be part of the proposed project. The generator would be sized to provide 1,500 kW of power. Policy dictates that electrical distribution at Fort Bliss would be underground.

3.9.3.1.6 Natural Gas

Natural gas would be required for the proposed new WBAMC and it is expected that the demand for natural gas would be met by the existing supplies and would result in minor impacts.

Natural gas would be delivered to the preferred site from the closest point in the high-pressure gas distribution system that currently exists within the Fort Bliss cantonment area. This point is in the vicinity of a proposed Access Control Point and the new BCT1, which is currently under construction. More specifically it is located approximately 6,000 feet northwest of the preferred site. Since the existing 6-inch high-pressure line is southwest of BCT1 and north of Spur 601, underground boring under this roadway would be required to attain access to the natural gas line from the south. The proposed connecting line would be sized to serve the proposed larger medical campus.

3.9.3.2 No Action Alternative

Under the No Action Alternative no new facilities would be constructed in the near future and levels of activity would remain status quo. Therefore, no impacts to existing infrastructure would occur as new connections to and additional demand on existing utilities would not be required.

3.10 Socioeconomics and Environmental Justice

3.10.1 Existing Environment

The Fort Bliss Army Growth and Force Structure Realignment Draft EIS (DEIS; U.S. Army, 2009) reported that the overall Fort Bliss-related population, in 2008, was almost 92,000 people. Retirees, annuitants, and their Family Members comprised another 79,600 people, increasing the overall population of Fort Bliss to 147,876. The total population directly supported by Fort Bliss showed a yearly increase of 9.5 percent from 2000 to 2008 and comprised about 6.9 percent and 9.2 percent of the total population of the ROI and El Paso County, respectively. When retirees, annuitants, and their Family Members are included, this increases to almost 15 percent of the ROI population (U.S. Army, 2009).

The population of El Paso County was estimated at 742,062 in mid-2008, while the population of the three-county area was estimated at 1,006,441 (U.S. Census, 2009). For comparison, the population of El Paso County was 479,899 in 1980, while the three-county population was 620,904 (U.S. Army, 2007a). The Army Growth and Force Structure Realignment DEIS projected that the population in El Paso County would increase annually by 1.75 percent from 2010 to 2020. These projected rates compare to an average annual growth rate of 1.66 percent from 1980 to 2004. The DEIS also projected that population growth in the three-county region would average 1.64 percent for the 2010-2020, slowing to about 1 percent between 2030 and 2040 (U.S. Army, 2009). These projections do not include Fort Bliss growth from the BRAC/Global Defense Posture Realignment expansion, but the El Paso Metropolitan Planning Organization has estimated population growth by planning region considering base expansion. They estimate an annual growth rate of about 1.9 percent with most growth expected to occur in the east, west, and northeast areas of El Paso and the New Mexico portion of their planning area (U.S. Army, 2009).

The Army Growth and Force Structure Realignment DEIS also provides the projected demographic and socioeconomic conditions relevant to this EA based on future Army Growth and Force Structure Realignment decisioning. The DEIS analyzes four stationing and training decisioning alternatives, all of which would result in an increase in Fort Bliss population. As the preferred or selected alternative has not been identified at this time, this EA describes potential maximum and minimum population levels resulting from the Alternatives. The maximum population increase would result as part of the No Action Alternative, Stationing and Training Alternative 1, which includes the 2005 Fort Bliss population plus the predicted total increase resulting from the implementation of Alternative 4 of the Final SEIS (the Proposed Action of the SEIS adopted in the ROD). Under this scenario, the total direct Fort Bliss-related population (including military, civilians, and their Family Members) would increase by 87,715 above the 2005 baseline, and also induce regional population growth by 90,396. The total direct and induced population increase over the 2005 baseline would be 178,083, of which an estimated 159,315 (89 percent) would be off-post residents. The total Fort Bliss-related population (direct and induced), including the

2005 baseline, was projected to reach 260,879, of which an estimated 224,956 (86 percent) would be off-post residents (U.S. Army, 2009). In comparison, Stationing and Training Alternative 3, if selected, would result in the lowest level of population increase. Under this scenario, the total direct Fort Bliss-related population (including military, civilians, and their Family Members) would increase by 15,185 above the 2005 baseline, and also induce regional population growth by 12,218. The total direct and induced population increase over the 2005 baseline would be 27,403, of which an estimated 22,196 (81 percent) would be off-post residents. The total Fort Bliss-related population (direct and induced), including the 2005 baseline, was projected to reach 110,199, of which an estimated 87,837 (80 percent) would be off-post residents (U.S. Army, 2009).

As reported in the DEIS, studies commissioned by Fort Bliss in 1989 and 2002 evidenced the significance of the installation to the regional economy as a principal employer and business stimulator (U.S. Army, 2009). It was estimated that, in 2002, Fort Bliss was responsible for \$1.6 billion in increased sales volume and \$112 million in government outlays. In 2005, using an average military salary of \$43,500, payroll for active duty personnel is estimated at \$944 million. Likewise, payroll to civilian employees is estimated to be \$332 million using an average civilian salary of \$45,000. In 2002, it was estimated that Fort Bliss was responsible for \$1.7 billion in increased sales in the City of El Paso Area (U.S. Army, 2009).

The DEIS addressed environmental justice considerations in accordance with Executive Order 12898. The evaluation determined that El Paso County (in 2000) had a minority population representing 83 percent of the total population with nearly 24 percent of individuals living below the poverty level. The SEIS also determined that 89 percent of the census tracts in the three-county region had minority populations comprising 50 percent or more of the total population, while 97 percent of the census tracts had minority populations at higher percentages than the average for the region. Also, nearly half of the census tracts had higher percentages of individuals living below the poverty level than the average for the region.

The residential areas adjacent to the existing WBAMC were characterized by both minority and low-income populations in the SEIS. The existing WBAMC is surrounded by census tracts 6 and 7 to the east, 8 to the south, 9 to the west, and 4.01 to the north. The residential areas in census tracts 6, 8, and 9 were determined to have minority populations at higher percentages than the average for the three-county region, as well as higher percentages of individuals living below the poverty level based on the 2000 census. Only tract 7, which is within the boundaries of Fort Bliss, and tract 4.01, which does not include any residential areas near the existing WBAMC, are not characterized by minority or low-income populations.

The preferred site for the proposed new WBAMC is located within census tract 101.1, which is almost entirely within the boundaries of Fort Bliss. The closest residential neighborhoods to the preferred site are located in census tracts 103.11 and 103.13, south of Montana Avenue, more than 2 miles away. Both tracts are characterized as having minority populations at higher percentages than the three-county average, but neither was characterized as having higher percentages of individuals living below the poverty level (U.S. Army, 2007a).

3.10.2 Environmental Consequences

3.10.2.1 Replacement of WBAMC at Preferred Site

The proposed new WBAMC would remain within the demographic baseline and planning assumptions for Fort Bliss as approved in the ROD for the SEIS; therefore, the proposed project would not affect regional population or housing conditions. The construction of the proposed new WBAMC would, however, provide additional economic stimulus and may attract construction workers to the region

temporarily depending upon local availability in the labor pool. The permanent relocation of WBAMC personnel from the existing medical center to the proposed new WBAMC may reduce demand on local commercial services in the vicinity of the existing WBAMC and increase demand on these services in the vicinity of the preferred site. Depending upon future decisions relating to the reuse or demolition of the existing WBAMC facilities, however, new commercial or residential uses may occur at the existing site. These may partially offset the loss of WBAMC personnel and visitors from the local area.

The relocation of existing WBAMC facilities and operations to the proposed new WBAMC at the preferred site would reduce accessibility by the Fort Bliss-related population near the existing WBAMC to one of two trauma centers in El Paso. This action may have a minor adverse impact on minority and low-income populations in the immediate vicinity of the existing WBAMC, as the medical center is located approximately 6 miles from the trauma center at R. E. Thomason General Hospital. The relocation to the preferred site, however, would place WBAMC closer to the shifting Fort Bliss population center and provide a trauma center closer to the expanding residential developments southeast of downtown El Paso.

3.10.2.2 No Action Alternative

The No Action Alternative would remain consistent with the demographic and planning assumptions for Fort Bliss as approved in the ROD for the SEIS. However, this alternative would not support the expected increase in demand on medical services delivery, because existing facilities are physically and geographically constrained for future expansion. Therefore, additional Soldiers and Family members would exceed current capacity of existing medical treatment services.

