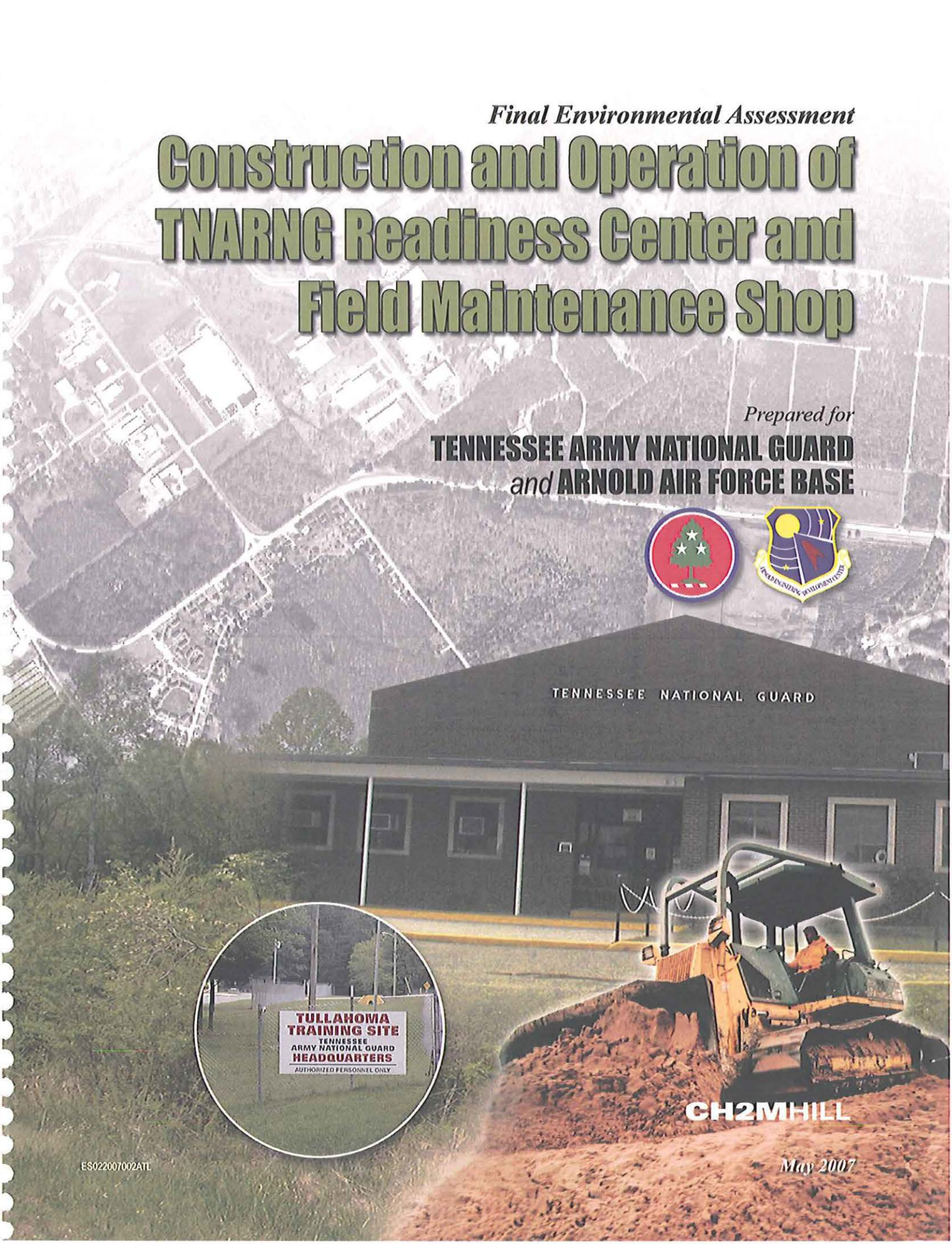
Final Environmental Assessment

Construction and Operation of TNARNG Readiness Center and Field Maintenance Shop

Prepared for

TENNESSEE ARMY NATIONAL GUARD
and **ARNOLD AIR FORCE BASE**



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FINDING OF NO SIGNIFICANT IMPACT
FOR
CONSTRUCTION AND OPERATION OF TNARNG READINESS CENTER AND FIELD MAINTENANCE SHOP
ARNOLD AIR FORCE BASE, TENNESSEE

Pursuant to the Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (40 Code of Federal Regulations [CFR] 1500 1508), Department of Defense Directive 6050.1 and Air Force Regulation 32 CFR Part 989, the Tennessee Army National Guard (TNANG) and Arnold Air Force Base (Arnold AFB) have prepared an Environmental Assessment (EA) that evaluates the potential environmental and socioeconomic impacts associated with two construction projects planned for the TNARNG Volunteer Training Site - Tullahoma (VTS-T) on base. This EA is incorporated by reference into this finding.

DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action includes construction of a new Readiness Center, Field Maintenance Shop (FMS), storage building, and supporting parking areas in the existing TNARNG cantonment area. If approved, the Readiness Center project would be implemented in Fiscal Year (FY) 2008 and the FMS project is scheduled for implementation in FY 2012. The specific components of the Proposed Action are described in the attached EA. Surface disturbance resulting from the projects would include 92,355 ft^2 of buildings and 175,419 ft^2 of paved parking and roads.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative current conditions and facilities would be maintained. The components of the Proposed Action (new Readiness Center and FMS, the storage building, and parking areas) would not be built. This would result in continued use of inadequately sized facilities and deteriorated buildings. The TNARNG mission would be restricted.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

The TNARNG evaluated two alternative sites for the Readiness Center, FMS, and storage building. Screening criteria for the sites included proximity to utilities and roads, ability to provide fencing and security, environmental issues, and Arnold AFB mission/operational requirements. The alternative sites were rejected by TNARNG due to the increased distances to utility lines and the increased costs of providing security fencing compared to the Proposed Action. The alternative sites were rejected by the USAF due to the operational and environmental constraints they would impose. In addition, the sites include suitable habitat for Eggert's sunflower and are within 500 feet of known locations. Use of those sites could result in impacts to that species, recently delisted from being a Threatened species. Selection of either of these sites would also have resulted in the loss of recreational lands designated for handicap wheelchair hunting.

ENVIRONMENTAL CONSEQUENCES

No significant environmental effects have been identified for the proposed action. Additional information can be found in Chapter 4 (Environmental Consequences) and Chapter 5 (Plans, Permits, and Management Actions) of the EA.

LAND USE

Under the Proposed Action, construction and paving would convert approximately 6.2 acres of old field habitat and deciduous forest habitat to buildings, parking, and maintained landscaping. The Proposed Action would have a minimal impact on designated land uses on Arnold AFB. While the land cover would be altered, the intended use of the land within the cantonment area would not change.

GEOMORPHOLOGY

Disturbance to soils would occur from work on roadbeds, parking lots, and construction sites. During construction, heavy equipment would be used to move and compact soils in construction and paving areas. Sedimentation and erosion controls would be implemented during construction to minimize erosion of surrounding soils due to soil/ground disturbance. Stormwater runoff resulting from increased impervious surface areas also could contribute to limited soil erosion. Site-specific measures would minimize transport of soils. The contract for this work would require that the contractor implement measures consistent with the *Tennessee Erosion & Sediment Control Handbook* and comply with the Tennessee Water Quality Control Act of 1977. The Proposed Action would have minimal impact on geomorphology. The project site is on lands previously cleared and allowed to re-vegetate. The site is on level to gently sloping land. Any changes to topography would be minor.

HYDROLOGY

Impacts on hydrology could result from land clearing, loss of vegetation, and associated accelerated runoff from impervious surfaces following precipitation events. The addition of impermeable surfaces through the construction of new buildings and lots would result in an increase in stormwater runoff. The Proposed Action would result in the conversion of approximately 6.2 acres of pervious surfaces to impervious surfaces. Construction activities would result in soil disturbance and loss of vegetative cover. These activities could result in modified surface water runoff patterns from the site. Increased runoff from an unvegetated site could result in hydrologic impacts, such as channelization and erosion. Tennessee requires that a Notice of Intent for National Pollutant Discharge Elimination System (NPDES) Stormwater Construction Permits be filed with Tennessee Department of Environment and Conservation for all projects disturbing 1 or more acres. Best Management Practices (BMP) and onsite stormwater controls included as part of that permit would reduce or eliminate runoff from the site to avoid hydrologic impacts to nearby waters. Construction would occur outside of designated floodplains and would have no impact on floodplain elevations.

WATER QUALITY

Impacts on water quality could result from construction activities that result in soil disturbance and exposed soil, presenting the possibility for the transport of sediment and soil-bound pollutants into streams. Transport could occur downslope or into immediately adjacent waters.

Use of appropriate construction stormwater BMPs, would contain or treat stormwater to prevent offsite impacts to water quality.

BIOLOGICAL RESOURCES

Biological resources and related habitats could be directly affected by the Proposed Action due to construction and increased use of areas. The Proposed Action would take place on lands previously impacted, but currently occupied by young deciduous forest and old field habitats. Implementation of the Proposed Action would result in the removal of existing vegetation from approximately 6.2 acres of land. Impacts considered include those that could directly and physically affect biological organisms and those with the potential to affect the quality and utility of the habitats used by biological organisms.

Loss of forested and old field habitat types would be a permanent loss but would represent less than .1 percent of such habitat on Arnold AFB.

No sensitive species are known to occur on or use the site of the Proposed Action and no impacts to sensitive species would be expected from its implementation. There are populations of Eggert's sunflower to the south of the cantonment area, but they would not be disturbed by construction activities.

No wetlands are located within any areas where construction is proposed.

SAFETY AND OCCUPATIONAL HEALTH

Workers would have the potential for accidents as a result of construction activities. Construction workers would use appropriate protection and would follow OSHA standards and procedures. The construction contractor would be responsible for ensuring that all contractor employees (and subcontractors) comply with all applicable OSHA standards and procedures. Contractors would be responsible for controlling traffic during road paving activities, minimizing the likelihood of vehicular accidents occurring at the site. Impacts would be considered minor.

NOISE

Heavy equipment such as bulldozers, graders, backhoes, excavators, dump trucks, and cement trucks would generate noise that could affect the onsite workers. Construction equipment typically emits noise in the 86-94 dB range. Construction workers would use hearing protection and would follow OSHA standards and procedures. Construction would occur near existing TNARNG buildings and a Coca-Cola bottling plant, which could affect personnel during daytime hours at levels above background. Any impacts would be temporary and minor. Post-construction noise would be associated with operation and maintenance of 61 vehicles and trailers. Noise levels for that equipment are less than 85 dB for crews at idle and low speeds.

AIR QUALITY

During construction, air quality impacts could occur from dust carried offsite and combustive emissions from construction equipment. The primary risks from blowing dust particles relate to human health and human nuisance values. Fugitive dust can contribute to respiratory health problems and create an inhospitable working environment. Deposition on surfaces can be a nuisance to those living or working downwind. Measures that can be implemented to reduce or eliminate fugitive dust emissions include sprinkling/irritation for haul roads and other traffic

routes; vegetative cover in areas not expected to handle vehicle traffic; and mulch for recently disturbed areas. During operation, negligible amounts of vehicle exhaust would be generated through operation of equipment associated with the FMS.

IRP AND HAZARDOUS MATERIALS

The proposed construction areas do not overlie any known IRP sites. No impacts from contaminants would be expected during construction. Small amounts of waste oils and lubricants would continue to be generated by the new FMS. Those wastes would be recycled or undergo proper disposal. The spill prevention plans and materials handling procedures adopted by TNARNG for FMS operations would prevent impacts from hazardous materials.

CULTURAL RESOURCES

The Proposed Action will not affect historic properties. This determination has been coordinated under provisions of the National Historic Preservation Act, Section 106. Should any significant or potentially significant historic or archeological artifacts be discovered during construction, all activities would halt in the immediate area and Arnold AFB would follow procedures outlined in its Integrated Cultural Resources Management Plan to consult with the SHPO and other parties to implement appropriate follow-on actions.

TRAFFIC FLOW AND UTILITY INFRASTRUCTURE

Construction would cause temporary impacts to roads and utilities. It would be necessary to interrupt utilities temporarily near the proposed construction sites. Movement of heavy equipment on and off the sites would cause brief disruptions on Highway 55 and Industrial Road.

SOCIOECONOMIC FACTORS

The Proposed Action would have a minor positive impact on socioeconomic factors. There would be temporary employment from construction activities.

CUMULATIVE IMPACTS

No cumulative impacts are anticipated with the exception of minor cumulative impacts to water quality, hydrology, and biological resources. The cumulative increase in impervious area on Arnold AFB would not significantly impact hydrology and water quality beyond the base. The use of appropriate construction stormwater BMPs would contain or treat stormwater to prevent offsite impacts to water quality. No significant biological resources have been identified on the site of the Proposed Action. No significant cumulative impacts to wetlands, floodplains, or threatened and endangered species are anticipated.

Arnold AFB has 28,547 acres total of forested land. Of that 23,053 are hardwood forested land. Approximately 6.2 acres of hardwood forest would be lost under the Proposed Action. Recent loss of hardwood due to construction and harvested pine for sale total 11 percent of the total pine forest land on base. The cumulative impact on hardwood forest is .6 percent. This loss would not contribute significantly to the cumulative loss of forest land on the base, either individually or when combined with other potentially foreseeable land clearing in the region.

PUBLIC COMMENTS

A public notice was published in the Manchester Times, Tullahoma News, and Winchester Herald Chronicle on 27 Mar 07 to disclose completion of the EA and request comments during a 30-day pre-decisional comment period. The 30-day comment period ended on 27 Apr 07 with no comment received.

PERMITS

The following permit is required: Storm Water Permit for Disturbance of One or More Acres from the Tennessee Department of Environment and Conservation.

FINDING OF NO SIGNIFICANT IMPACT

Based on my review of the facts and the environmental analysis contained in the attached EA as summarized above, we find the proposed action to construct a readiness training center and field maintenance shop for the Tennessee Army National Guard at Arnold AFB will not have a significant impact on the human or natural environment; therefore, an environmental impact statement is not required. This analysis fulfills the requirements of the NEPA, the President's Council on Environmental Quality, and 32 CFR Part 989.