3.11 Cultural Resources

3.11.1 Affected Environment

Cultural resources include prehistoric and historic archaeological sites, buildings, structures, districts, artifacts, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, or religious purposes. The area encompassing and around Fort Bliss has a rich history between the Native American population, and through the beginning of the Fort. A more detailed summary of the history of the Installation can be found in the ICRMP.

The goal of cultural resources management at Fort Bliss is to protect and manage the installation's cultural resources in compliance with various Federal laws and regulations that govern cultural resources and in support of the overall Fort Bliss mission of military training and readiness. Management of Fort Bliss' historic properties as required by the National Historic Preservation Act (NHPA) of 1966 (as amended) is governed by a PA executed between the Fort Bliss Garrison Command, the Advisory Council on Historic Preservation (ACHP), and the New Mexico and Texas SHPOs. The preferred site has been evaluated for impacts to historic and archaeological properties and complies with the NHPA, Executive Order (EO) 11593, *Protection and Enhancement of the Cultural Environment*, and the PA.

Cultural resources on Fort Bliss include Native American or Euroamerican districts, landscapes, sites, buildings, structures, artifacts, and other evidence of human use. Buildings and structures from the Cold War era (1946 to 1991) can be considered significant historic properties if they were of exceptional importance to the nation's military history. The existing WBAMC is currently being evaluated for historic significance in the context of Cold-War-era sites; a determination is expected in the near future. If necessary, the facility would be subject to recordation for Cold War significance.

The preferred site is not within the viewshed of a historic district. Archaeological surveys of the area of the proposed new WBAMC have discovered several archaeological sites located in the vicinity of the

southeast corner of the proposed medical campus, however, SHPO concurred with all sites as "Not Eligible" on June 2, 2006 (Sitton, 2006).

3.11.2 Environmental Consequences

An action results in an adverse effect to a historic property when it alters qualities of the resource, including relevant features of its environment or use, that make it eligible for inclusion in the NRHP (36 CFR 800.9[b]). Potential adverse effects could include the following:

- Physical destruction, damage, or alteration of all or part of the property;
- Isolation of the property from, or alteration of the character of, the property's setting, when that character contributes to the property's qualification for the NRHP;
- Introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting, if its setting is integral to the property's significance;
- Neglect of a property resulting in its deterioration or destruction; and
- Transfer, lease, or sale of the property if the sale removes the property from Federal protection.

3.11.2.1 Proposed Action

As previously stated, no eligible or listed sites occur within the preferred site, therefore, the Proposed Action would not have a direct impact on any known resources protected under Section 106 of the NHPA. The potential to uncover unknown archaeological resources, however, does exist during construction. Any inadvertent discoveries of sub-surface cultural materials discovered during construction would be treated in accordance with SOP 10 of the Fort Bliss PA. Any discovery of possible human remains will be managed by the procedures set out in the ICRMP. As part of the cultural resources analysis and in accordance with Section 106, Fort Bliss would notify Native American tribes, as appropriate, of all the proposed undertakings potentially affecting resources of interest to the Native American tribes. Because cultural resources would either be avoided or mitigated, impacts would be negligible.

3.11.2.2 No Action Alternative

Under the No Action Alternative, cultural resources within the preferred site would not be disturbed. Current activities, programs, and management practices established by the ICRMP and PA would continue. Therefore, no impacts would occur to cultural resources.

3.12 Visual Quality and Aesthetics

3.12.1 Affected Environment of Proposed Action

Fort Bliss is located on a relatively flat landscape. The City of El Paso borders along the installation to the south and west. The area is further constrained by the Rio Grande River, and the Franklin Mountain Range. The northwest northern and eastern installation border joins to the alluvial fans and foothills. The rugged mountains in view add to the overall aesthetics of the desert vista, and the relative flatness of the Main Post means that tall structures are visible for a long distance. Other new BCT buildings are currently being constructed directly north of the preferred site. These are multistory buildings for Soldier housing, offices, and training facilities.

Figure 3.12-1 shows a representative image from the preferred site. The water tower is located on the southeast corner of the preferred site, approximately one mile away from where the photo was taken.



Figure 3.12-1. View of the Preferred Site Looking Southeast

3.12.2 Environmental Consequences

3.12.2.1 Proposed Action

Fort Bliss has determined that visual resources are an important resource to the installation, both as an aesthetic and a safety measure. The *Army Installation Design Guide for Fort Bliss* outlines visual themes at the post, and describes planning design standards for buildings, landscape, transportation and site elements (USACE, 2006b). These standards will guide the design of the proposed new WBAMC and ensure that the overall proposed new WBAMC complies with regional visual themes.

Temporary impacts would occur from construction, which would impose heavy vehicles, noise, and traffic on a previously undisturbed landscape. In addition, unfinished buildings and unvegetated areas would impose temporary aesthetic impacts to the area. These impacts, however, would be temporary and limited to the construction period. Construction would involve clearing brush from the preferred site, and installing utilities, building structures, roads, and parking lots. Because this particular area is still undeveloped, it would be imposing physical structures on a previously undisturbed area. The buildings would be visible from the new BCT complex, from Route 375, and depending on the location and views, potentially Montana Avenue. The buildings would not be visible from the Main Cantonment Area.

Once construction is complete, there would be a long-term, localized impact to the area visual resources, as new buildings would replace previously open space. Incorporation of vegetative screens and buffers into the site design, however, would limit the impact to the visual resources. Landscaping, as detailed in the Real Property Master Plan would mediate the look of the new structures, while ensuring that the new buildings blend into the installation's campus, minimizing visual impacts.

The proposed new WBAMC would most likely need security lighting around parking lots and near the emergency vehicle entrance. Depending on the location and the type of lighting required, lights could be visible from the roadways and from the BCT complex, and training areas directly north and east of the preferred site. Measures to reduce these impacts could include configuring the lighting for the structures and parking away from training areas and using well-shielded lighting (e.g., hooded lights). Shielding consists of lighting fixture designs that direct light to where it is needed while minimizing the amount of light trespassing into areas where it becomes a nuisance. These measures would help to reduce light pollution around the preferred site. Overall, the aesthetics impact would be indirect and minor.

3.12.2.2 No Action Alternative

Under the No Action Alternative, the proposed new WBAMC would not be constructed at the preferred site; therefore, the aesthetics would not be affected by the No Action Alternative. However, the area around the preferred site is currently under new construction, with new projects being planned. The undisturbed landscape will soon have other buildings built.

3.13 Hazardous Materials & Wastes

3.13.1 Affected Environment

Hazardous materials, including waste products, are defined by the Resource Conservation and Recovery Act (RCRA) as corrosive, ignitable, combustible, or toxic. Because of their characteristics, the materials present a hazard to human health or the environment when released or improperly managed. This section describes current waste generation and management activities at Fort Bliss, which also applies to WBAMC.

3.13.1.1 Hazardous Materials Use and Waste Generation

Fort Bliss stores and uses hazardous chemicals for training activities and installation maintenance, including a variety of flammable and combustible liquids. Types of hazardous chemicals used by the installation include acids, corrosives, caustics, glycols, compressed gases, aerosols, batteries, hydraulic fluids, solvents, paints, cleaning agents, pesticides, herbicides, lubricants, fire retardants, photographic chemicals, alcohols, insecticides, sealants, and ordnance. In accordance with the Emergency Planning and Community Right-to-Know Act (EPCRA), Section 312, an annual inventory report (Tier II report) for chemicals stored in quantities above the chemicals' threshold quantity must be submitted to the State Emergency Response Commission, Local Emergency Planning Committee, and local fire department (U.S. Army, 2009). The Tier II report identifies the hazardous chemicals stored on Fort Bliss in excess of 10,000 pounds and generally includes the chemical name, physical state of the chemical, associated hazards, type of storage container, amounts stored, and storage locations. Based on 2004 quantities, Fort Bliss submits Tier II reports for gasoline and JP-8 jet fuel (U.S. Army, 2009).

The Fort Bliss hazardous waste management program includes an Installation HWMP for the handling and storage of hazardous waste in accordance with AR-200-1. The HWMP provides detailed information on training, hazardous waste management roles and responsibilities, and hazardous waste identification, storage, transportation, and spill control, consistent with Federal and State regulations. Fort Bliss is categorized as a Large Quantity Generator (LQG) of hazardous waste (EPA Identification number TX4213720101) as defined by 40 CFR Parts 262 and 264, which means the facility generates more than 2,200 pounds (1,000 kilograms) or more of hazardous waste or more than 2.2 pounds (1 kilogram) of acute hazardous waste per calendar month. Fort Bliss is permitted by TCEQ to operate as a hazardous waste storage facility (HWSF) (permit #50296). The operating permit was renewed on March 11, 2002 and is valid for 10 years. The permit allows Fort Bliss to store hazardous waste at the HWSF for up to one year. Waste processing at the HWSF is continual, resulting in a turnaround time of approximately 90 days. Several times a month, or more often if necessary, wastes are transported to an offsite Treatment, Storage, and Disposal (TSD) facility (U.S. Army, 2009). Wastes generated throughout Fort Bliss are brought to one of the five 90-day storage areas or the HWSF (Building 11614) for classification, labeling, and storage.

Fort Bliss submits an Annual Waste Summary to TCEQ detailing the management of each hazardous waste generated onsite during the previous calendar year. A waste minimization report is also submitted to TCEQ in accordance with the installation's hazardous waste permit. The Fort Bliss Waste Analysis Plan (2009) documents procedures for classification and identification of hazardous wastes to ensure

compliant management of all waste streams generated at Fort Bliss. The Waste Analysis Plan is updated annually or more frequently if there is a change in the waste stream (U.S. Army, 2009).

3.13.1.2 Medical and Biohazardous Waste

Medical wastes include wastes generated by hospitals, clinics, physicians' offices, dental offices, veterinary facilities, and other medical laboratories and research facilities. Biohazardous waste can typically include human blood and blood products, cultures and stocks of infectious agents and associated biological, isolation wastes, contaminated and unused sharps, animal carcasses, contaminated bedding material, and pathological wastes.

WBAMC, together with other Fort Bliss entities (i.e., Dental Clinic, two Blood Banks, the Veterinary Clinic, the Troop Clinic), generates approximately 13,000 pounds of medical and biohazardous waste per month. Large-scale training exercises may add several thousand pounds of waste per month during the exercise. Waste is collected and stored at the generating locations. These wastes are picked up by a licensed medical waste contractor about every other day and removed from the post for proper disposal.

3.13.1.3 Low-Level Radioactive Waste

WBAMC generates small amounts of low-level radioactive waste. The use of radioisotopes for medical purposes generates short-lived (half-life less than 90 days), low-level waste. Short-lived radiological waste generated by WBAMC is managed by the hospital Radiation Safety Officer. All waste items are consolidated, inventoried, the radioactive material removed if possible, and temporarily stored in waste containers in Building T2550 on Fort Bliss. The consolidated waste is collected for subsequent disposal at an authorized disposal site.

3.13.1.4 Nonhazardous Solid Waste

Army solid waste policy is based on the concept of Integrated Solid Waste Management (ISWM) planning. ISWM is designed to minimize the initial input into the waste stream. The Fort Bliss ISWM Plan was most recently updated in December 2003. The Fort Bliss DPW-Environment coordinates solid waste management and planning with the DPW, Directorate of Community Activities (DCA), Defense Reutilization and Marketing Office (DRMO), Directorate of Contracting (DOC), Directorate of Resource Management (DRM), RCI, and other installation organizations, tenants, and activities as required. Since 2000, recycling, selling, and diverting of solid wastes has increased at Fort Bliss. Recyclable materials are sold or reused.

Domestic solid waste generated at Fort Bliss, including WBAMC, that cannot be recycled is collected and disposed of by a private contractor at a government-owned, 102-acre landfill (MSW ID No. 1422) located 3 miles north of the intersection of Fred Wilson and Chaffee Roads (U.S. Army, 2007a). Landfill cells handle Type I waste (refuse) and Type IV waste (construction and demolition wastes). Fort Bliss has an aggressive waste recycling program, which has substantially reduced the post's reliance on the onsite landfill – all paper, plastic, and aluminum containers and metal scrap (from artillery use) are recycled. Beginning July 1, 2005, residential waste from Fort Bliss was disposed of in the City of El Paso's Clint Landfill, a Type I landfill. It is designed with a 30-year life expectancy at the current daily solid waste accumulation rate of 800 tons per day (tpd) (estimated closure time is around 2013). Several actions may be taken that could increase the life of the landfill, but it is not currently known how long these actions would extend operations (U.S. Army, 2007a).

3.13.1.5 Pollution Prevention

The objective of the Fort Bliss Pollution Prevention (P2) Program is to reduce or eliminate use of hazardous materials, generation of wastes, and emissions of pollutants to the environment, and to

conserve resources. The Fort Bliss P2 Plan complies with current Army regulations and TCEQ requirements. The success of Fort Bliss's P2 Program is measured against the Army's P2 Program reduction goals. In accordance with the Texas Waste Reduction Policy Act (WRPA) and Army Pamphlet 200-1, the P2 Plan is revised either every five years or upon any occurrence of change to a function or process at Fort Bliss. Mandatory workplace recycling was implemented in November 1996 and a Fort Bliss Recycling Policy, U.S. Army Garrison Regulation 200-2, was signed on 8 March 2005, making recycling mandatory. The recycling center currently recycles about 163 tons of material a month.

Petroleum, oils and lubricants (POLs) are used throughout the Fort Bliss installation, including the existing WBAMC. POLs include engine fuels (gasoline, diesel, and jet fuel), motor oils and lubricants, and diesel and kerosene heating fuels. Fort Bliss has completed a four-phase project to upgrade existing underground storage tanks (USTs) to meet Federal and State requirements and reduce total number of USTs on the installation. Records indicate that 69 USTs and 238 aboveground storage tanks (ASTs) are currently in use for storing diesel fuel, unleaded gasoline, used oil, antifreeze, JP-8 jet fuel, and heating oil. One UST and three ASTs are located at the Doña Ana Range–North Training Areas; three USTs and one AST are located at Orogrande Range; and five USTs and 18 ASTs are located on McGregor Range. Fort Bliss has identified 36 sites that formerly had leaking petroleum storage tanks, of which four were ASTs. All have been remediated and closed except for a gasoline pipeline release that occurred in 2005 and is currently under remediation by the company which owns the pipeline (U.S. Army, 2009).

3.13.1.6 Site Contamination Potential

Soil can represent a potential lead exposure concern in urban areas where past auto and industrial emissions have left lead residues. Lead-tainted soil is found near homes where deteriorated exterior paint has leached into the soil from rain. At Fort Bliss, very high levels of lead in soil have been found around steel structures such as bridges, water towers, and shooting ranges (U.S. Army, 2001a).

There is no evidence to suggest that the preferred site has ever been used as a firing range, nor is it near any active ranges. The site is inside Loop 375, formerly part of Training Area 1B, in an area now designated for facilities use. The site is considered a Category 1 site: not a known site for a release of contaminants and no reason exists to expect any contamination would be encountered during construction. Additionally, there appears to be no obvious dumping or contamination at the site.

3.13.2 Environmental Consequences

The measure of impacts related to hazardous materials and waste is the potential for the injury to human health or the environment from an inadvertent release of a hazardous substance.

3.13.2.1 Proposed Action

While site contamination would not be expected, environmental sampling of the preferred site would be conducted to further characterize the site and identify any potential soil contaminants. Should contamination be found, it would be remediated in accordance with all applicable regulations prior to construction. Therefore, no environmental impacts would be expected from ground disturbing activities at the site prior to the commencement of construction activities.

Construction equipment and vehicles on the property could leak small amounts of petroleum products; however, any leaks would be small, temporary, and managed in accordance with the Spill Prevention Control & Countermeasure Plan (SPCCP). Operation of the proposed new WBAMC would include small amounts of cleaning chemicals that would be used by hospital employees. The substances would be managed in accordance with applicable regulations and management plans, so the potential for an

accidental release would be very small. In the event of a spill, the spill control measures outlined in the SPCCP would be followed.

Relocation of the WBAMC would require construction of the proposed new WBAMC on a currently vacant site. Solid waste generated during construction activities would be limited to common construction-related waste streams (e.g., wood products, piping materials, paper products) and sanitary waste. Landfills currently being used by Fort Bliss to accept non-hazardous waste could accept construction wastes for materials that cannot be recycled; therefore, there would be no impact associated with the disposal of these materials. In addition, the hospital would implement BMPs to minimize the quantity of non-hazardous solid waste generated, as appropriate, during construction and to ensure proper handling of all materials.