Date: 15 Aug 07

TIMOTHY K. BRIDGES, SES
Director of Installations
and Mission Support

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Acronyms and Abbreviations

AEDC	Arnold Engineering Development Center
AFB	Air Force Base
AFI	Air Force Instruction
AFMC	Air Force Materiel Command
AFOSH	Air Force Occupational and Environmental Safety, Fire Protection, and Health
AGR	Active Guard Reserve
AICUZ	Air Installation Compatible Use Zone
APE	Area of Potential Effects
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CMA	Cooperative Management Agreement
CWA	Clean Water Act of 1977
dB	Decibel
dB_a	A-weighted Scale
DoD	Department of Defense
DODI	Department of Defense Instruction
EA	Environmental Assessment
EBS	Environmental Baseline Survey
EO	Executive Order
ESHQ	Environmental, Safety, Health, and Quality
EHR	Eastern Highland Rim
ESA	Endangered Species Act of 1973
FMS	Field Maintenance Shop
ft^2	Square Foot
FY	Fiscal Year
gpm	Gallons per Minute
HET	Heavy Equipment Transport
HQ	Headquarters
INCRMP	Integrated Cultural Resource Management Plan
INRMP	Integrated Natural Resource Management Plan
IRP	Installation Restoration Program
LDN	Day-Night Average Noise Level

mgd	Million Gallons per Day
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PDM	Post-Delisting Monitoring
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act of 1976
ROW	Right-of-Way
SARA	Superfund Amendments and Reauthorization Act of 1986
SHPO	State Historic Preservation Office
SWMU	Solid Waste Management Unit
TDEC	Tennessee Department of Environment and Conservation
TNARNG	Tennessee Army National Guard
TSCA	Toxic Substances Control Act
TUB	Tullahoma Utilities Board
TWRA	Tennessee Wildlife Resources Agency
USACE	U.S. Army Corps of Engineers
USAF	United States Air Force
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VTS-T	Volunteer Training Site-Tullahoma
WQA	Water Quality Act of 1987
WWTP	Wastewater Treatment Plant

1.0 Purpose and Need for Action

1.1 Background

Arnold Air Force Base (AFB) is located in Coffee and Franklin Counties, Tennessee, approximately 70 miles southeast of Nashville, near the towns of Manchester, Tullahoma, and Winchester (Figure 1-1). License No. L-97-001 with the U.S. Air Force (USAF) allows the Tennessee Army National Guard (TNARNG) to use a portion of Arnold AFB, designated the Volunteer Training Site-Tullahoma (VTS-T), for training purposes. The VTS-T is located on the western side of the Base and occupies 8,159 acres. The 30th Troop Command and 1175th Transportation Company of the TNARNG are stationed in a cantonment area to the west of the VTS-T. TNARNG units that are not stationed at the VTS-T also use the site for tank training activities. The license agreement that allows TNARNG to train on Arnold AFB requires that any new construction by TNARNG be approved by the USAF prior to implementation.

Natural resources in the VTS-T area are studied and managed as part of the larger Arnold AFB management program. Impacts to resources in the VTS-T are tied to the management of resources at Arnold AFB and evaluated as part of this larger system.

1.2 Military Mission

1.2.1 Tennessee Army National Guard

During peacetime, the role of the TNARNG is to be a state military force under the direction of the Governor, as Commander-in-Chief of the state. The TNARNG may be called upon to maintain or restore order in emergency situations, to rescue civilians whose lives are in danger, or to assist during natural disasters.

During national emergencies, the President has the authority to mobilize National Guard units or individuals, putting them in federal duty status. While federalized, TNARNG units or personnel report to the Combatant Commander of the theatre in which they operate and, ultimately, to the President. Even when not on federal duty status, the TNARNG has a federal mission to maintain properly trained and equipped units, available for prompt mobilization for war, national emergency, or as otherwise needed.

At the VTS-T, the TNARNG mission is to provide facilities in support of units using the site to accomplish training and enhance readiness. TNARNG sustains this mission through four key areas: Mission Support (to units using VTS-T), Environmental Stewardship, Economic Feasibility, and Productivity Enhancement. These four areas play key roles in the US Army's current decision-making process for training resource allocation.

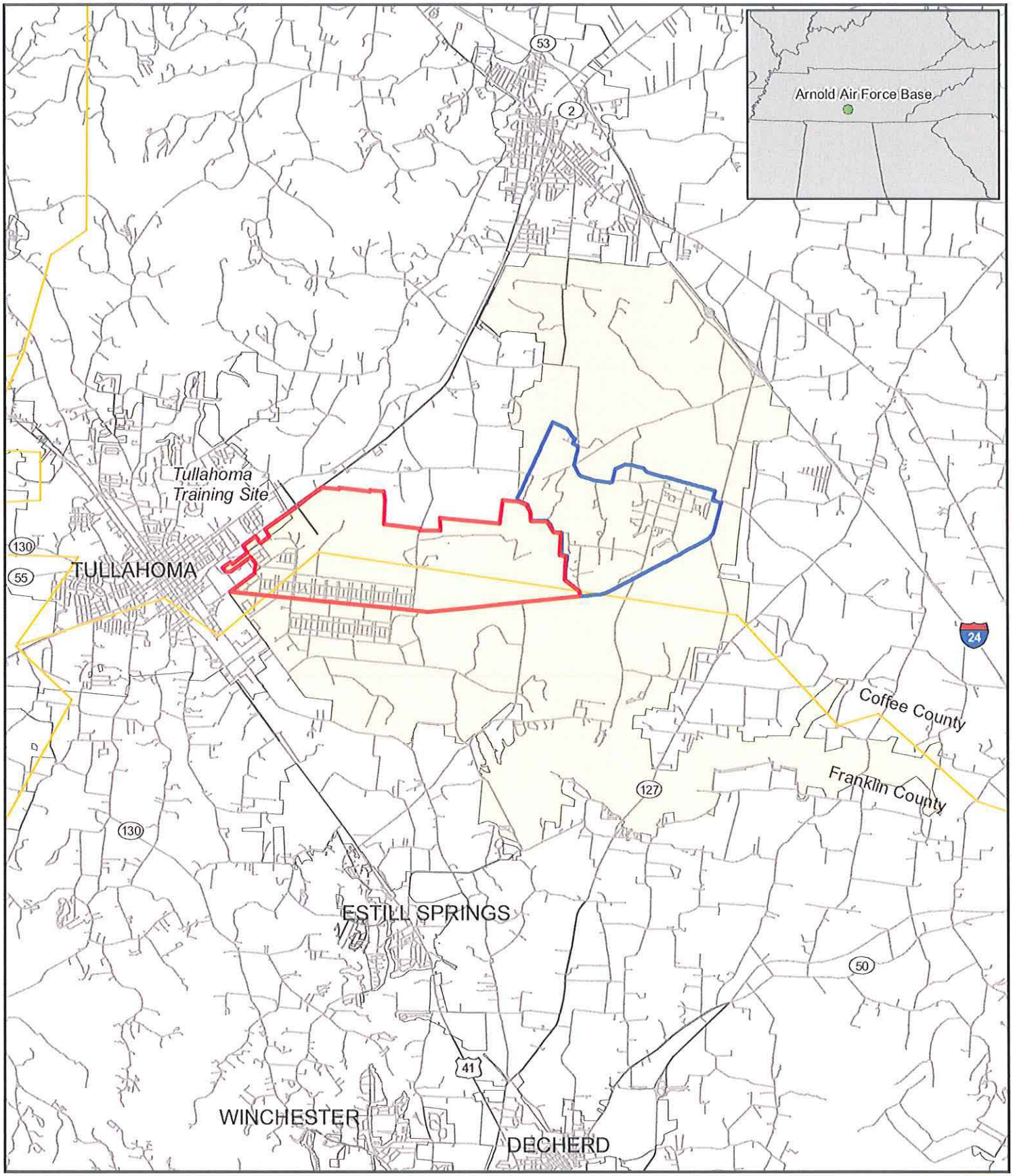

Figure 1-1
Arnold Air Force Base and General Vicinity
Construction and Operation of TNARNG Readiness Center and Field Maintenance Shop
Final Environmental Assessment

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1.2.2 Arnold Air Force Base

The military mission of Arnold AFB is the operation of Arnold Engineering Development Center (AEDC) to support the development of aerospace systems by testing hardware in facilities that simulate flight conditions.

1.3 Proposed Action

TNARNG proposes to construct a new Readiness Center, Field Maintenance Shop (FMS), storage building, and supporting parking areas in the existing TNARNG cantonment area on Arnold AFB to the west of the VTS-T. If approved, the Readiness Center project would be implemented in Fiscal Year (FY) 2008 and the FMS project is scheduled to be implemented in FY 2012..

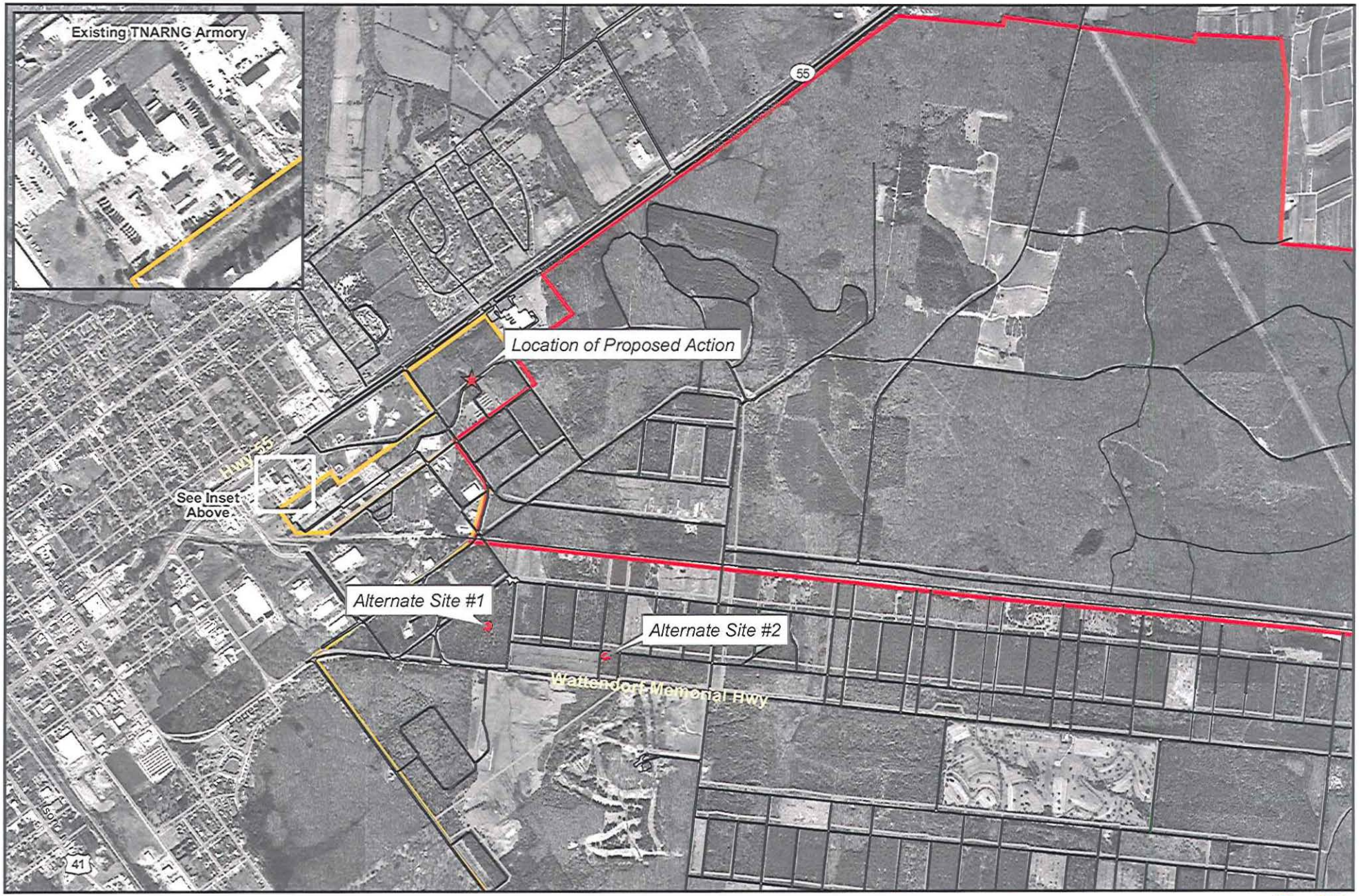
1.4 Need for Proposed Action

The purpose and need for the Proposed Action is to enhance the ability of the TNARNG to fulfill its military mission by providing the organization with adequate facilities. Appendix A contains the Form 1390-1s completed by the TNARNG. Those documents detail the condition of and deficiencies with the existing buildings. Currently, troops are housed in a 52–year-old state-owned facility to the northeast of the VTS-T (Figure 1-2) at 1202 E. Carroll Street in Tullahoma. The existing Readiness Center is too small for the troops assigned to it and has been determined to be unfeasible for rehabilitation. The existing Readiness Center lacks adequate parking, storage, and training areas and contains inadequate heating, plumbing, and electrical systems. The existing FMS is more than 50 years old and has only 3,550 square feet (ft^2) of functional space compared to 38,879 ft^2 in the proposed FMS. It was originally designed to accommodate vehicles of World War II and Korean War vintage. The functional space is insufficient for the vehicles assigned to the FMS. Existing work bays are not large enough to support artillery vehicles and oversized Heavy Equipment Transport (HET) vehicles used by the modern Army. Administration, supply, and latrine space is critically deficient. The existing buildings would be retained for other purposes following completion of the new Readiness Center and FMS.

1.5 Related Environmental Documents

The following documents were used in the preparation of this Environmental Assessment (EA):

- Arnold Air Force Base Integrated Natural Resources Management Plan, Preliminary Draft, February 20, 2006
- Arnold Air Force Base Two Year Conservation Management Plan 2005-2006



LEGEND

- Proposed Action
- Tullahoma Training Sites
- Arnold AFB Boundary
- Tullahoma Training Boundary

N

0 2,000 4,000 Feet

Figure 1-2
Location of Proposed Action
Construction and Operation of TNARNG Readiness Center and Field Maintenance Shop
Final Environmental Assessment

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1.6 Decision to be Made

A decision must be made to implement the Proposed Action within the TNARNG cantonment area at Arnold AFB beginning in FY 2008 or to maintain current conditions.