Operation of the proposed new WBAMC would generate general, hazardous, and medical waste. However, because these activities are currently ongoing at the WBAMC, the type of waste would be similar and waste generation would not increase significantly. Slight increases would occur due to the increased population resulting from CS/CSS and BCT stationing actions, however, this would occur regardless of the proposed new WBAMC.

General waste would be placed in receptacles and transported to collections areas on a regular basis. A licensed hauler would transport the general waste to the landfills. Hazardous and medical waste generated by the proposed new WBAMC would be collected, consolidated, or separated (as appropriate) and packaged for disposal in accordance with Texas regulations. Manifests would be prepared for hazardous waste, which would be shipped by a licensed hazardous waste hauler for offsite disposal. Similar to current operations, wastes generated would be brought to one of the 90-day storage facilities or the HWSF (Building 11614) area for classification, labeling, and storage. Radioactive waste generated would be consolidated, inventoried, the radioactive material removed if possible, and temporarily stored in waste containers in Building T2550, as currently handled. The consolidated waste would then be collected for subsequently disposed of at an authorized disposal site.

Fort Bliss would continue to identify and implement pollution prevention initiatives to reduce the amount and types of hazardous materials used and the amount and type of hazardous waste that are generated from the use of those materials. The HWMP and the P2 Plan will address pollution prevention and waste minimization issues and provide an automated tracking system for hazardous materials and chemicals. Improvements under this program would result in beneficial impacts.

The wastes generated would be common industrial wastes; therefore, the hazardous waste would be accepted by treatment, storage, and disposal facilities. The facility currently operates as a large quantity generator of hazardous waste regulated by Federal and State regulations; therefore, an increase of hazardous waste generated could be accommodated through adequate management, accumulation area(s), and collection for offsite treatment or disposal.

Non-hazardous waste would be generated in quantities above what are currently generated. These materials would be recycled for beneficial reuse, whenever possible. The handling and storage of non-hazardous waste would be similar to current operations, namely, materials would be recycled whenever possible or sent to a permitted landfill.

3.13.2.2 No Action Alternative

Under the No Action Alternative, the existing WBAMC would remain in operation and continue to generate hazardous wastes. In addition, there could be a slight increase in hazardous waste generation due to hazardous chemicals use and during demolition and renovation of existing facilities. Current

hazardous waste disposal procedures would continue. The minimal increased generation of hazardous wastes would have no adverse environmental impacts.

Medical and biohazardous wastes would continue to be generated at a slightly increased level due to the increased population resulting from CS/CSS and BCT stationing actions. Waste collection, storage, and disposal procedures would remain the same. The additional generation of medical and biohazardous wastes would not cause adverse impacts.

3.14 Human Health and Safety

3.14.1 Affected Environment

Fort Bliss is an active Army post that houses Soldiers and their Families and operates military maneuvers in the air and on the ground. Biggs Army Airfield is located directly west of the preferred site. Detailed safety processes and procedures for ramp access, aircraft movement, and fueling and defueling are in place. Two parking areas are designated for loading and unloading of hazardous cargo, which includes munitions.

The Army has an Installation Compatible Use Zone (ICUZ) program to recommend land use compatibility guidelines for areas exposed to increased safety risk in the vicinity of Army airfields. As discussed in Section 3.3.2.1, the preferred site is located approximately 13,000 feet away from Biggs AAF. Three safety zones are delineated at both ends of the runway and safety zones have been established around the airfield. The preferred site is not located within any of these zones.

The FAA has established runway protection zones (RPZs); a trapezoidal shaped area which has specific land use limitations in order to keep the approach to an airport runway clear of obstacles to maintain safety. The closest RPZ to the proposed project site is associated with Runway 4-22 at El Paso International Airport and is approximately 2 miles to the west of the proposed project site (see Figure 3.14-1).



Figure 3.14-1. El Paso International Airport Runway Protection Zones

All day-to-day operations and maintenance activities on Fort Bliss, including the existing WBAMC, are performed by trained, qualified personnel in accordance with applicable equipment technical directives,

approved occupational safety and health standards, and sound maintenance practices. The handling, processing, storage, and disposal of hazardous by-products resulting from demolition, construction, operations, or maintenance are accomplished in accordance with all Federal and State requirements applicable to each substance.

Fire suppression on Fort Bliss is the responsibility of the Fort Bliss Fire Department, which is party to a Mutual Support Agreement with the City of El Paso. If required, augmented support for fire suppression would be available from the city.

3.14.2 Environmental Consequences

3.14.2.1 Proposed Action

Potential occupational health and safety risks during construction of the proposed new WBAMC are expected to be typical of risks for any other construction sites of comparable size. These include, but are not limited to, the movement of heavy objects, including construction equipment; the risk of fire or explosion from general construction activities (e.g., welding); and spills and exposures related to the storage and handling of chemicals and disposal of hazardous waste. The health and safety of construction workers would be protected by adherence to accepted work standards and regulations set forth by Occupational Safety and Health Administration (OSHA) (29 CFR Parts 1910 and 1926).

Hazardous materials that may be used during construction include fuels and lubricants. Fort Bliss would comply with all local, State, and Federal regulations regarding the use, transport, storage, and disposal of hazardous materials and wastes (see Section 3.13). Spill control measures outlined in the SPCCP would be followed. All personnel involved with construction activities would be properly trained and required to comply with OSHA regulations and industrial material handling. Thus, it is expected that minor adverse safety impacts would occur during construction as following OSHA procedures and a spill and prevention plan would minimize the risk for injuries during the construction phase.

Because there is no evidence to suggest that the preferred site has ever been used as a firing range and it is not near any active ranges, no safety concerns exist relative to explosive Quantity Safety Distance (QSD) or unexploded ordnance (UXO).

The memorandum entitled "List of Concerns" prepared by the Fort Bliss Directorate of Emergency Services (19 June 2008) would be adhered to in the planning and design of the proposed new WBAMC. The Fort Bliss Fire Department would review plans throughout the design process to maintain adequate access for emergency vehicles. Fire suppression systems and fire hydrants would be specified in the design stage.

Because the preferred site is outside the security fencing of the Fort Bliss cantonment area, the proposed new WBAMC would be fenced in its own compound. Fencing and perimeter lighting would meet design requirements for installation security fencing.

During operation, beneficial impacts to human health and safety would occur by providing access to adequate medical care to Soldiers and their Families. Safety-wise, the center of the proposed site is approximately 1-mile from the center of the approach/departure flight path for El Paso International Airport Runway 04-22 and approximately one-half-mile from the end of the Accidental Potential Zone (APZ) ² and approximately 2 miles outside of the FAA RPZ; placing the site well into the safe zone according to United Facilities Criteria for development and operations of medical care facilities. Furthermore, in terms of FAA Air Traffic Control Space (ATC) airspace, the site is inside of the inner

² The accident potential in APZ2 is low enough that low-density housing and commercial uses are compatible with flight operations.

circle of Class-C airspace controlled by the El Paso tower from surface up to 8,000 feet above ground level; no aircraft can operate in Class-C airspace without being under strict movement control of the tower which would greatly reduce the potential of an errant aircraft striking into the proposed buildings.

3.14.2.2 No Action Alternative

Under the No Action Alternative, no changes would occur to existing safety rules or regulations. Existing human health conditions would be moderately adversely affected by the potential lack of adequate medical care at the WBAMC.

3.15 Traffic and Transportation

3.15.1 Affected Environment

The roughly 202-acre preferred site is located approximately five miles east of the existing WBAMC. The preferred site is situated on the southwest quadrant of State Loop-375 (Purple Heart Memorial Highway) and State Spur-601, north of the water tower. The major roads in proximity to the preferred site are State Loop-375 on the east, US-62/180 Montana Avenue on the south, Global Reach Drive on the west, and State Spur-601 on the north. Locations of the roads and intersections of concern are shown in Figure 3.15-1.