1.7 Applicable Regulatory Requirements and Coordination

The TNARNG uses the VTS-T and cantonment area through a license agreement with the USAF signed in 2001, which is currently being updated. This agreement requires approval from the USAF prior to the implementation of new construction. Since two branches of the armed forces are parties in the project, the EA incorporates National Environmental Policy Act of 1969 (NEPA)-related USAF instructions in addition to Army Regulations.

Any projects that result in the disturbance of more than 1 acre require a construction stormwater permit from the Tennessee Department of Environment and Conservation (TDEC). This permit is obtained by filing a Notice of Intent (NOI) with TDEC for coverage under the Construction Stormwater General Permit. No other permits are required from the state.

The following regulations and coordination are applicable to one or more components of the considered alternatives as described in this EA:

- NEPA
- Title 40 of the Code of Federal Regulations (CFR), Parts 1500-1508 (40 CFR 1500-1508)
- 32 CFR 989
- 32 CFR 651
- Department of Defense (DoD) Directive 6050.1 (32 CFR 214)
- Army Regulation 200-2
- Air Force Instruction (AFI) 32-7064
- Executive Order (EO) 11514, Protection and Enhancement of Environmental Quality (amended by EO 11991)
- Endangered Species Act of 1973 (ESA) (16 U.S. Code [USC] 1531-1543),
- Fish and Wildlife Coordination Act, (16 USC 661, et seq.),
- Migratory Bird Treaty Act (16 USC 701, et seq.)
- Clean Water Act of 1977 (CWA) and the Water Quality Act of 1987 (WQA) (33 USC 1251 et seq., as amended)
- EO 11990, Protection of Wetlands
- EO 12372, Intergovernmental Review of Federal Programs
- The Farmland Protection Act of 1981 (7 USC 4201 et. seq., as amended)
- DoD 4165.57, Air Installation Compatible Use Zone (AICUZ)

- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (as amended by the Superfund Amendments and Reauthorization Act of 1986 [SARA])
- Resource Conservation and Recovery Act of 1976 (RCRA)
- Toxic Substances Control Act (TSCA)
- National Historic Preservation Act of 1966 (NHPA) (16 USC 470 et seq., as amended)
- Protection of Historic Properties (36 CFR 800) Act
- Archeological Resources Protection Act of 1979
- EO 11988, Floodplain Management
- Clean Air Act (CAA) (42 USC 7401 et seq., as amended)
- Noise Control Act of 1972
- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risk

1.8 Authority

This document was prepared in accordance with the requirements of the NEPA, the Council on Environmental Quality (CEQ) regulations of 1978, and 32 CFR Part 989.

1.9 Scope of Analysis

This document analyzes the potential environmental and socioeconomic impacts that would result from implementation of the considered alternatives at Arnold AFB. The analysis also considers potential impacts on the military mission of the TNARNG resulting from the considered alternatives. Because the TNARNG is a tenant on Arnold AFB, using land licensed for administrative and training activities (Figure 1-2), the analysis in this document also addresses the interactions of the considered alternatives with Arnold AFB activities.

1.9.1 Issues Eliminated from Detailed Analysis

The Proposed Action would not have the potential for significant impacts on all resource areas on Arnold AFB. Consequently, the resource areas identified below have been eliminated from detailed analysis in this document.

1.9.1.1 Airfield Operations

Arnold AFB has an active airfield and an exemption from Headquarters (HQ) Air Force Materiel Command (AFMC) for AICUZ because of the types and limited number of flying operations. The components of the Proposed Action are not within any designated accident potential zones for the airfield, would not encroach on the airfield, and would not impact airfield operations (Figure 1-2). Therefore, potential impacts to airfield operations are not further considered in this document.

1.9.1.2 Geology

No activities conducted under the Proposed Action would affect the underlying geologic features of Arnold AFB. Accordingly, geology has been eliminated from detailed analysis in this document.

1.9.1.3 Environmental Justice and Protection of Children

Implementation of the components of the Proposed Action would be confined to Arnold AFB and would not impact minority or low income population groups per EO 13045 Protection of Children from Environmental Health Risks and EO 12898 Environmental Justice. None of the components of the Proposed Action would present environmental health or safety risks to children. Therefore, environmental justice and protection of children were eliminated from detailed analysis in this document.

1.9.2 Issues Studied in Detail

The resource areas below are discussed in detail in this document:

- Land Use
- Geomorphology
- Hydrology
- Water Quality
- Biological Resources
- Safety and Occupational Health
- Noise
- Air Quality
- Hazardous Materials and Installation Restoration Program (IRP)
- Cultural Resources
- Traffic Flow and Utility Infrastructure
- Socioeconomic Factors

1.10 Document Organization

This EA follows the organization established by the CEQ regulations (40 CFR, Parts 1/500-1508). This document includes the following sections:

- 1.0 Purpose and Need for Action
- 2.0 Description of Proposed Action and Alternatives
- 3.0 Affected Environment
- 4.0 Environmental Consequences
- 5.0 Plan, Permit, and Management Requirements
- 6.0 List of Preparers
- 7.0 List of Contacts
- 8.0 References
- Appendices

2.0 Description of Proposed Action and Alternatives

As required by federal regulation, this EA addresses the possible environmental impacts of the Proposed Action and a No-Action Alternative. This section provides a summary of the issues and potential impacts associated with the Proposed Action and No-Action Alternative. This section also presents two alternatives that were considered as options but were eliminated and not carried forward in the evaluation.

2.1 Proposed Action (Preferred Alternative)

Under the Proposed Action a new Readiness Center, FMS, and unheated storage building would be constructed within the TNARNG cantonment area to the west of the VTS-T at Arnold AFB (Figure 1-2), along with suitable parking areas to accommodate anticipated use of these facilities. The new facilities would replace the existing TNARNG Readiness Center and FMS facilities in Tullahoma, Tennessee. The proposed location is along Highway 55, immediately west of the Coca-Cola plant.

Construction of the Readiness Center would provide a facility with adequate troop areas capable of supporting the training, supply, administrative, and maintenance missions of assigned units (30th Troop Command and 11th Transportation). The Readiness Center would provide assembly, educational, and physical fitness areas for TNARNG units assigned to the VTS-T and those units training at the VTS-T. The Readiness Center would include a weapons vault, kitchen, and storage areas. Parking would be provided for approximately 190 vehicles.

The FMS would provide vehicle support services and include a shop building and an unheated storage building. It would include administrative and supply areas and provide standard work bays and lubrication, electronics, and body shop bays to support 270 wheeled vehicles, 5 tracked vehicles, 1 fuel vehicle, 24 HET system vehicles, and 18 other pieces of equipment. Permanent parking areas would be provided for approximately 60 military vehicles and 10 to 15 other vehicles. The space requirements for the Readiness Center, FMS, storage building, and associated parking areas are summarized in Table 2-1.

The TNARNG facilities would include building information services, antiterrorism measures, parking, and wash platforms. Supporting facilities would include site utilities, walks, storm drainage facilities such as curbs and gutters, access roads/bridge, information systems, and site improvements. Access for individuals with disabilities would be provided in public areas. Heating and air conditioning would be provided by self-contained units. To ensure that post-construction stormwater runoff does not exceed pre-construction stormwater runoff from the Readiness Center and FMS, site design would incorporate stormwater detention facilities.

TABLE 2-1
Space Requirements for Proposed Action
Construction and Operation of TNARNG Readiness Center and FMS
Final Environmental Assessment

Components of the Proposed Action	Size (ft^2)
Readiness Center Building	50,876
Readiness Center Parking	78,300
FMS Building	38,879
FMS Parking	97,119
Unheated Storage Building	2,600

2.2 No-Action Alternative

The No-Action Alternative would maintain current conditions and facilities. The components of the Proposed Action (new Readiness Center and FMS, the storage building, and parking areas) would not be built. This would result in continued use of inadequately sized facilities and deteriorated buildings. The existing facilities do not meet the space requirements for TNARNG unit designations and the buildings do not meet current standards. Under the No-Action Alternative, the TNARNG mission would be restricted as described earlier in Section 1.4. The FMS was constructed to accommodate WWII and Korean War vintage vehicles. Vehicles used in the modern Army are too large to safely fit within the existing work bays. Without larger facilities, the TNARNG cannot maintain vehicles of the modern Army. In addition, the existing Readiness Center is too small to support the number of troops assigned and has outdated facilities that are considered unfeasible to rehabilitate to support the revised training mission.

2.3 Alternatives Considered but Not Carried Forward

NEPA requires that the Proposed Action, No-Action Alternative, and any other practicable alternatives be considered in the analysis. Two alternatives were considered, but eliminated from further evaluation:

- Select Alternative Sites
- Renovate and Expand Existing Buildings

2.3.1 Select Alternative Sites

The TNARNG evaluated two alternative sites (Figure 1-2) for the Readiness Center, FMS, and storage building described in the Proposed Action. Alternative Site 1 is located at the intersection of Wattendorf Highway and the entrance to the Tullahoma Industrial Park. Alternative Site 2 is located off Wattendorf Highway across from the Arnold AFB Golf Course. Screening criteria for the sites included proximity to utilities and roads, ability to provide fencing and security, environmental issues, and Arnold AFB mission/operational requirements. The alternative sites were rejected by TNARNG due to the increased distances to utility lines and the increased costs of providing security fencing compared to the Proposed Action. The alternative sites were rejected by the USAF due to the operational and

environmental constraints they would impose. In addition, the sites include suitable habitat for Eggert's sunflower (*Helianthus eggertii)* and are within 500 feet of known locations. Use of those sites could result in impacts to that species. Selection of either of these sites would also have resulted in the loss of recreational lands designated for handicap wheelchair hunting.

2.3.2 Renovate and Expand Existing Buildings

The existing Readiness Center and FMS facilities are more than 50 years old and lack adequate parking and training areas, as well as adequate work, latrine, storage, and administrative space. These existing structures would also require significant renovation to upgrade the inadequate heating, plumbing, and electrical systems to support the necessary level of use. TNARNG determined that renovation and expansion of the existing facilities would be cost-prohibitive.

2.4 Comparison of Alternatives Carried Forward

The Proposed Action and the No-Action Alternative are compared in Table 2-2.

TABLE 2-2
Comparison of Impacts of Considered Alternatives
Construction and Operation of TNARNG Readiness Center and FMS
Final Environmental Assessment

Resource Area	Proposed Action	No-Action Alternative
Land Use	Conversion of 6.2 acres of old field and young deciduous forest to buildings and parking lots.	No Impact
Geomorphology	Clearing and grading of 6.2 acres for site preparation	No Impact
Hydrology	Increase in stormwater runoff due to increase in impervious surfaces. Use of construction and post-construction stormwater Best Management Practices (BMPs) for the project would manage any increase in stormwater runoff and limit impacts to hydrology.	No Impact
Water Quality	Potential for increased sedimentation and pollutant loading from stormwater runoff during and following construction. Use of appropriate construction and post-construction stormwater BMPs would prevent other than minor impacts.	No Impact
Biological Resources	Minor loss of wildlife habitat through conversion for construction and paving.	No Impact
Safety and Occupational Health	No impact	No Impact
Noise	Construction related noise would be generated, resulting in short-term minor impacts	No Impact
Air Quality	Fugitive dust would be generated during construction. BMPs would be implemented to prevent impacts to local air quality.	No Impact
Installation Restoration Program and Hazardous Materials	No impact	No Impact
Cultural Resources	No impact	No Impact

TABLE 2-2
Comparison of Impacts of Considered Alternatives
Construction and Operation of TNARNG Readiness Center and FMS
Final Environmental Assessment

Resource Area	Proposed Action	No-Action Alternative
Traffic Flow and Utility Infrastructure	Short-term construction-related traffic delays may occur.	No Impact
Socioeconomic Factors	Temporary increase in construction employment.	No Impact
Cumulative Impacts	Minor permanent loss of 6.2 acres of vegetated land.	No Impact
	Minor increase in impervious surfaces. Use of appropriate construction and post-construction stormwater BMPs would prevent other than minor impacts.	

3.0 Affected Environment

3.1 Land Use

The VTS-T license area currently occupies a 26-acre exclusive use cantonment area and 7,365 acres of joint use land along the western portion of Arnold AFB. The 7,365-acre joint use area is made up of the Maneuver Area (3,340 acres), Rifle Range (2,763 acres), and Laser Firing Tank Range/Artillery Maneuver Area (1,262 acres).
The VTS-T is used primarily for military training and maneuvers. Additional land uses include hunting, recreation, timber harvest, and other natural resource uses. Land cover consists primarily of unimproved lands, including forested land, woodland/ savanna/shrubland, and grassland.

The TNARNG cantonment area currently occupies approximately 10 acres of the 26-acre exclusive use area in the northwest portion of the land licensed from the Base. The cantonment area currently includes an administrative building, mess hall, and six barracks. A motor pool area is located adjacent to the cantonment area and includes a guardhouse, Battalion Maintenance Shelter, Shop/Warehouse building, salvage yard, washrack, and parking areas for artillery pieces, tracked armored vehicles, and other equipment.