In support of this project, a Traffic Impact Study (TIS) was conducted to analyze the existing traffic conditions, as well as the 10-year projected conditions with superimposed prospective hospital traffic and planned road improvements (Martinez, 2010). Traffic counts along the major corridors and key traffic-signal controlled intersections were collected during the week of April 19 through April 26, 2009. The TIS analyzed these existing traffic counts, as well as the current staffing population and square footage at the existing WBAMC, which would serve as a baseline for ingress and egress traffic to the proposed new WBAMC. The 7-day, 24-hour average daily traffic (ADT) volumes collected for key road corridors are presented in Table 3.15-1; and the 12-hour intersection turning movement volumes for relevant intersections are presented in Table 3.15-3.

Table 3.15-1. Major Corridor Road Descriptions for the Region of Influence

Major Corridor Roads	Description	2009 7-Day ADT (bi-directional)
State Loop-375 (Purple Heart Memorial Highway)	Controlled access State highway. Two lanes in each direction with emergency shoulders.	22,610
Montana Avenue (US 62/180)	State highway. Two lanes in each direction with intermittent left turn lanes at major intersections. Roadbeds are separated by a 50-foot wide dirt median.	47,857
Global Reach Drive	City street. Three lanes in each direction with intermittent left turn lanes at controlled distances. Roadbeds are separated by 24-foot raised median.	15,085
Walter Jones Drive	City street. Two lanes in each direction. No median.	6,665

Traffic in the immediate area is relatively sparse as the surrounding vicinity is undeveloped and Spur-601 is still under construction. However, some of the surrounding intersections, particularly Montana Avenue at Global Reach Drive and Global Reach Drive at Walter Jones Drive, are currently experiencing high levels of traffic volumes and capacity issues during peak commute hours.

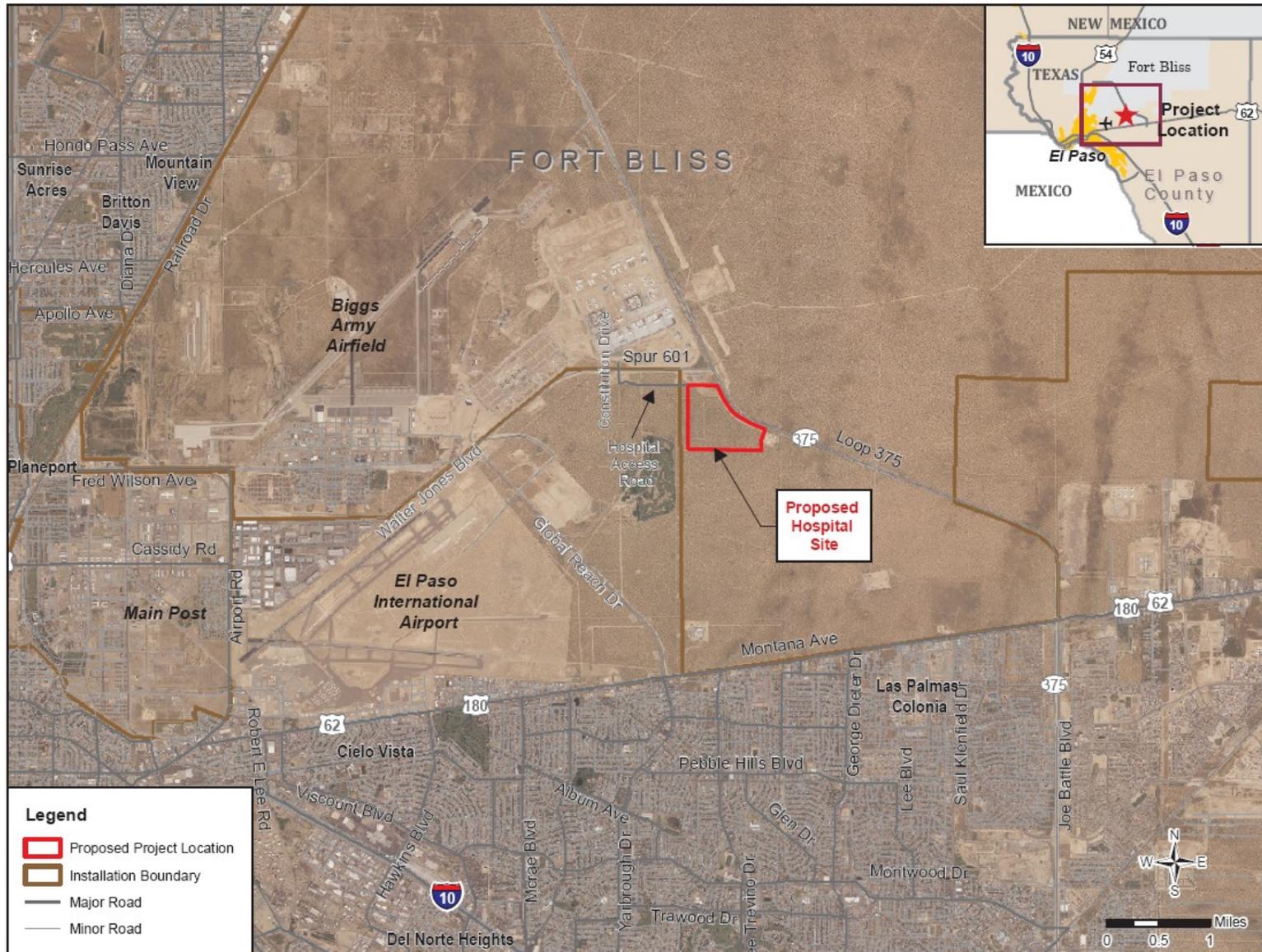


Figure 3.15-1. Transportation Network Near the Proposed New WBAMC Site

The 2000 Highway Capacity Manual published by the Transportation Research Board defines six categories of levels of service (LOS) that reflect the level of traffic congestion and qualify the operating conditions of an intersection. The LOS scale ranges from A to F, where A represents the best operating conditions (free-flow conditions) and F is the worst (stop-and-go conditions). LOSs of A, B, and C are typically considered good operating conditions, while LOS D represents high density but stable flow, and LOS E and F are considered unacceptable (TRB, 2000). The quantifying value that was computed in the TIS and used to qualify the intersections was the ‘average control delay.’ Table 3.15-2 summarizes the operating conditions associated with each LOS designation and the corresponding ranges of average control delay for both unsignalized and signalized intersections.

Table 3.15-2. Level of Service (LOS) Criteria and Average Control Delay

LOS	Operating Conditions	Signalized Intersection – Control Delay (seconds per vehicle)	Unsignalized (Stop-Controlled) Intersection – Control Delay (seconds per vehicle)
A	Signalized: good progression, few stops, and short cycles. Unsignalized: little or no delay.	≤ 10	≤ 10
B	Signalized: good progression and/or short cycles; more vehicle stops. Unsignalized: short traffic delays.	> 10 to 20	> 10 to 15
C	Signalized: fair progression and/or longer cycle lengths; some cycle failures; significant portions of vehicles must stop. Unsignalized: average traffic delays.	> 20 to 35	> 15 to 25
D	Signalized: congestion becomes noticeable; high volume-to-capacity ratio; longer delays; noticeable cycle failures. Unsignalized: long traffic delays.	> 35 to 55	> 25 to 35
E	Signalized: at or beyond limit of acceptable delay; poor progression; long cycles; high volumes; long queues. Unsignalized: very long traffic delays.	> 55 to 80	> 35 to 50
F	Signalized: unacceptable to drivers; arrival volumes greater than discharge capacity; long cycle lengths; unstable, unpredictable flows. Unsignalized: unacceptable traffic delays.	> 80	> 50

Source: TRB, 2000

Table 3.15-3 presents the 12-hour turning movement volumes collected at the intersections of concern, along with the existing LOSs and average control delays currently experienced at these intersections during morning (AM) and afternoon (PM) peak-hours as assessed in the TIS. The greatest traffic volumes in the study area occur on Montana Avenue near the intersections with State Loop-375 and with Global Reach Drive. The intersection of Montana Avenue at Global Reach Drive received an unacceptable LOS of E at the morning peak; and that same intersection as well as Global Reach Drive at Walter Jones Drive both received an unacceptable LOS of F at the afternoon peak.