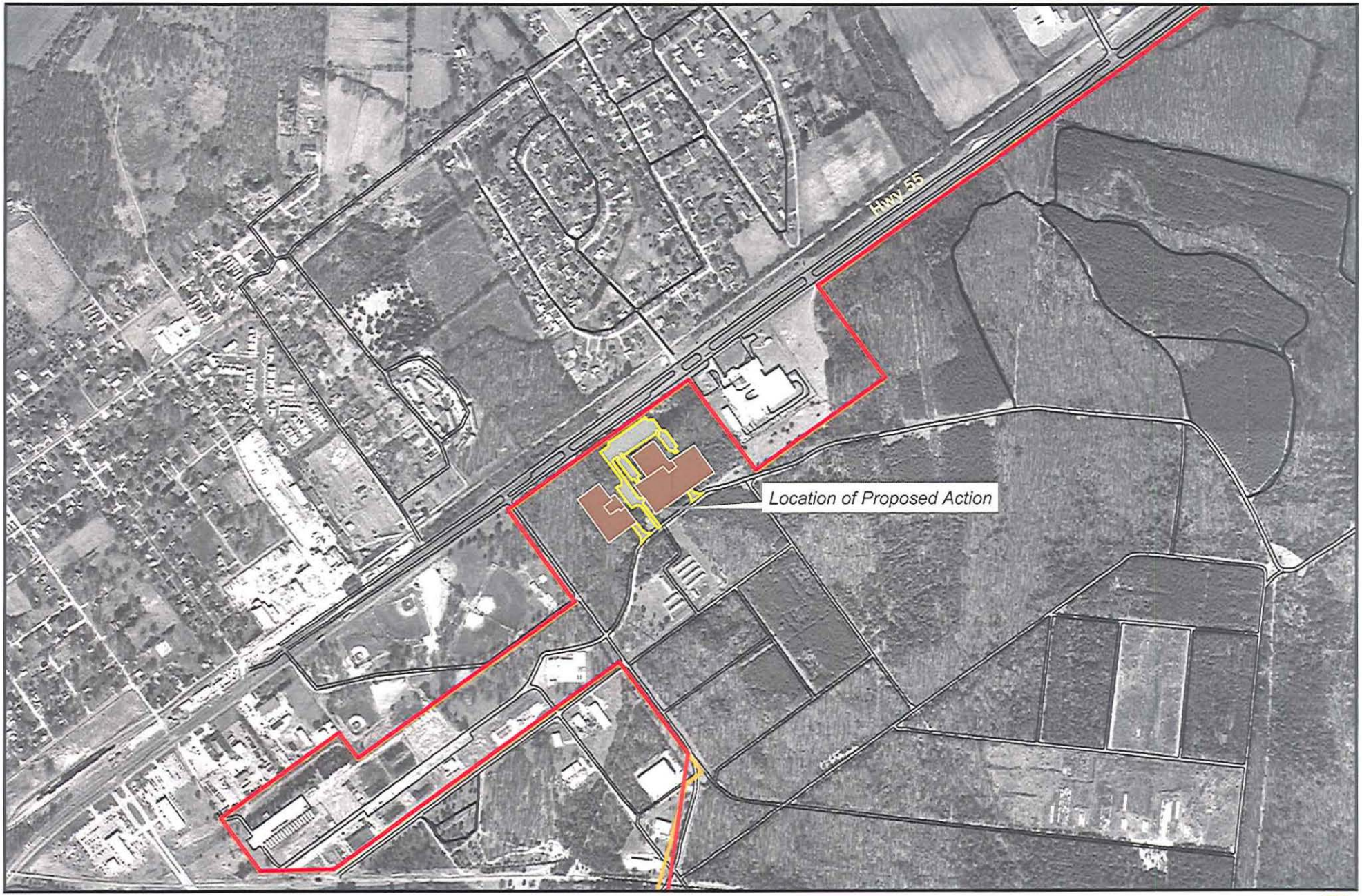
Undeveloped portions of the cantonment area consist of primarily plant communities in early successional stages, such as young deciduous forests and old field habitats. The cantonment area, including the footprint of the Proposed Action, is shown in Figure 3-1. Photos of the proposed construction site are included in Appendix B.

The Air Force is currently processing a 5-year license for joint use of most areas requested by the TNARNG and exclusive use for the VTS-T Readiness Center site.

3.2 Geomorphology

Geomorphology, as discussed here, refers to landforms, slopes (topography/relief), and soils at Arnold AFB and the VTS-T. Analysis of this feature helps to establish the relationships between various elements of the environment (geology, hydrology, vegetation, and wildlife). The topography at Arnold AFB ranges from relatively flat with poor surface drainage in the northern portion of the installation to moderately rolling with defined stream channels in the southern section.

Arnold AFB lies within the Eastern Highland Rim (EHR) physiographic region of Tennessee (Miller, 1974). Elevations range from about 1,100 feet above sea level at the drainage divide between the Duck and Elk River basins to 890 feet above sea level in the valleys. In the areas north and northeast of Arnold AFB, there are many swamps and internally drained depressions. Stream channels there are poorly defined and stay dry through much of the summer and fall (Haugh and Mahoney, 1994). Locations of streams and wetlands in the VTS-T are shown in Figure 3-2.



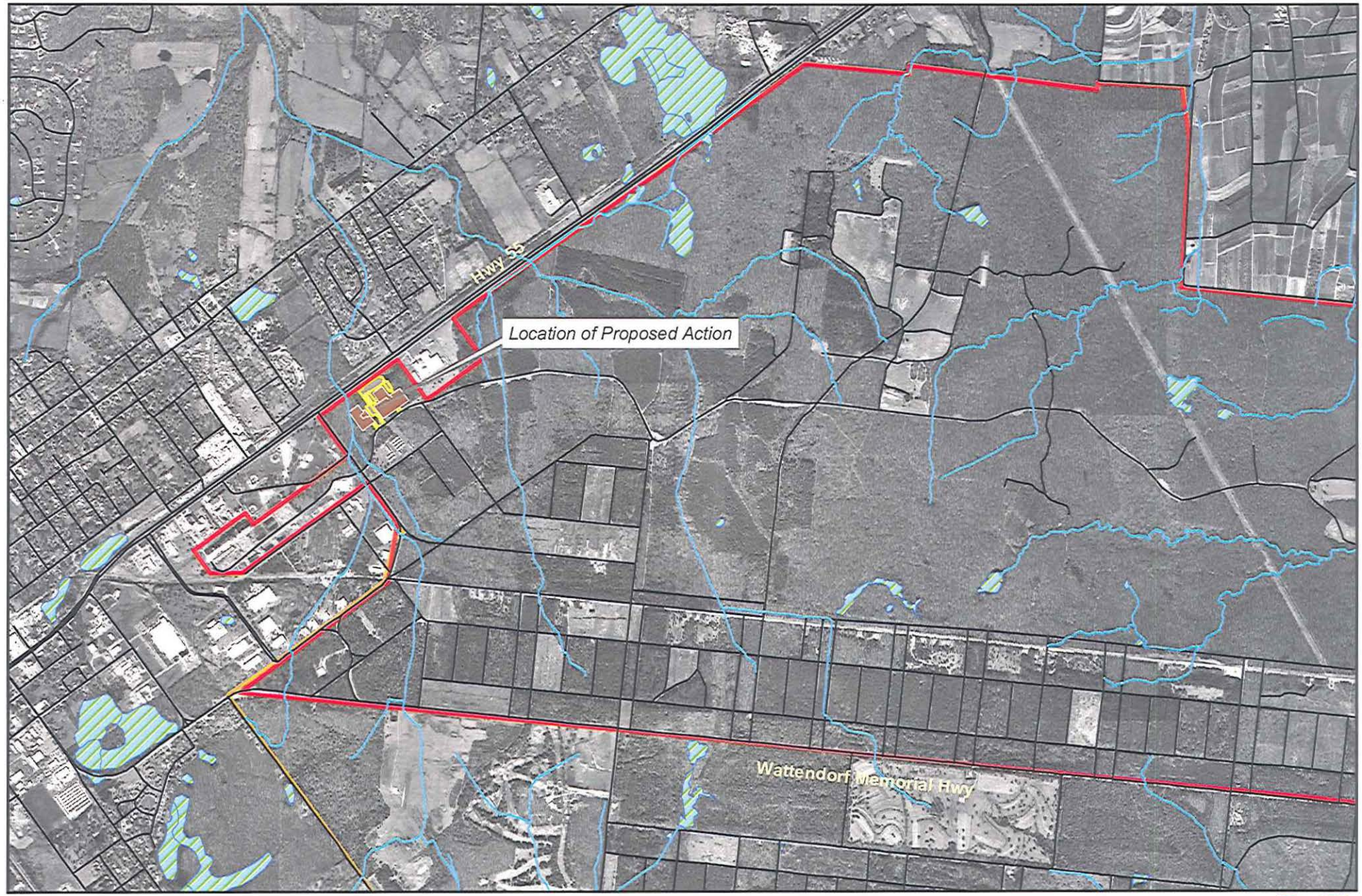
LEGEND

- Roads
- Tullahoma Training Site Boundary
- Parking Area
- Building

N

0 1,000 2,000 Feet

Figure 3-1
Location of Proposed Action
Construction and Operation of TNARNG Readiness Center and Field Maintenance Shop
Final Environmental Assessment



LEGEND

- Roads
- Streams
- Wetlands
- Arnold AFB Boundary
- Tullahoma Training Site Boundary
- AEDC Boundary
- Parking Area
- Building

N

0 2,500 5,000 Feet

Figure 3-2
Wetlands and Streams
Construction and Operation of TNARNG Readiness Center and Field Maintenance Shop
Final Environmental Assessment

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Prior to construction and paving activities, geotechnical surveys would be conducted to confirm that the sites are suitable for each project. A summary of the total surface area required for the construction projects for this EA is presented in Table 2-1. The project site is in an area where soils have been disturbed through land clearing in the past.

Soils on the VTS-T vary in composition and permeability characteristics. These soils include the Dickson silt loam series (DkA, DkB, DkC, and Dka), which are moderately drained soils and are associated with upland areas. This series represents the primary soil type at the location of the Proposed Action. The Guthrie silt loam soil series (GuA) are soils that are poorly drained and are associated with flats, depressions, and floodplain areas. The Lawrence silt loam soils (LaA) are somewhat poorly drained soils and are associated with floodplains and foot slopes. The Lobelville silt loam soils (LbA) are moderately well drained and are associated with floodplains and foot slopes. The Mountview silt loam soil series (MoA, MoB, and MoC) are moderately well drained soils and are associated with upland areas. The Montview gravely silt series (MtC and MtD) are well drained soils and are associated with upland areas. The Purdy silt loam soils (PuA) are poorly drained and are associated with flats, depressions, and floodplain areas. The Waynesboro loam soil series (WaA) are well drained and are associated with upland areas. Soils annotated as "W" are water-related and soils indicated as "Unk" are classified as unknown.

3.3 Hydrology

Hydrologic features include surface waters (lakes, rivers, streams, and springs) and groundwater. Arnold AFB and the VTS-T lie within the Duck River and the Elk River basins. The drainage divide between these two watersheds extends southwest to northeast. The Duck River basin lies to the north of the divide and receives drainage from Hunt, Huckleberry, Wiley, Crumpton, and Bobo Creeks and the Hickerson Spring Branch. The Proposed Action is in the Bobo Creek subwatershed of the Duck River basin. There are no perennial streams in the area of the Proposed Action. An ephemeral stormwater ditch is located just to the west of the Proposed Action area. Streams near the area are shown on Figure 3-2.

The major regional groundwater resource is the Mississippi Carbonate (karst) aquifer (recently named Highland Rim aquifer). This aquifer consists of flat-lying carbonate rocks of Mississippian age and underlies the Highland Rim physiographic province. Well yields commonly range from 5 to 50 gallons per minute (gpm) (TDEC, 2002a).

Karst areas are characterized by sinkholes, springs, disappearing streams and caves, and rapid, highly directional groundwater flow in discrete channels. Since water can travel rapidly over long distances through conduits that lack natural filtering processes of soil and bacteria, karst systems are easily contaminated.

Floodplains have been defined at several locations on Arnold AFB. These areas are located near Sinking Pond and the inlet to Woods Reservoir at a considerable distance from the area of the Proposed Action.

The climate of the EHR varies by season, with generally mild winters and warm summers. Rainfall averages between 50 and 55 inches per year and is heaviest in late winter and early spring. The average yearly temperature is about 60 degrees Fahrenheit (Smith, 2004).

Precipitation is somewhat evenly distributed throughout the year, with slightly less in fall and slightly more in winter. October is typically the driest month (3.44 inches of precipitation) and March has the highest average precipitation (6.24 inches) (Arnold AFB, 2006a).

3.4 Water Quality

The VTS-T straddles the upper Elk River and Duck River basins. The Proposed Action would be constructed in an area that drains to Bobo Creek in the Duck River basin. Within the Duck River basin, there are two streams that do not fully meet their designated uses. Both the Duck River and the Little Duck River have elevated bacteria levels near the City of Manchester, attributed to failing sewage collection systems within the city and general urban runoff. There are no 303(d) listed segments in or near the project area (TDEC, 2002b; U.S. Environmental Protection Agency [USEPA], 2004).

3.5 Biological Resources

Biological resources include the native and introduced terrestrial plants and animals around Arnold AFB. The land areas at the Base are home to unusually diverse biological resources, including several sensitive species, habitats, and wetlands. Arnold AFB developed a system of ecological associations based on floral, faunal, and geophysical characteristics. These ecological associations are described in the Arnold AFB Integrated Ecosystem Management Plan (Call, 2003; Arnold AFB, 2006a). Therefore, only summary information is provided below.

3.5.1 Eastern Highland Rim Ecological Association

The EHR region is part of the Mississippian Plateau section of the Western Mesophytic Forest region, supporting a mixed oak-tulip-chestnut forest with accessory stands of beech and hemlock. Relic stands of mixed hardwood-white pine occur on some bluffs above streams. The Barrens of the EHR is linked to the karst topography and was once an area of tall grass prairies.

3.5.2 Wildlife Species

Wildlife species at Arnold AFB are those common to the central southeastern United States. A literature review was conducted and resulted in identification of 42 mammals (including 7 species of bats), 35 reptiles, 26 amphibians, and 83 species of fish found on Arnold AFB (CH2M HILL, 2004). In addition, AEDC Conservation staff have identified 226 species of birds (includes summer residents, migrants, and wintering species) on Arnold AFB (J.W. Lamb, unpublished data). Wildlife in the project area could include those species commonly associated with old field and young deciduous forest habitats.

3.5.3 Plant Species

The plant species found at Arnold AFB are those common to the EHR ecological association. Oak-hickory forest, cedar glades, and a mosaic of bluestem prairie and oak-hickory forest dominate this association. The predominant vegetation form is temperate lowland and subroutine broad-leaved cold-deciduous forest. Oaks (*Quarks* spp.) are the dominant canopy

species. Hickories (*Carya* spp.), including pignut (*C. glabra*), mockernut (*C. tomentosa*), shagbark (*C. ovata*), and bitternut (*C. cordiformis*), form a common but minor component (McNab and Avers, 1994).