Table 3.15-3. Existing 2009 Intersection Turning Volumes and AM and PM Peak Hour Level of Service

	2009 12-Hour Intersection Turning Movement Volumes	AM Peak Hour LOS¹ (Delay in Seconds)	PM Peak Hour LOS¹ (Delay in Seconds)
State Loop-375 at Spur-601 (signalized)	6,897	A (3.9)	A (5.6)
State Loop-375 at Montana Avenue (signalized)	59,656	B (11.2)	A (9.8)
Montana Avenue at Global Reach/Yarbrough Drive (signalized)	58,743	E (55.5)	F (114.9)
Global Reach at Walter Jones Drive (signalized)	21,771	B (16.2)	F (208.1)

Source: Martinez, 2010

1. LOS=Level of Service, calculated using Highway Capacity Manual (TRB, 2000)

Note: Affected Environment traffic counts for the intersections of Constitution Drive at Spur-601 and Constitution Drive at Hospital Access Road were not analyzed as traffic volumes adjacent to the preferred site are sparse as Spur-601 is currently under construction in this vicinity

3.15.2 Environmental Consequences

This section provides a discussion of potential impacts to transportation resources that could result from the construction and operation of the proposed new WBAMC as well as the No Action Alternative. Impacts were assessed by using existing corridor and intersection conditions to predict future traffic conditions in ten years (2019), and analyzing the existing WBAMC hospital traffic flow to predict traffic to and from the new relocated hospital assuming traffic would be increased slightly from current volumes.

3.15.2.1 Proposed Action

The construction of the proposed new WBAMC would commence in Fiscal Year 2011 and be completed in Fiscal Year 2016. Short-term but measurable adverse impacts to traffic are expected during construction. Construction vehicles and workers would add to existing local traffic and would potentially cause minor congestion, higher traffic noise, and increased vehicle emissions levels along the routes. The commuter traffic from the construction workers would increase the local traffic, but it is expected to be a moderate impact overall, as construction activities would be temporary, the surrounding properties in the immediate vicinity are undeveloped, and State Loop-375 has adequate capacity for increase. The existing conditions, however, at the intersections of Global Reach Drive at Montana Avenue and at Walter Jones Drive currently exceed capacity during peak hours and any increase would contribute to the existing unacceptable congestion. This impact could be mitigated if the construction workers were to be scheduled to arrive and depart at non-peak commuter times.

Future traffic projections for the ROI in 2019 without the hospital (No-Build conditions) were calculated based on a growth rate of 4 percent per year over current traffic flows. Table 3.15-4 displays these projected volumes. The proposed increase in traffic flows due to the new hospital operations (Build conditions) were based on the number of employees, gross floor area of the proposed new WBAMC, and current entry trips through the WBAMC hospital gates. The projected volume calculations for the year 2019 assume a 10 percent increase in staff at the proposed new WBAMC, and a 15 percent increase in square footage at the new facility over the existing WBAMC (Martinez, 2010). The proposed new WBAMC site plan involves the development of Constitution Drive off of Spur-601, leading into a Hospital Access Road (See Figure 3.15-1). As a result, the LOS analysis includes two new intersections as follows:

New intersections analyzed for 2019 conditions with hospital operations:

- Constitution Drive at Spur-601, a traffic signal controlled intersection.
- Constitution Drive at Hospital Access Road, an “L”-shaped all-way stop controlled intersection.

Table 3.15-4 displays the projected 2019 traffic flows and LOSs with and without the hospital operations. In summary, the capacity analyses for the six intersections comprising the project roadway network have very mixed LOSs. The intersections that have inadequate LOSs in the projected 2019 conditions are the same intersections that have undesirable LOSs in the current 2009 conditions. While the traffic conditions in 2019 with the hospital in operation produce unacceptable LOSs at these intersections, their LOSs are not significantly different from those of projected 2019 without the hospital.

Table 3.15-4. 2019 Traffic Conditions During AM and PM Peak Hours (under No-Build and Build Conditions)

	Intersection	AM Peak Hour				PM Peak Hour			
		2019 Projected ¹ Traffic Volume No-Build [Build]	Percent Increase in Traffic Volume from No-Build to Build	Delay (s) No-Build [Build]	LOS ² No-Build [Build]	2019 Projected ¹ Traffic Volume No-Build [Build]	Percent Increase from No-Build to Build	Delay (s) No-Build [Build]	LOS ² No-Build [Build]
1	State Loop-375 at Spur-601	1,468 [1,778]	21	5.0 [5.6]	A [A]	1,627 [1,955]	20	6.5 [8.8]	A [A]
2	State Loop-375 at Montana Avenue	9,635 [9,782]	1.5	29.3 [34.1]	C [C]	11,078 [11,169]	0.8	27.0 [35.8]	C [D]
3	Montana Avenue at Global Reach / Yarbrough Drive	8,232 [8,634]	4.9	294.8 [374.4]	F [F]	11,910 [12,187]	2.3	423.3 [447.7]	F [F]
4	Global Reach at Walter Jones Drive	3,815 [4,596]	20	96.0 [81.5]	F [F]	5,409 [5,991]	11	383.5 [348.8]	F [F]
5	Constitution Drive at Spur-601	NA [1,519]	NA	NA [6.2]	NA [A]	NA [1,371]	NA	NA [5.4]	NA [A]
6	Constitution Drive at Hospital Access Road	NA [1,210]	NA	NA [13.5]	NA [A]	NA [1,123]	NA	NA [23.4]	NA [A]

Source: Martinez, 2010

1. Projected volumes assume a 4 percent per year future growth rate from current 2009 levels

2. LOS=Level of Service, calculated using Highway Capacity Manual (TRB, 2000)

NA = not applicable

It is anticipated that Intersections 3 (Montana Avenue at Global Reach / Yarbrough Drive) and 4 (Global Reach at Walter Jones Drive) would experience inadequate operating conditions under the Build condition during morning and afternoon rush hour peaks; however, as noted in Table 3.15-4, the TIS indicates that both of these intersections are already failing under current conditions and projected 2019 (No-Build) conditions during these hours. The projected traffic increases resulting from the Proposed Action would produce no change in the LOS classifications at the relevant traffic intersections except for

changing the PM rush hour LOS at Intersection 2 (State Loop-375 at Montana Avenue) from a C to a D. Although additional traffic volumes from the Proposed Action would exacerbate this issue, it is estimated that the extent of the project's contribution to overall traffic volumes represents only a moderate impact.

Later project designs may incorporate a second access point to the hospital by adding an entrance ramp off Loop 375. This new ramp off a major highway would provide additional increased traffic efficiencies and ease of access to the hospital; thereby increasing the overall LOS in the area road system. Project transportation impacts could, therefore, be mitigated further as a result of this additional access. Since traffic flows would increase as a result, additional traffic analyses at a later date incorporating the second access point would not be necessary unless Fort Bliss DPW determines further study is needed.

3.15.3 No Action Alternative

Under the No Action Alternative, the proposed new WBAMC would not be constructed. There would be no impacts to existing transportation resources under this alternative. The 10-year traffic conditions projected for 2019 are analyzed in the TIS, and discussed under the Proposed Action section and presented in Table 3.15-4 for comparison purposes of future traffic conditions with and without the hospital. Intersections 3 and 4 would continue to fail LOS criteria unless significant traffic improvements are made.

3.16 Cumulative Impacts

CEQ regulations implementing NEPA define a "cumulative impact" as follows:

Cumulative impact is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR §1508.7).

EPA guidance to reviewers of cumulative impacts analyses further adds:

...the concept of cumulative impacts takes into account all disturbances since cumulative impacts result in the compounding of the effects of all actions over time. Thus, the cumulative impacts of an action can be viewed as the total effects on a resource, ecosystem, or human community of that action and all other activities affecting that resource no matter what entity (Federal, non-Federal or private) is taking the action (EPA, 1999).

For the purposes of this EA, significant cumulative impacts would occur if incremental impacts of the Proposed Action, added to the environmental impacts of past, present, and reasonably foreseeable actions, would result in significant adverse impacts to resources for Fort Bliss and the surrounding regions. For the purpose of this cumulative impacts analysis, the ROI includes the portion of Fort Bliss encompassing El Paso County, Texas, (Main Cantonment Area and South Training Areas) and the City of El Paso, Texas. The Army considered a wide range of past, present, and reasonably foreseeable future actions within the ROI by researching existing literature and contacting local area planners and State and Federal agencies to identify other projects in the region that could contribute to cumulative environmental impacts. The Army considered other past, present, or foreseeable future actions regardless of whether the actions are similar in nature to the Proposed Action or outside the jurisdiction of the Army.