Wetland vegetation ranges from grassland to closed-canopy forest. Several hundred acres of open, prairie-like Barrens occur primarily near the airfield and along powerline and railroad rights-of-way (ROWs). The Nature Conservancy and the Tennessee Division of Natural Heritage classified and mapped 33 plant associations on Arnold AFB. Seventeen of the 33 associations are considered "imperiled" community types.

Vegetation in and near the project area consists of old field and a narrow strip of hardwoods adjacent to Highway 55. The old field portion is dominated by blackberry (*Rubus* spp.), Chinese privet (*Ligustrum sinense*), flowering dogwood (*Cornus florida*), and yellow poplar (*Liriodendron tulipifera*). The hardwood strip is dominated by oaks (*Quercus* spp.) and yellow poplar.

3.5.4 Sensitive Species

Sensitive species include those with federal endangered or threatened status, species proposed for listing as federally threatened or endangered, and state endangered, threatened, and species of special concern status. An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is any species that is likely to become endangered in the future throughout all or a significant portion of its range due to loss of habitat, anthropogenic effects, or other causes.

Three federally listed species and one recently delisted species with specific management and monitoring requirements are known to occur or have the potential to occur on Arnold AFB (Table 3-1). USAF projects and any construction projects of tenant military units such as the TNARNG that could affect federally protected species and species proposed for federal listing are subject to the ESA. One element of the ESA, as identified in Section 4(a)(3)(A), is the designation of critical habitat. However, no areas on Arnold AFB are designated as critical habitat under the ESA. The species present on Arnold AFB that are protected under the ESA are discussed below. Locations of known sensitive species near the project area are shown in Figure 3-3.

TABLE 3-1
Protected Species Occurring on Arnold AFB
Construction and Operation of TNARNG Readiness Center and FMS
Final Environmental Assessment

Species	Federal Status
Gray bat (*Myotis grisescens*)	Endangered
Indiana bat (*M. sodalis*)	Endangered
Bald eagle (*Haliaeetus leucocephalus*)	Threatened
Eggert's sunflower (*Helianthus eggertii*)	Recently Delisted[a]

[a] Federal Register 70:259 pp 48482-90

3.5.4.1 Gray Bat

A gray bat colony resides on Arnold AFB at Woods Reservoir Dam and is listed as a Priority 2 maternity colony in the U.S. Fish and Wildlife Service (USFWS) Gray Bat Recovery Plan (USFWS, 1982). This is one of very few maternity colonies that have been identified as using manmade structures for a maternity roost (Lamb, 2003).

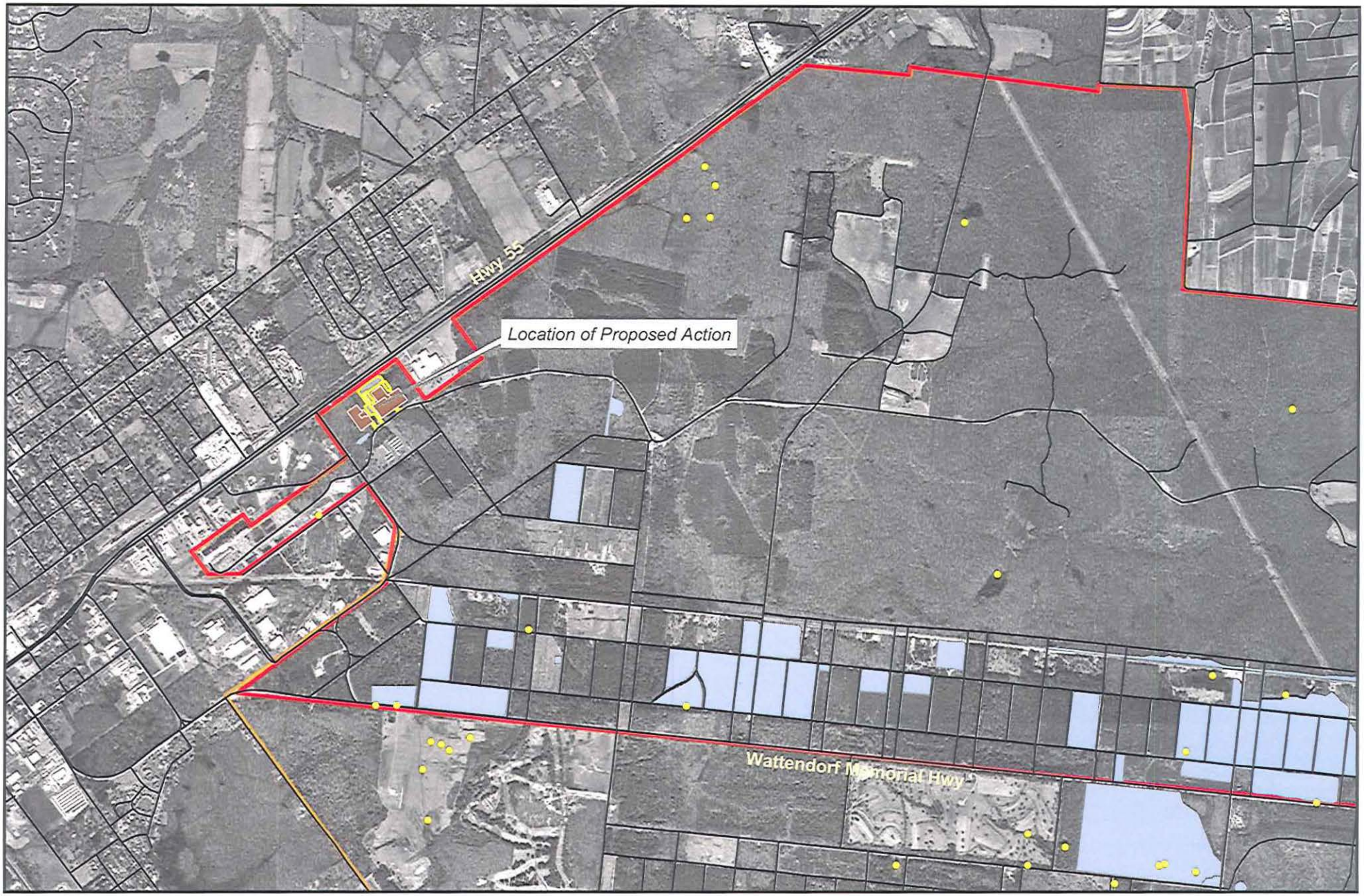


Figure 3-3
Sensitive Species Locations
Construction and Operation of TNARNG Readiness Center and Field Maintenance Shop
Final Environmental Assessment

Gray bats forage primarily on aquatic insects along forested riparian corridors and use other forested corridors as travel routes. The canopy provides protective cover from potential predators (Rommé and Reaves, 1999; Lamb, 2003). Gray bats have been captured during mist net surveys while foraging along Elk River Bottoms, Bradley Creek, Brumalow Creek, and Rowland Creek. Juvenile bats typically forage in wooded areas around the maternity cave (Rommé and Reaves, 1999; Lamb, 2003).

3.5.4.2 Indiana Bat

Indiana bats hibernate in caves and typically spend summers under the loose bark of trees in upland and bottomland forests and semi-wooded areas (Whitaker and Hamilton, 1998). Typically, Indiana bats make summer roost in hardwood trees with sloughing bark or cavities (Rommé and Reaves, 1999). Indiana bats forage on insects in a variety of habitats. This species typically forages in and around the tree canopy of riparian, floodplain, and upland forests. They also may forage along fencerows, crops, clearings, and farm ponds (Rommé and Reaves, 1999). AnaBat II™ surveys in 2003 identified the possible presence of Indiana bats along Bradley and Brumalow Creeks, but the species has never been captured in mist nets on the Base (Lamb, 2004).

3.5.4.3 Bald Eagle

There are an estimated 7,066 bald eagle nesting pairs and an unknown number of immature bald eagles in the conterminous U.S. A 2003 survey in Tennessee identified 50 breeding pairs (USFWS, 2006). Tennessee's bald eagle population is the highest in winter when birds migrate from the north. Most of the birds winter in western parts of the state, particularly at Reelfoot Lake and at Dale Hollow Reservoir. However, bald eagles may occur on almost any waterway in the state (Tennessee Wildlife Resources Agency [TWRA], 2004). In the Southeast, bald eagles build their nests in early September. To date, no bald eagles have been documented nesting at Woods Reservoir. Bald eagles have been observed wintering at Woods Reservoir every year since 1989. Typically, two adults (and in a few rare instances a juvenile) have been observed (Arnold AFB, 2006a).

3.5.4.4 Eggert's Sunflower

Arnold AFB is home to the largest known population of Eggert's sunflower. This species was, until recently, listed as Threatened by the USFWS under the ESA. Although this species was delisted on 18 August 2005 (Federal Register 70:159 pp 48482-90), the Eggert's sunflower recovery plan requires that monitoring be conducted for a 5-year period after delisting. Arnold AFB has signed a Cooperative Management Agreement (CMA) with the USFWS Cookeville Tennessee Field Office to continue management and monitoring of this species according to the protocols outlined in the Post-Delisting Monitoring (PDM) Plan for Eggert's sunflower (Federal Register 70:159 48577-79) for this 5-year period. Conservation staff members at Arnold AFB coordinate Eggert's sunflower management activities with the USFWS Cookeville, Tennessee Field Office. The agency's recommendations are incorporated when developing new management strategies and projects or addressing unforeseen operational impacts (Fitch, 2003).

Additionally, the CMA stipulates that Eggert's sunflower must be integrated with other elements of the ecosystem management program at Arnold AFB. Management for this

species will therefore become part of the ongoing Integrated Natural Resource Management Plan (INRMP) process.

The TDEC currently lists Eggert's sunflower as Threatened. AFI 32-7064, Section 7.1.2, State Listed Species, directs:

> "INRMPs will provide for the protection and conservation of state listed protected species when practicable. Although not required by the Endangered Species Act, provide similar conservation measures for species protected by state law when such protection is not in direct conflict with the military mission. When conflicts occur, consult with the appropriate state authority to determine if any conservation measures can be feasibly implemented to mitigate impacts."

Pursuant to this instruction, monitoring and protection of the sunflower will continue well beyond the required 5 years of the federal PDM Plan as part of the Base's INRMP.

There are no known occurrences of Eggert's sunflower or Eggert's management areas on the project site (Figure 3-3).

3.5.5 Wetland Habitats

Wetlands are inundated areas, or areas where water is present either at or near the surface of the soil for distinguishable periods throughout the year.

Wetland flats and depressions are the two primary wetland types on Arnold AFB. The USFWS completed a wetlands inventory and mapping project on Arnold AFB in 1998 and documented 1,894 acres of wetlands in 220 sites. Two-hundred wetlands on Arnold AFB totaling about 1,775 acres are classified as either flats or depressions (CH2M HILL, 2004; Arnold AFB, 2006a). Figure 3-2 shows wetlands located in the general vicinity of the project site. There are no wetlands located on or near the project site.

3.6 Safety and Occupational Health

3.6.1 TNARNG Safety

The TNARNG Safety and Occupational Health Program is responsible for safety and accident prevention in every operation and activity. This program is designed to create safe and healthful conditions within the work/training environment and to promote safe and healthful practices for personnel on and off duty (TNARNG, 2006). Safety training is provided to personnel as needed. Job-specific safety measures are addressed as standard operating procedures. Personal protective equipment such as hearing protection is provided when conditions warrant its use (SAIC, 2002).

3.6.2 Arnold AFB Safety

The Air Force Safety Center develops Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) standards. These standards are used to implement Occupational Safety and Health Administration (OSHA) rules directed by Department of Defense Instruction (DoDI) 6055.1 and AFI 91-302. The Center also develops other guidance to supplement the AFOSH standards and ensure their availability at the supervisor and worker level. The goal is to ensure that guidance is in compliance with OSHA and other

federal standards and incorporates "lessons learned" and appropriate parts of consensus standards to provide the supervisor and worker with the tools to prevent mishaps. Their function is to serve as a focal point for Environmental, Safety, and Occupational Health compliance, produce guidance, evaluate compliance, provide technical expertise in a wide range of subjects, coordinate with other agencies and private entities in and outside of the federal sector, and perform engineering reviews of procedures and facility design projects (USAF, 2004).

The Environmental, Safety, Health, and Quality (ESHQ) team is responsible for environmental and occupational safety at Arnold AFB. The ESHQ team ensures that workers are informed about potential hazards from chemicals and materials that may be encountered on the Base and ensures that work areas have proper lighting and ventilation for tasks to be performed. Additional components include ongoing program evaluations for noise, ergonomics, hazard communication, personal protective equipment (including respiratory protection), and emergency response.

3.7 Noise

"Noise," in the context of this analysis, refers to sounds generated by activities that could affect members of TNARNG, construction personnel, or wildlife. Noise levels typically are expressed in terms of decibels (dB), a measure of the sound pressure generated. The decibel scale is logarithmic rather than linear because humans perceive sound as the logarithm of the sound pressure rather than the actual sound pressure (Danish Wind Industry Association, 2004).

For determination of impacts to human receptors, noise measurements are weighted to increase the contribution of noises within the normal range of human hearing and decrease the contribution of noises outside the normal range of human hearing. For humans, this is considered an A-weighted scale (dB_a). When sound pressure doubles, the dB_a level increases by three. Psychologically, most humans perceive a doubling of sound as an increase of 10 dB_a (Danish Wind Industry Association, 2004). Sound pressure decreases with distance from the source. Typically, the amount of noise is halved as the distance from the source doubles (Danish Wind Industry Association, 2004).

Additionally, people tend to exhibit differing sensitivity to noises generated by time of day, with noise at night being more disturbing than daytime noise. Therefore, a Day-Night Average Noise Level (LDN) is used to determine whether noise would be perceived as an adverse impact. USEPA developed an index as a standard descriptor for noise impacts from a variety of sources. Where LDN values exceed 65 dB_a, residential development is not recommended.

Background noise levels within the VTS-T cantonment area depend on the duration and types of activities that occur in it or nearby (e.g., construction or maintenance, traffic, and training elsewhere in the VTS-T). Urban residential areas typically have a noise range from 58 dB_a to 72 dB_a (U.S. Army Corps of Engineers [USACE], 1998). Noise levels in suburban neighborhoods are typically around 50 dB_a to 60 dB_a (dB Engineering, 2004). A quiet office or rural home typically has a noise level of approximately 40 dB_a (League for the Hard of Hearing, 2004). While no site-specific data have been compiled, noise levels in the

cantonment area would be expected to range from 50 dB_a to 60 dB_a, with occasional upward spikes related to traffic or nearby training activities.

3.8 Air Quality

Arnold AFB is located in the Tennessee Valley-Cumberland Mountains Interstate Air Quality Region, which occupies portions of Alabama and Tennessee. Although activities at Arnold AFB result in various sources and volumes of air emissions, the regional air quality is good. Arnold AFB is located in an attainment zone for all pollutants (CH2M HILL, 2002). Air pollutants are emitted from mobile and stationary sources and general maintenance activities, government and privately owned vehicles, jet engine testing, aircraft operations, prescribed burning, wildfires, and mission test and training operations (USAF, 2000). The Tennessee Air Pollution Control Board of the TDEC issued AEDC a Title V Operating Permit in May 2002. There are currently 26 emission sources covered under this permit, and all are in compliance.

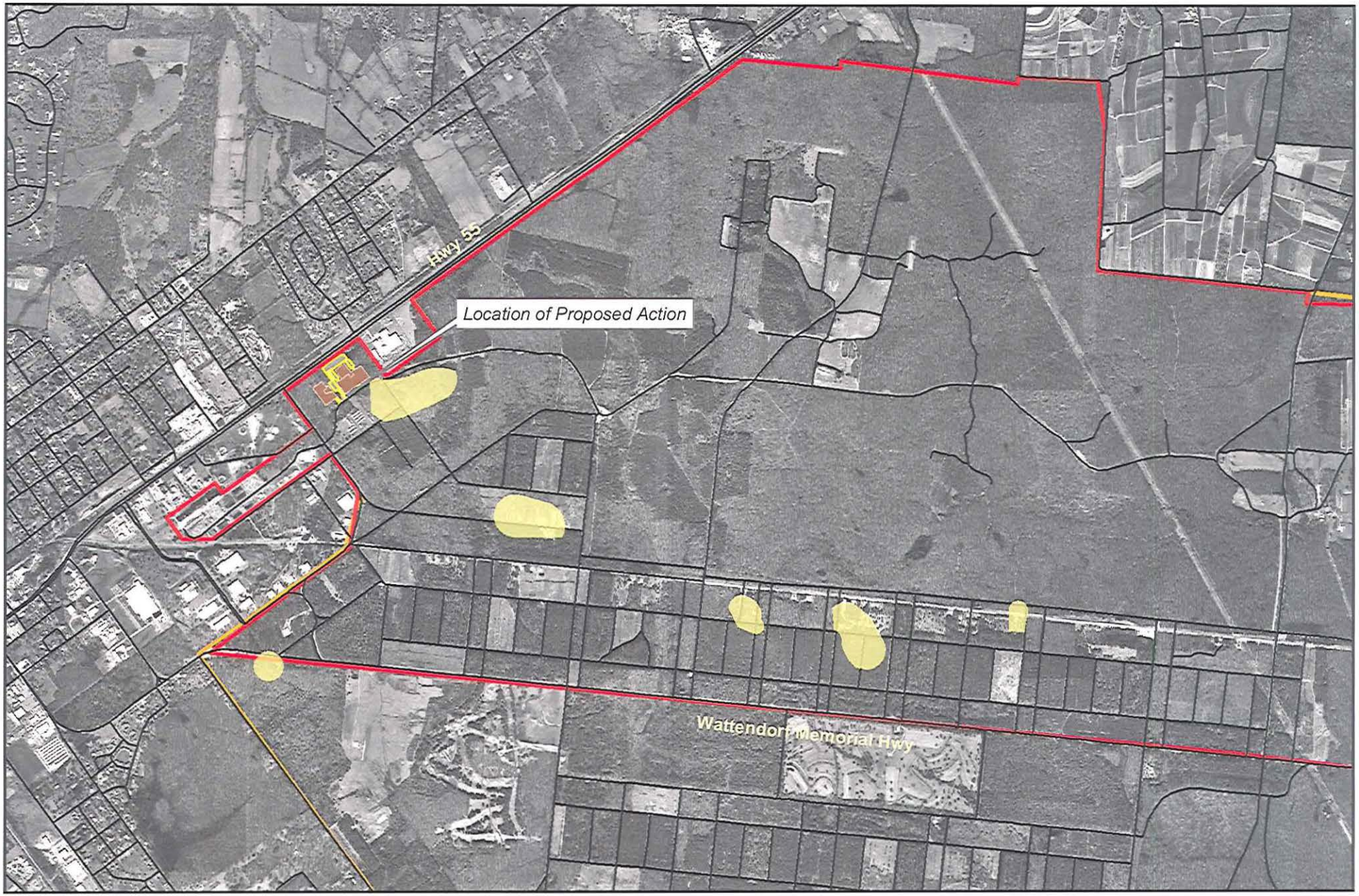
Since Arnold AFB is within an attainment area for all criteria pollutants, major new or modified stationary sources on and in the area of Arnold AFB are subject to Prevention of Significant Deterioration (PSD) review to ensure that these sources are constructed without causing significant deterioration of regional air quality. A major new source is defined as one that has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specific major source thresholds: 100 or 250 tons/year based on the source's industrial category.

3.9 IRP and Hazardous Materials

Arnold AFB has an active IRP designed to protect human health and the environment and to restore areas for future use. Arnold AFB executes the IRP in consultation with TDEC in accordance with CERCLA and RCRA. Twenty-six IRP sites have been identified on Arnold AFB, 11 of which have been closed after determinations of no further action required. IRP areas near proposed construction activities are shown on Figure 3-4.

A portion of the TNARNG license area, including the cantonment area, contains land that was historically Camp Forrest, a World War II-era Army base. Solid waste management unit (SWMU) 24 encompasses the Camp Forrest area, due to the presence of contaminants at locations within this area. Waste materials identified include ordnance, pharmacy waste, pesticides, fuel, oils, and asbestos. The former incinerator from Camp Forrest is located to the southeast and is considered a contaminated site.

An Environmental Baseline Survey (EBS) was recently completed for the TNARNG cantonment area by Arnold AFB (ATA, 2007). No contaminated sites were identified within the boundaries of the proposed project. IRP areas near the TNARNG cantonment area have been assessed as part of the IRP. Activities in those areas are monitored and land use controls are in place.



LEGEND

- IRP Area
- Arnold AFB Boundary
- Tullahoma Training Site Boundary
- Parking Area
- Building

N

0 2,500 5,000 Feet

Figure 3-4
IRP Locations
Construction and Operation of TNARNG Readiness Center and Field Maintenance Shop
Final Environmental Assessment

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Hazardous wastes stored at the TNARNG cantonment area and motor pool are listed according to characteristic waste type, hazard classification, and associated USEPA number. The major waste classifications are:

Ignitable Waste: Wastes classified as ignitable are generated from several sources including machine shops, laboratory operations, testing activities, and associated maintenance and support operations. Ignitable waste on hand can include, but is not limited to, a variety of organic solvents, aliphatic and aromatic hydrocarbons, ketones, ethers, and alcohols.

Toxic Waste: The toxic wastes include predominantly toxicity characteristic metals and some U-list organics (Rule 1200-1-11-.20). Although other listed materials (both U and P list) are occasionally generated in small lab-pack quantities, the table in the regulation lists major classes of toxics generally found in AEDC waste streams.

Corrosive Waste: Both acids (pH $\leq$2) and bases (pH $\geq$12.5) are generated periodically at AEDC. Both are classified under USEPA number D002 for the characteristic of corrosivity.

Reactive Waste: The reactive wastes are typically materials that have received this designation due to their potential to generate toxic vapors.

Hazardous materials at the current Armory and FMS are those associated with vehicle repair and maintenance, grounds maintenance, painting, and degreasing. The most commonly used materials include diesel fuel, oils and lubricants, hydraulic fluids, batteries, and solvents. Vehicle painting activities occur offsite. Batteries and replaced parts associated with repairs are hauled offsite for disposal (TNARNG, 2007).

Hazardous materials are typically stored in small quantities (5 gallons or less). Diesel fuel is stored in a 10,000-gallon aboveground storage tank adjacent to the motor pool area. A waiver is currently being processed to allow TNARNG to operate outside of the parameters of AFIs and Arnold AFB's HAZMAT Pharmacy.

Sixty-one vehicles and trailers would be assigned to the new Readiness Center and would be maintained at the new FMS. They include:

- 20 Humvees
- 15 One-quarter to 1-ton trailers
- 2 Hemitt fuel tankers
- 24 Hemitt tractor-trailer combined units

In addition, the FMS would provide maintenance support for other TNARNG units not located at the VTS-T. Units that may use the FMS include those associated with the 1-115th Field Artillery Battalion and the 190th and 212th Engineer Companies. Equipment assigned to those units includes 270 wheeled vehicles, 5 tracked vehicles, 1 fuel vehicle, 24 HET system vehicles, and 18 other pieces of equipment assigned to other units that are not located at the VTS-T. Waste oils from vehicle maintenance and other activities are collected and stored in the motor pool area until shipped out for disposal. Approximately 330 gallons of waste oils are generated per year (SAIC, 2002), although volumes have varied in recent years due to overseas deployments. Disposal is coordinated through TNARNG HQ. Currently, waste oils are sold to a used oil vendor (TNARNG, 2007).

3.10 Cultural Resources

Section 106 of the NHPA requires that federal agencies analyze the impacts of federal activities on historic properties. Areas potentially impacted by mission activities are surveyed as part of the USAF Cultural Resources Management Program. Arnold AFB also follows the principles of the DoD American Indian and Alaska Native Policy for interaction and coordination with interested tribal governments.

Surveys conducted on Arnold AFB have identified 107 prehistoric and historic sites dating back to Early Archaic times (Hajic et al., 2002). These include 40 prehistoric sites, 55 historic sites, and 12 mixed prehistoric and historic sites. Of these 107 sites, 6 have been deemed eligible for listing on the National Register of Historic Places (NRHP) and 40 are considered potentially eligible (Arnold AFB, 2006b). The prehistoric sites include open habitations, isolated projectile points/knives, and a midden mound. The historic sites include the remains of houses, outbuildings, wells, cemeteries, and trash dumps (Call, 2003).

A Phase 1 archaeological survey was conducted in 2006 on 100 acres of the VTS-T. The survey area encompassed the 26-acre TNARNG license parcel that contains the cantonment area and the site of the Proposed Action. No significant resources were identified within the 6.2-acre area of potential effects (APE) at the site. A potentially eligible 8.3-acre site was identified south of the APE within the 26-acre license parcel. That site contains foundation remains, road beds, and sewer lines that may be associated with African American troops assigned to Camp Forrest (TRC, 2006). The nearest intact historical structures are more than 0.5 mile from the APE. None of those structures have been recommended as eligible for the NRHP. Correspondence with the Tennessee State Historic Preservation Office (SHPO) is included in Appendix C.

The existing TNARNG Armory is more than 50 years old, but has not been evaluated for eligibility for inclusion on the NRHP. No changes are proposed to the structure. It is located outside the APE for construction associated with the Proposed Action and would not be affected.

3.11 Traffic Flow and Utility Infrastructure

3.11.1 Roads

The entrance to the TNARNG cantonment area is located off Industrial Road near its intersection with Highway 55. These roads serve industrial and commercial businesses in the area and are sufficient to accommodate traffic flow into and out of the cantonment area.

3.11.2 Utilities

Utility infrastructure at the VTS-T includes the electric transmission lines and associated ROWs, as well as water and sewer systems.

Electrical, water, and sewer services are provided to the VTS-T cantonment area by the City of Tullahoma Utilities Board (TUB). Electrical power is purchased by TUB from the Tennessee Valley Authority. TUB purchases water from the Duck River Utility Commission, whose water source is Normandy Lake. Sewage is treated in a wastewater treatment plant

(WWTP) operated by TUB. That plant has a 5-million-gallon-per-day (mgd) capacity (TUB, 2006).

Solid wastes are collected and disposed of by the City of Tullahoma Department of Public Works. Wastes are transported to the Quail Hollow Landfill (City of Tullahoma, 2006).

Natural gas is supplied by the Elk River Public Utilities District (Elk River Public Utilities District, 2006).

3.12 Socioeconomic Factors

The socioeconomic factors considered in this EA are employment and recreation.

3.12.1 Employment

The VTS-T is supported by 8 full-time employees: (1 Active Guard Reserve [AGR], 2 technicians, 4 state employees, and 1 contractor) and 14 M-Day/traditional Guardsmen (1 weekend a month and 15 days/year).

3.12.2 Recreation

The current VTS-T is used for hiking, biking, and hunting. Hunting seasons and locations are managed by TWRA. Hiking and biking are restricted to perimeter roads around the cantonment area.

4.0 Environmental Consequences

4.1 Land Use

4.1.1 Proposed Action

Under the Proposed Action, construction and paving would convert approximately 6.2 acres of old field habitat and deciduous forest habitat to buildings, parking, and maintained landscaping. The Proposed Action would have a minimal impact on designated land uses on Arnold AFB. While the land cover would be altered, the intended use of the land within the cantonment area would not change.

During construction, heavy equipment would be used to move and compact soils in construction areas. Standard construction BMPs would limit soil erosion and runoff to adjacent land. The improvements to TNARNG operations would be considered beneficial and would be compatible with adjacent land uses.

4.1.2 No-Action Alternative

No impacts to existing land uses would result from the No-Action Alternative. If the Proposed Action were not approved, the present facility's age and lack of adequate space would reduce efficiency, training, and mobilization readiness.