This cumulative impacts analysis offers a fuller understanding of resource conditions that implementation of the Proposed Action might magnify, amplify, or otherwise exacerbate or cause beneficial or adverse impacts to resources on a regional or temporal scale. Table 3.16-1 lists past, present, and reasonably

foreseeable Army actions, other than the Proposed Action, that were reviewed to complete the cumulative impact analysis.

Table 3.16-1. Past, Present, and Reasonably Foreseeable Army and Regional Actions

Potentially Contributing Project or Activity	Timeframe	Spatial Extent
Military Activity		
1. Fort Bliss, development of facilities and infrastructure.	1957 – present	Approximately 133,440 acres within El Paso County, Texas.
2. Fort Bliss (Base Realignment And Closure 2005) resulted in further population growth and development within Fort Bliss and the surrounding El Paso Community.	2008 – 2011	20,000 Soldiers/27,000 Family Members at Fort Bliss.
3. Grow the Army Fort Bliss Stationing resulted in further population growth and development within Fort Bliss and the surrounding El Paso Community.	2008-2012	9,200 additional Soldier and Civilian population at Fort Bliss.
4. Kay Bailey Hutchison Desalination Plant. A desalination plant operated by the City of El Paso Water Utilities to treat brackish water from the Hueco Bolson and decrease freshwater withdrawals. The facilities augment existing supplies to make sure El Paso and Ft. Bliss have sufficient water for growth and development for 50 years and beyond.	2007 – Future	Approximately 31 acres of land currently located in the South Training Area.
5. Solar Facility. A planned solar facility for providing energy to the Kay Bailey Hutchison Desalination Plant desalination plant and potentially other development occurring within the southeastern portion of Fort Bliss.	Future	Land currently located in the South Training Area.
6. Residential Community Initiative (RCI) Soldier Housing. A planned housing community for Soldiers and their Families. Community would likely include an elementary school.	Future	Land currently located in the South Training Area.
7. National Guard Armory	Future	Land currently located in the South Training Area.
8. Spur-601 and other highway improvements	Ongoing	Local roadways.
Regional Activity		
1. Grazing. Lands formerly supporting livestock grazing have caused desertification and the transition from historic grasslands to shrub lands and mesquite coppice dunes.	Past – Future	Fort Bliss and El Paso County.
2. El Paso Airport. The airport serves approximately 3,000,000 passengers annually, and in 2009 had 98,786 aircraft operations. Passenger levels at the airport has been relatively consistent over the past 10 years. Current runway expansions to accommodate larger aircraft, however, may change use in the future.	1928 - Future	Approximately 7,100 acres of land currently located between the South Training Area and Fort Bliss cantonment area.
3. Regional Population Growth. The region projects a population growth of approximately 1.64 percent between 2010 and 2020 and continued growth forward from 2020. Within the City of El Paso, population growth is expected to continue at an average rate of 2.9 percent per year; independent of Fort Bliss expansion.	Present – Future	El Paso County.
4. <i>Regional Growth Management Plan (RGMP)</i> . The City of El Paso with assistance from the DoD Office of Economic Adjustment is developing a RGMP under a collaborative planning effort with the City of El Paso, El Paso County, Fort Bliss, and City of Las Cruces and Doña Ana County. The RGMP indicates that by 2025, the City of El Paso's current land base of 161,000 acres with development on 50 percent of the land is expected to increase to 171,000 acres with development of 63 percent of the land.	Present – Future	Fort Bliss and El Paso County.

Table 3.16-1. Past, Present, and Reasonably Foreseeable Army and Regional Actions

Potentially Contributing Project or Activity	Timeframe	Spatial Extent
5. Stormwater Management. Since 2006, the City of El Paso has passed legislation authorizing the El Paso Water Utilities to study, plan, and where necessary, construct to mitigate stormwater capacity and drainage issues. These mandates include planning for increases in stormwater run-off due to the increased construction associated in part with the expansion of Fort Bliss.	2006 - Present	Fort Bliss and El Paso County.
6. EPCC East Side Campus. EPCC is proposing to enter a long-term lease agreement with Fort Bliss for the construction and operation of a campus, directly south of the proposed new WBAMC. This campus may also include a Public Safety Institute for El Paso First Responders.	Future	Approximately 200 acres of land currently located in the South Training Area.

3.16.1 Land Use

As shown in Table 3.16-1, regional development is anticipated to continue. Cumulative increases in development increases the potential for land use compatibility conflicts occurring within the ROI. Adverse cumulative impacts, however, would be reduced through implementation of the *Regional Growth Management Plan* (see Table 3.16-1). Under this plan, future development within the area would be planned to site compatible land uses and buffers would be used between incompatible land uses. Proposed future projects identified in the area including the EPCC East Side Campus and the RCI Soldier Housing would be compatible land uses. Overall cumulative adverse impacts to land use would be minor.

3.16.2 Airspace

As the Proposed Action would result in negligible impacts to airspace, significant adverse cumulative impacts would not be anticipated. Development within the area would continue to comply with FAA height restrictions and site development requirements to maintain safe flight paths for the El Paso International Airport.

3.16.3 Noise

Other projects in the ROI would contribute to the cumulative impacts on noise levels in the ROI (see Table 3.16-1). The Soldier population at Fort Bliss is currently increasing as a result of BRAC and GTA initiatives, and the City of El Paso is pursuing additional economic development. Possible construction projects in the vicinity include ongoing developments in East Fort Bliss, the proposed El Paso Community College, proposed RCI housing, and proposed solar facility to power the existing desalination plant, and a proposed National Guard Armory. Construction noise from these projects and any long-term increases in traffic volumes from future projects would add to regional cumulative noise levels. Due to the existing levels of regional noise produced by the El Paso Airport, the proposed project along with other proposed regional activities shown in Table 3.16-1 would only produce minor cumulative adverse noise conditions.

3.16.4 Air Quality

Other projects in the Fort Bliss and El Paso region would contribute to the cumulative impacts on air quality in the ROI. The Soldier population at Fort Bliss is currently increasing as a result of BRAC and GTA initiatives, and the City of El Paso is pursuing additional economic development. Possible construction projects in the vicinity include ongoing developments in East Fort Bliss, the proposed El Paso Community College, proposed RCI housing, proposed solar facility to power the existing desalination plant, a proposed National Guard Armory, and on-going development of the road networks (including Spur-601). These projects would have components that contribute to air pollutant emissions, such as building mechanical systems (boilers, generators, etc). Furthermore, any increases in traffic volumes from future projects would add to the air emissions in the region. The cumulative increased

emissions could ultimately result in exceedances of the NAAQS, especially of PM10 (for which the City of El Paso is in moderate nonattainment) and of NOx. PM10 in El Paso County is further aggravated by windblown dust, especially during dust storms. Additional ground disturbance due to construction, in combination with agricultural uses and off-road vehicle use (both military and civilian), would all contribute to cumulative increases in PM10 emissions in the ROI. In general, however, the cumulative contribution of the WBAMC replacement project to regional air quality would be minor compared to the total emissions in the project region.

3.16.5 Geology and Soils

The magnitude of cumulative impacts to geology and soil resources would be primarily determined on the amount of ground disturbance from area projects. Several other projects around Fort Bliss have started construction or are in the planning process (see Table 3.16-1), which includes completion of Spur-601, a housing development for Soldiers and their Families, and an extension of the El Paso Community College both proposed to the south of the preferred site. In addition, through BRAC and GTA initiatives, the Soldier population at Fort Bliss is increasing, which, in association with new economic development at El Paso, means additional construction in the surrounding communities. Some construction would replace already existing structures that are located in previously disturbed locations. Construction of new buildings within the ROI would increase the total amount of soils disturbed, and their potential for increased erosion. This would be an incremental change to previously undisturbed soils and to soils that were previously disturbed from training, recreational, and grazing activities. BMPs and erosion prevention measures, however, would reduce the increased potential for soil loss through erosion. Overall impact to geology and soils within the ROI, however, would be less than significant.

3.16.6 Biological Resources

Much of the undeveloped land on Fort Bliss and within El Paso is already partially degraded as a result of past and current uses (see Table 3.16-1) and weather conditions. As the Proposed Action would result in negligible impacts to wildlife and sensitive species, significant adverse cumulative impacts would not be anticipated to these resources. Incremental cumulative loss to habitat would occur within the ROI as the area continues to develop as discussed in Table 3.16-1. This loss, however, would occur over time and within ecosystems/habitat already stressed by human disturbances. Overall cumulative impacts to habitat and sensitive species would be minor as the diversity of species and quality of habitat within the ROI is low.