4.2 Geomorphology

4.2.1 Proposed Action

Disturbance to soils would occur from work on roadbeds, parking lots, and construction sites. During construction, heavy equipment would be used to move and compact soils in construction and paving areas. Construction of new structures and paved areas would require clearing and grading. Disturbed area would be kept to the minimum necessary to complete the work and would be confined to the final site boundaries. Sedimentation and erosion controls would be implemented during construction to minimize erosion of surrounding soils due to soil/ground disturbance. Stormwater runoff resulting from increased impervious surface area also could contribute to limited soil erosion. Site-specific measures would minimize transport of soils. The contract for this work would require that the contractor implement measures consistent with the *Tennessee Erosion & Sediment Control Handbook* (TDEC, 2002c) and comply with the Tennessee Water Quality Control Act of 1977.

During construction, a grading plan would be prepared to identify how the site would be graded, how drainage patterns would be directed, and how runoff velocities would affect receiving waters. The grading plan also would include information regarding when earthwork would start and stop, establish the degree and length of finished slopes, and specify where and how excess material would be disposed of and where borrow materials would be obtained if needed. Berms, diversions, and other stormwater practices that require

excavation and filling also would be incorporated into the grading plan. The grading plan would be designed to address erosion and sediment control and stormwater management goals. Grading crews will be supervised by the project manager and construction manager to ensure that the plan is implemented as intended. However, Arnold AFB Conservation staff may periodically visit the site to observe compliance with BMPs.

Soil disturbance could result in increased erosion potential from loss of ground cover and exposure of bare soils to precipitation and runoff. Potential temporary impacts to water quality from these factors are discussed in Section 4.4. Potential impacts would be controlled or avoided through the use of appropriate BMPs and soil stabilization/revegetation techniques following construction. Appropriate BMPs would be selected based on site-specific conditions and could include, but would not be limited to, sediment barriers (silt fence or straw bales), temporary detention basins, grade stabilization with seed and mulch, and geotextile slope stabilization. Because rainfall is distributed fairly evenly throughout the year, as discussed above, no particular time of year would be likely to reduce the erosion potential. Therefore, it is unlikely that timing of construction could be used to offset potential erosion impacts.

The Proposed Action would have minimal impact on geomorphology. The project site is on lands previously cleared and allowed to re-vegetate. The site is on level to gently sloping land. Any changes to topography would be minor.

4.2.2 No-Action Alternative

No soil disturbance or impacts on geomorphology would result from the No-Action Alternative.

4.3 Hydrology

Impacts on hydrology could result from land clearing, loss of vegetation, and associated accelerated runoff from impervious surfaces following precipitation events.

4.3.1 Proposed Action

The addition of impermeable surfaces through the construction of new buildings and lots would result in an increase in stormwater runoff. Potential impacts would include impacts to the quality and utility of water resources resulting from an increase in stormwater runoff.

The Proposed Action would result in the conversion of approximately 6.2 acres of pervious surfaces to impervious surfaces.

Construction activities would result in soil disturbance and loss of vegetative cover. These activities could result in modified surface water runoff patterns from the site. Increased runoff from an unvegetated site could result in hydrologic impacts, such as channelization and erosion. Tennessee requires that NOIs for National Pollutant Discharge Elimination System (NPDES) Stormwater Construction Permits be filed with TDEC for all projects disturbing 1 or more acres. BMPs and onsite stormwater controls included as part of that permit would reduce or eliminate runoff from the site to avoid hydrologic impacts to nearby waters.

There would be an increase in runoff following implementation of the Proposed Action, but through the use of construction and post-construction BMPs, impacts resulting from the increase would be minimal.

Construction would occur outside of designated floodplains and would have no impact on floodplain elevations.

4.3.2 No-Action Alternative

Under the No-Action Alternative, no change from existing conditions would occur. Therefore, no impact on hydrology would result from the No-Action Alternative.

4.4 Water Quality

4.4.1 Proposed Action

Impacts on water quality could result from construction activities that result in soil disturbance and exposed soil, presenting the possibility for the transport of sediment and soil-bound pollutants into streams. Transport could occur downslope or into immediately adjacent waters. The potential water quality impacts would be temporary and limited to the construction footprints.

Approximately 55 acres of the VTS-T contains buildings or large areas of impervious surface (e.g., parking lots). The remainder of the VTS-T, aside from roads, is undeveloped. These areas have vegetation that intercepts much of a rainfall event and soils that allow infiltration of substantial amounts of rainfall. Use of appropriate construction stormwater BMPs, as noted in Section 4.3.1, would contain or treat stormwater to prevent offsite impacts to water quality.

4.4.2 No-Action Alternative

Under the No-Action Alternative, no change from existing conditions would occur. Therefore, no impact on water quality would result from the No-Action Alternative.

4.5 Biological Resources

4.5.1 Proposed Action

Biological resources (plants and animals) and related habitats (foraging and nesting areas) could be directly affected by the Proposed Action due to construction and increased use of areas. The Proposed Action would take place on lands previously impacted, but currently occupied by young deciduous forest and old field habitats. Implementation of the Proposed Action would result in the removal of existing vegetation from approximately 6.2 acres of land. Impacts considered include those that could directly and physically affect biological organisms and those with the potential to affect the quality and utility of the habitats used by biological organisms.

4.5.1.1 Impacts to Non-sensitive Flora and Fauna

Impacts to common flora and fauna would result from construction activities, from displacement as animals avoid areas with ongoing construction activities, and from indirect impacts associated with loss of habitat.

During land clearing and grading, all plants would be eliminated from the area and limited incidental animal injury or mortality could occur. No losses would seriously affect regional animal population levels. Impacts would be considered minor. Care would be taken to minimize damage to hardwood trees located in the vicinity of the construction activities. Most animals (such as birds, deer, rodents, opossums, and reptiles) would avoid the area during construction.

Animals displaced from the construction areas would relocate to similar habitats nearby. Animals displaced from the adjacent habitats would be expected to return following the disturbance. Therefore, displacement of animals would be temporary and minor.

Loss of forested and old field habitat types (approximately 6.2 acres) would be a permanent loss but would represent less than 0.1 percent of such habitat on-Base.

4.5.1.2 Impacts to Sensitive Species

No sensitive species are known to occur or use the site of the Proposed Action and no impacts to sensitive species would be expected from its implementation. There are populations of Eggert's sunflower to the south of the cantonment area, but they would not be disturbed by construction activities.

4.5.1.3 Impacts to Wetlands

No wetlands are located within any areas where construction is proposed. Therefore, no impacts to wetland habitats would result.

4.5.2 No-Action Alternative

No impacts to biological resources would result from the No-Action Alternative.

4.6 Safety and Occupational Health

4.6.1 Proposed Action

Workers would have the potential for accidents as a result of construction activities. Construction workers would use appropriate protection and would follow OSHA standards and procedures. The construction contractor would be responsible for ensuring that all contractor employees (and subcontractors) comply with all applicable OSHA standards and procedures. Therefore, the safety and occupational health of construction workers and other persons in the construction areas would not be impacted. During road paving activities, the contractors would be responsible for controlling traffic near the construction activities. These steps would minimize the likelihood of vehicular accidents occurring at the site. Impacts would be considered minor.

4.6.2 No-Action Alternative

No impacts to safety and occupational health would result from the No-Action Alternative.

4.7 Noise

4.7.1 Proposed Action

Heavy equipment such as bulldozers, graders, backhoes, excavators, dump trucks, and cement trucks would generate noise that could affect the onsite workers. Construction equipment typically emits noise in the 86- to 94-dB range. Construction workers would use hearing protection and would follow OSHA standards and procedures.

Since the construction would occur near existing TNARNG buildings and a Coca-Cola bottling plant, personnel could be affected by sound emanating from the construction sites. Construction noise levels would be confined to daytime hours, but would be above background levels. Direct exposure would be temporary, limited to times when personnel travel between vehicles and buildings or among buildings. Any impacts would be temporary and minor.

Post-construction noise would be associated with operation and maintenance of 61 vehicles and trailers. Noise levels for that equipment are less than 85 dB for crews at idle and low speeds (U.S. Army, 2007).

4.7.2 No-Action Alternative

No noise impacts would result from the No-Action Alternative.

4.8 Air Quality

4.8.1 Proposed Action

During construction, air quality impacts could occur from dust carried offsite and combustive emissions from construction equipment. The primary risks from blowing dust particles relate to human health and human nuisance values. Fugitive dust can contribute to respiratory health problems and create an inhospitable working environment. Deposition on surfaces can be a nuisance to those living or working downwind.

Measures that would be implemented to reduce or eliminate fugitive dust emissions would include the following:

- *Sprinkling/Irrigation.* Sprinkling the ground surface with water until it is moist is an effective dust control method for haul roads and other traffic routes (Smolen et al., 1988). This practice can be applied to almost any site. When suppression methods involving water are used, care would be exercised to minimize over-watering that could cause the transport of mud onto adjoining roadways, ultimately increasing the dust problem.
- *Vegetative Cover.* In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. Vegetation provides coverage to surface soils and

decreases wind velocity at the ground surface, thus reducing the potential for dust to become airborne.

- *Mulch.* Mulching can be a quick and effective means of dust control for recently disturbed areas.

During operation, negligible amounts of vehicle exhaust would be generated through operation of equipment associated with the FMS.

4.8.2 No-Action Alternative

No air quality impacts would result from the No-Action Alternative.

4.9 IRP and Hazardous Materials

4.9.1 Proposed Action

The proposed construction areas not overlie any known IRP sites. No impacts from contaminants would be expected during construction.

Small amounts of waste oils and lubricants would continue to be generated by the new FMS. Those wastes would be recycled or undergo proper disposal. The spill prevention plans and materials handling procedures adopted by TNARNG for FMS operations would prevent impacts from hazardous materials.

4.9.2 No-Action Alternative

No IRP or hazardous materials impacts would result from the No-Action Alternative.

4.10 Cultural Resources

4.10.1 Proposed Action

Compliance activities under Section 106 of the NHPA are initiated with this EA's distribution to the SHPO and other interested parties. Arnold AFB has a consultation process and memorandum of understanding (MOU) to include interested tribal governments in actions affecting the Base. No cultural resources were identified at the site of the Proposed Action and no impacts would occur. Should any significant or potentially significant historic or archeological artifacts be discovered during construction, all activities would halt in the immediate area and Arnold AFB would follow the procedures in its Integrated Cultural Resource Management Plan (INCRMP) to consult with the SHPO and other interested parties to implement appropriate follow-on actions. The existing armory would not be changed under the Proposed Action and no impacts would occur to that structure. Therefore, no significant impacts would occur to cultural resources from implementation of the Proposed Action.

4.10.2 No-Action Alternative

Under the No-Action Alternative, no building or paving would occur. Therefore, no impacts on cultural resources would result from the No-Action Alternative.

4.11 Traffic Flow and Utility Infrastructure

4.11.1 Proposed Action

Construction would cause temporary impacts to roads and utilities. It would be necessary to interrupt utilities temporarily near the proposed construction sites. Movement of heavy equipment on and off the sites would cause brief disruptions on Highway 55 and Industrial Road.

4.11.2 No-Action Alternative

The No-Action Alternative would result in no impacts to traffic or utility infrastructure.

4.12 Socioeconomic Factors

4.12.1 Proposed Action

The Proposed Action would have a minor positive impact on socioeconomic factors. There would be temporary employment from construction activities.

4.12.2 No-Action Alternative

No socioeconomic impacts would result from the No-Action Alternative.

4.13 Cumulative Impacts

Environmental impacts may not result from the direct effects of any particular action, but from the combination of effects of multiple, independent actions over time. As defined in 40 CFR 1508.7, a cumulative impact is the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." Principles of cumulative impacts analysis are described in the CEQ guide *Considering Cumulative Effects under the National Environmental Policy Act* (CEQ, 1997).

For this analysis, cumulative impacts could result from incremental loss of habitat value from conversion to other uses or from incremental impacts to hydrology or water quality resulting from increased impervious surfaces within the region.

4.13.1 Proposed Action

No cumulative impacts are anticipated with the exception of minor cumulative impacts to water quality, hydrology, and biological resources. However, the cumulative increase in impervious area on Arnold AFB would not significantly impact hydrology and water quality beyond the Base. As discussed above, the use of appropriate construction stormwater BMPs would contain or treat stormwater to prevent offsite impacts to water quality.

No significant biological resources have been identified on the site of the Proposed Action. No significant cumulative impacts to wetlands, floodplains, or threatened and endangered species are anticipated.

Arnold AFB has 28,547 acres total of forested land. Of that, 23,053 acres are hardwood forested land. Approximately 6.2 acres of hardwood forest would be lost under the Proposed Action.

Recent hardwood forest losses include the following:

- 6 acres lost (Building, Construction, and Paving EA)
- 49 acres lost (Laser Tank Firing Range EA)
- 75 acres lost (Timber Sale EA)

The total loss from recent activities (130 acres) represents approximately 0.6% of the hardwood forested habitat on the Base.

Recent pine forest losses include the following:

- 395 acres of pine forest harvested for sale
- 194 acres of primarily pine forest converted in association with tree-clearing along Wattendorf Highway (Forest Land Conversion EA).

The total amount of pine forest lost (589 acres) represents 11% of the total pine forest land on the Base.

The loss of 6.2 acres associated with the Proposed Action, combined with the losses associated with the timber sale, the building and construction, and the Laser Tank Firing projects, represent a total of 2.5% of the forested land on Arnold AFB. However, the cumulative impact on hardwood forest is 0.6%

The loss of 6.2 acres associated with the Proposed Action would not contribute significantly to the cumulative loss of forest land on the Base, either individually or when combined with other potentially foreseeable land clearing in the region.

4.13.2 No-Action Alternative

There would be no change from existing conditions and no potential for cumulative impacts resulting from the No-Action Alternative.

5.0 Plan, Permit, and Management Requirements

There is a regulatory requirement to obtain a stormwater permit if 1 acre (43,560 ft^2) or more of land is disturbed during construction (Jennifer Innes, TDEC, personal communication, July 2004). The proposed project area is more than 6 acres in size and would require a permit.

6.0 List of Preparers

Russell Short/Senior Project Manager/29 years of experience/Master of Science

Rich Reaves/Environmental Scientist/13 years of experience/Ph. D.