As stated in Table 3.16-1, grazing and past human activities have considerably altered the historical ecosystems within the ROI. Due to past regional disturbances such as grazing and off-road recreation use, much of the historical grasslands have been converted to shrub communities, mesquite coppice dunes, and bare soils. Future actions discussed in Table 3.16-1, along with the proposed project would contribute a minor adverse impact to vegetation as these projects would be located within areas already disturbed by past activities that have altered the historical vegetation.

3.16.7 Water Resources

As the Proposed Action would result in negligible impacts to surface water and wetland resources, significant adverse cumulative impacts would not be anticipated. Development within the area would continue to comply with Section 404 permitting and stormwater mandates issued by the City of El Paso (see Table 3.16-1), minimizing the potential for adverse impacts to water resources.

Cumulative adverse impacts to groundwater resources could occur from the regional development and adjacent proposed projects as indicated in Table 3.16-1. All of these projects would have an overall increase in water demand for the ROI. As most of the potable water is withdrawn from underground

aquifers, there is a potential for a net decrease in groundwater resources. The proposed new WBAMC, however, would be replacing the original hospital complex, and would not be a significant contributor to the regional water demand increases. In addition, the new desalination plant and reduction of water use through conservation measures and improved technologies would further minimize adverse cumulative impacts to groundwater resources to minor.

3.16.8 Utilities

Utilities within the project area include water, wastewater, stormwater, and energy (natural gas and electricity). The proposed project would cumulatively contribute to an increased demand for these utilities services through the introduction of new development. Fort Bliss, the City of El Paso, and County of El Paso are expected to continue to experience growth and development as shown in Table 3.16-1. Past projects have contributed and future projects will contribute to minor cumulative impacts to utilities as a result of increased demand. Where utilities must be rebuilt or where new construction is warranted, coordination with utility companies and government agencies would take place in order to ensure design conformance, environmental compliance, and reduce potential significant cumulative impacts. Proposed solar projects along with other forms of improved technologies reducing energy usage would further minimize adverse impacts to energy and gas. Adverse cumulative impacts from increased regional development and increase of impervious surfaces (i.e., increased stormwater runoff and flash-flooding) would be minimized by stormwater mandates issued by the City of El Paso (see Table 3.16-1).

3.16.9 Socioeconomics and Environmental Justice

Overall development within the ROI as indicated by Table 3.16-1 would benefit socioeconomic conditions and minority and low income populations. Both the increase in regional population and development would provide a cumulative benefit of job creation and economic spending.

3.16.10 Cultural Resources

As the Proposed Action would result in negligible impacts to cultural resources, significant adverse cumulative impacts would not be anticipated. Development within the area (see Table 3.16-1) would continue to comply with Section 106 requirements, minimizing the potential for adverse impacts to cultural resources.

3.16.11 Visual Quality and Aesthetics

New projects currently being planned within the ROI (see Table 3.16-1) would contribute to the amount of imposition from man-made buildings on a previously flat landscape. If construction from all the proposed projects at Fort Bliss were to occur, views from Montana Avenue looking north would include buildings associated with the El Paso Community College, a housing subdivision for Soldiers and their Families, and the multistory proposed new WBAMC. This would create a long-term visual impact that could be managed with appropriate use of location-specific vegetation. Of these projects, the proposed new WBAMC would be located the farthest from Montana Avenue, however, so its height would produce the smallest increment to the impacts.

3.16.12 Hazardous Materials and Wastes

Other projects in the ROI would contribute to the cumulative impacts on the amount of hazardous and non-hazardous waste generated. The Fort Bliss onsite landfill cell that accepts general refuse is projected to be filled to capacity by 2013. Therefore, offsite disposal of non-hazardous solid waste would have to be transported to an offsite commercial landfill. Construction and operation of proposed projects would contribute to the amount of waste being landfilled and could affect the expected life of a landfill if capacity is reached before it is expected. However, non-hazardous and hazardous waste that would be generated from proposed projects could be accepted by regional landfills (non-hazardous waste) or by

treatment and disposal facilities (hazardous waste) with adequate capacity to accept the increase in volume of waste. Therefore, no significant impact would be expected from the increase in the quantity of hazardous and non-hazardous waste generated from proposed projects in the ROI.

3.16.13 Human Health and Safety

Fort Bliss is an active Army post with detailed safety processes and procedures in place for the safety of all personnel and visitors to Fort Bliss. Fort Bliss has trained, qualified personnel how operate in accordance with approved occupational safety and health standards in accordance with all Federal and State regulations. Fire suppression could be handled by the Fort Bliss Fire Department and if needed, with support from the city fire department. As the area within the region becomes developed and surface water features are incorporated into site development, a potential exists for the increase of BASH occurrences as additional water features would be prone to attract additional bird species to the region. The FAA Wildlife Strike Database indicates an average of 10 BASH incidences per year at the El Paso International Airport from 2000-2009. This is an average increase of three incidences per year compared to the previous decade (1990-1999). Of the reported approximate 170 incidences over the past 20 years, however, FAA characterized only four of the BASH strikes as substantial (1 occurrence each in 1990 and 1991 and two occurrences in 2007). Overall the proposed projects at Fort Bliss and in the ROI would not be expected to significantly contribute to cumulative severe adverse impacts on human health and safety.

3.16.14 Traffic and Transportation

Other projects in the ROI would contribute to the cumulative impacts on air quality in the ROI. The Soldier population at Fort Bliss is currently increasing as a result of BRAC and GTA initiatives, and the City of El Paso is pursuing additional economic development. Possible construction projects in the vicinity include ongoing developments in East Fort Bliss, the El Paso Community College, RCI housing along with the potential for an elementary school, solar facility to power the existing desalination plant, National Guard Armory, and Army community support facilities (i.e., Army and Air Force Exchange Service stores, a morale, welfare, and recreation facility, and fire/police station). Any increases in traffic volumes from future projects would further exacerbate the currently inadequate traffic conditions during peak hours at intersections 3 and 4, and possibly 2. Although the Proposed Action would not significantly impact existing traffic congestion conditions within the ROI, the cumulative development and associated increased traffic within the ROI would continue to perpetuate congested traffic conditions within the ROI. The overall cumulative impact would continue to be significant without traffic mitigation. As these future projects are developed, Fort Bliss and City of El Paso engineering requirements in design and planning would consider and mitigate the anticipated traffic impacts of these developments.

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4.0 MITIGATION MEASURES

Most potential adverse impacts identified in Chapter 3 of this EA are identified as minor or would avoid significant thresholds through adherence to existing Fort Bliss management practices, Federal and State regulatory requirements and use of typical BMPs during construction and operation activities. Each VEC section in Chapter 3 specifically identifies these required management practices, regulatory requirements and BMPs where applicable. Subsequently, these required measures are not considered within this section.

Due to the proximity of the preferred site to existing airfields, the following additional measures would be implemented to avoid the potential for significance of adverse environmental impacts to airspace:

- The incoming patient tower would be built within the USAASA and FAA regulations, and outfitted with low aircraft warning lights. The building height and location would also be subject to USAASA and FAA review and approval.
- Landscaping and stormwater drainage would be designed to discourage attraction of birds and other harmful wildlife within the vicinity of the airports (e.g., minimizing outside trees to discourage nesting habitat; designing buildings with no shady spots under cooling systems, vent systems, or ducting so as not to provide nesting habitat; and discouraging permanent water on the site).
- If the final design incorporates onsite permanent water, bird balls would be installed to camouflage the liquid surface from the air and deter birds and waterfowl from leach ponds
- Stormwater retention ponds located within the 10,000 foot buffer area of the Biggs AAF and the El Paso International Airport (i.e., the northern and western portions of the preferred site) would comply with FAA rules requiring ponds within the buffer area be drained within 48 hours of the storm event to discourage birds and other hazardous wildlife from roosting.

Due to historical WBAMC exceedances of EPWU Rule #9 and in order for the proposed new WBAMC to meet compliance requirements of the CWA regarding wastewater discharges, the following additional measures would be implemented IPT practices of the proposed new WBAMC:

- IPT controls would be implemented to maintain compliance with Rule #9.
- Any new processes that would discharge into the sanitary sewer would be reviewed for potential impact to the IPT Program and discharge limits (i.e. laboratory wastes, etc).

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