Rob Price/Environmental Scientist/11 years of experience/Master of Science; Master of Public Affairs

Kira Zender/Senior Planner/14 years of experience/Master of Urban and Regional Planning

Shruti Shah/Environmental Scientist/9 years of experience/Bachelor of Arts

Collin Horace/GIS Analyst/6 years of experience/Bachelor of Science

David Dunagan/Technical Editor/28 years of experience/Master of Arts

7.0 List of Contacts

TNARNG

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ATA

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Mark Moran, Aerospace Testing Alliance Natural Resources

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Appendix A

Form 1390 —
FY 2007 Guard and Reserve Military Construction

and

FY2012 Guard and Reserve Military Construction

FY 2007

1. COMPONENT	FY 2007 GUARD AND RESERVE MILITARY CONSTRUCTION	2. DATE
NGB		15-Mar-06
3. INSTALLATION AND LOCATION		4. AREA CONSTR COST INDEX
TULLAHOMA, TN	INSNO= 47D85	0.89

5. FREQUENCY AND TYPE OF UTILIZATION

NORMAL ADMINISTRATION FIVE DAYS PER WEEK WITH A TWO-DAY TRAINING ASSEMBLY TWO OR THREE TIMES PER MONTH

6. OTHER ACTIVE/GUARD/RESERVE INSTALLATIONS WITHIN 15 MILES RADIUS

Component	Location	Distance	Type Facility	Square Footage		Year con'st
ARNG	WINCHESTER	15 MILES	READINESS	25,582	SF	1991
ARNG	SHELBYVILLE	17 MILES	READINESS	17,795	SF	1980

7. PROJECTS REQUESTED IN THIS PROGRAM:

CATEGORY CODE	PROJECT TITLE	SCOPE	COST ($000)	DESIGN STATUS START	DESIGN STATUS CMPL
17180	READINESS CENTER	4,726 SM *50,876 SF*	8,851	Mar-06	Jul-07

8. STATE GUARD/RESERVE FORCES FACILITIES BOARD RECOMMENDATION

FACILITIES IDENTIFIED IN ITEM #6 HAVE BEEN EXAMINED BY THE STATE RESERVE FORCES FACILITIES BOARD FOR POSSIBLE JOINT USE/EXPANSION. THE BOARD RECOMMENDATIONS ARE UNILATERAL CONSTRUCTION.

18/01/06
(Date)

9. LAND ACQUISITION REQUIRED

NONE REQUIRED

25
(Number of acres)

10. PROJECTS PLANNED IN NEXT FOUR YEARS

CATEGORY CODE	PROJECT TITLE	SCOPE	COST $(000)
21407	FIELD MAINTENANCE SHOP	38,879 SF	7.2

SRM BACKLOG ($000): $225.00

A SITE SURVEY HAS BEEN COMPLETED AND THE SITE IS SUITABLE FOR CONSTRUCTION OF THE PROPOSED PROJECT AT THE ESTIMATED COST INDICATED.

1. COMPONENT	FY 2007 GUARD AND RESERVE MILITARY CONSTRUCTION	2. DATE
NGB		15-Mar-06

3. INSTALLATION AND LOCATION

TULLAHOMA, TN INSNO= 47D85

11. PERSONNEL STRENGTH AS OF 28/12/05

	PERMANENT				GUARD/RESERVE		
	TOTAL	OFFICER	ENLISTED	CIVILIAN	TOTAL	OFFICER	ENLISTED
AUTHORIZED	11	1	10	0	161	24	137
ACTUAL	11	1	10	0	153	18	135

Percentage =95.0%

12. RESERVE UNIT DATE

UNIT DESIGNATION				STRENGTH AUTHORIZED	STRENGTH ACTUAL
30TH TROOP COMMAND			ARNG	45	39
UIC: W77AAA	TSPN:		MTOE/TDA: NGW77AAA		
1175TH TRANSPORTATION COMPANY (-)			ARNG	116	114
UIC: WPC9AA	TSPN: 35675		MTOE/TDA: 55739LNG06		
			SUB-TOTAL	161	153

13. MAJOR EQUIPMENT AND AIRCRAFT

TYPE	AUTHORIZED ON MTOE	AUTHORIZED PERMANENT PARKING
WHEELED	20	20
TRAILERS	15	15
TRACKED	0	0
EQUIPMENT > 30 FT	0	0
FUEL & M977 HEMTT	2	2
HEMTT PLS/HET	24	24

14. OUTSTANDING POLLUTION AND SAFETY DEFICIENCIES:

	($000)
A. AIR POLLUTION	NONE
B. WATER POLLUTION	NONE
C. OCCUPATIONAL SAFETY AND HEALTH	NONE

1. COMPONENT	FY 2007 MILITARY CONSTRUCTION	2. DATE	REPORT CONTROL SYMBOL
NGB	PROJECT DATA	15-Mar-06	

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
TULLAHOMA, TN INSNO= 47D85	READINESS CENTER

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST *($000)*
0505896A	17180	470043A	$9,000

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST *($000)*
PRIMARY FACILITY				6,900
READINESS CENTER	SM	4,689	120	(6,057)
	SF	*50,476*		
FLAMMABLE MATERIALS FACILITY	SM	9	40	(4)
	SF	*100*		
CONTROLLED WASTE FACILITY	SM	28	40	(12)
	SF	*300*		
UNHEAT METAL STOR BLDG	SM			(0)
	SF			
ANTI-TERRIORISM/FORCE PROTECTION	LS		100,000	(100)
EMCS	LS		150,000	(150)
BUILDING INFORMATION SYSTEMS	LS		10,000	(10)
			0	
EMERG POW GEN PAD AND HOOK-UP	LS		45,000	(45)
ORGANIZATIONAL PARKING	SY		60	(522)
SUPPORTING FACILITIES				1,223
ELECTRIC SERVICE	LS		20,000	(20)
WATER, SEWER, GAS	LS		50,000	(50)
STEAM AND/OR CHILLED WATER DISTTRIBUTION	LS		0	(0)
PAVING, WALKS, CURBS AND GUTTERS	LS		828,900	(829)
STORM DRAINAGE	LS		10,000	(10)
SITE IMP (100) DEMO (0)	LS		100,000	(100)
INFORMATION SYSTEMS	LS		5,000	(5)
ANTITERRIORISM/FORCE PROTECTION	LS		50,000	(50)
OTHER	LS		159,400	(159)
TOTAL CONSTRUCTION COST				8,124
CONTIGENCY PERCENT (5.00%)				409
SUPERVISION, INSPECTION & OVERHEAD				258
COMMISSIONING CONTRACT (1% OF PRIMARY FACILITY)				61
TOTAL PROJECT COST				8,851
TOTAL FEDERAL CONTRIBUTION				8,851
TOTAL FEDERAL CONTRIBUTION ROUNDED				9,000
INSTALLED EQT-OTHER APPROPRIATIONS				550

10. DESCRIPTION OF PROPOSED CONSTRUCTION

A specially designed Readiness Center of permanent masonry type construction, with standing seam roof, concrete floors and mechanical and electrical equipment with emergency power generator backup. Supporting facilities will include weapons cleaning, maintenance, issue, turn-in sheds, military vehicle parking and access roads and POV parking, security fencing and dark motor pool lighting, vehicle wash system and pump house, fuel storage and dispensing systems, loading ramp, flammable materials storage building, controlled waste handling facility, and sidewalks. Extension of gas, electric, sewer, water and communication utilities to the building site will be necessary. Actual foundation design will be determined during design. Physical security measures will be incorporated into design including maximum feasible standoff distance from roads, parking areas, and vehicle unloading areas, berms, heavy landscaping, and bollards to prevent access when standoff distance cannot be maintained. Cost effective energy conserving features will be incorporated into design and standard HVAC/MEP systems commissioning will be included.

AIR CONDITIONING- 112 TON

1. COMPONENT	FY 2007 MILITARY CONSTRUCTION PROJECT DATA	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Mar-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
TULLAHOMA, TN	INSNO= 47D85	READINESS CENTER

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	17180	470043A	8,851

11. REQUIREMENT:	4,726	SM	50,876	SF	ADEQUATE:	0	SM	0	SF	SUBSTANDARD:	2,972	SM	31,990	SF

PROJECT:
Construct a new 4,726 square meter (50,876 square feet) Readiness Center and supporting facilities and infrastructure at Tullahoma, Tennessee. The location is on a 25 acre, federally licensed site on U.S. Air Force's Arnold Engineering Development Center (AEDC).

REQUIREMENT:
The facility is required to adequately provide the units housed in this facility with administrative, supply, classroom, locker, latrine, and kitchen space.

CURRENT SITUATION:
The current facility is in poor condition, does not meet current building codes or criteria, and is 1/3 the size authorized to support the facility mission. The current facility was constructed in 1954 and has not been renovated during its life. The facility has been identified to have significant safety hazards and does not meet ADA, fire, electrical, and other code requirements. The unit is currently having to store their vehicles at the training site since their Military Vehicle Storage Area is inadequate to house the unit's HET trucks.

IMPACT IF NOT PROVIDED:
If the project is not approved, the present facility's lack of adequate space will reduce efficiency, training and mobilization readiness standards will continue to decline. The building has become severely damaged due to the age of the building. Lack of adequate military vehicle parking decreases efficiency.

ADDITIONAL:
Alternative methods of meeting thie requirement have been explored during project development. This project is the only feasible option to meet this requirement. Sustainable principles will be integrated into the design, development, and construction of the project in accordance with Executive Order 13123 and other applicable laws and Executive Orders.

JOINT USE CERTIFICATION:
The Deputy Assistant Secretary of the Army (Installations and Housing) certifies that this project has been considered for joint use potential. This facility will be available for use by other components.

ANTITERRORISM/FORCE PROTECTION:
This project has been coordinated with the installation physical security plan. All required physical security and anti-terrorism/force protection measures are included.

GUS L. HARGETT, JR.
MAJOR GENERAL
THE ADJUTANT GENERAL

ATFP POC: Pat Tuggle, COL (615) 313-3076

CFMO: Willard G. Finch, COL (615) 313-2610

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12. SUPPLEMENTAL DATE

a. ESTIMATED DESIGN DATA:

(1) STATUS:

(a) DATE DESIGN STARTED	Mar-06
(b) PERCENT COMPLETE AS OF JANUARY 2006	0%
(c) DATE DESIGN EXPECTED TO BE 35% COMPLETE	Sep-06
(d) DATE DESIGN EXPECTED TO BE 100% COMPLETE	Jul-07
(e) PARAMETRIC COSTS USED TO DEVELOP COSTS	NO
(f) TYPE OF DESIGN CONTRACT	Design-Build

(g) AN ENERGY STUDY AND LIFE CYCLE COST ANALYSIS WILL BE DOCUMENTED DURING FINAL DESIGN.

(2) BASIS:

(a) STANDARD OR DEFINITIVE DESIGN YES ___ NO X

(b) WHERE DESIGN WAS MOST RECENTLY USED NA

(3) TOTAL DESIGN COST (c)=(a)+(b) or (d)+(e)

(a) PRODUCTION OF PLANS AND SPECIFICATIONS	(487.0)
(b) ALL OTHER DESIGN COSTS	(244.0)
(c) TOTAL	(731.0)
(d) CONTRACT	(0.0)
(e) IN-HOUSE	(3.0)

(4) CONSTRUCTION CONTRACT AWARD DATE	Sep-07
(5) CONSTRUCTION START	Oct-07
(6) CONSTRUCTION COMPLETION DATE	Sep-08

b. EQUIPMENT ASSOCIATED WITH THIS PROJECT WHICH WILL BE PROVIDED FROM OTHER APPROPRIATIONS

EQUIPMENT NOMENCLATURE	PROCURING APPROPRIATION	FISCAL YEAR APPROPRIATION OR REQUESTED	COST (000)
KITCHEN EQUIPMENT	OMARNG	2008	50
INFORMATION SYSTEMS	OMARNG	2008	100
FURNITURE	OMARNG	2008	300
SECURITY SYSTEMS	OPA	2008	50
PHYSICAL FITNESS	OMARNG	2008	50
		TOTAL	550

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ANTITERRORISM/FORCE PROTECTION: This project has been coordinated with the installations AT/FP plan. Risk and threat analysis have been performed in accordance with DA Pam 190/51 and TM 5-853-1, respectively. Only protective measures required by regulation and ONLY the minimum standards required by the "Unified Facilities Criteria 4-010-01, DoD Minimum Antiterrorism Standards for Buildings" dated 8 Oct 03 are needed. They are included in the cost estimate and description of construction.

ANTITERRORISM/FORCE PROTECTION: SUMMARY OF RISK AND THREAT ANALYSIS

1. Method used to perform the risk & threat analysis:

2. Members of the planning board that performed the risk & threat Analysis were:

NAME/RANK POSITION/TITLE

3. Findings of the risk & threat Analysis:

4. Design basis threat level and level of protection:

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ANTITERRORISM/FORCE PROTECTION: SUMMARY OF RISK AND THREAT ANALYSIS (CONTINUED)

5. Description of the operational measures that will be taken to mitigate the threat:

6. Design strategies for mitigation of specific aggressor tactics to provide required level of protection and the effect on construction cost for applying those measures:

7. Detailed description of AT/FP construction features required:

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SPACE CRITERIA

Schedule I	AUTHORIZED	REQUIRED
Assembly Hall	5,800	5,800
Classrooms	2,610	2,610
Library/Classroom	250	250
Learning Center	250	250
Distance Learning Center	0	0
Indoor Firing Range	0	0
Training Device/Simulation Center	0	0
Training Aid Storage	120	120
Kitchen	1,300	1,300
Break Area	480	480
Vending Area	75	75
Toilets & Showers	2,045	2,045
Flammable Materials Storage	100	100
Family Support Office	250	250
RAPIDS Office	0	0
Recruiting Office	250	250
Audio Visual Storage	100	100
Table & Chair Storage	375	375
Physical Fitness Area	700	700
Controlled Waste Handling Facility	300	300
Subtotal Schedule I	**15,005 SF**	**15,005 SF**
Subtotal Schedule II	19,776	19,776
Schedule I + Schedule II	**34,781**	**34,781**
Facility Maint and Stor (3%)	1,043	1,043
Facility Mech/Elect Room (5%)	1,739	1,739
Facility TELKECON/INFO RM (1%)	348	348
Total Schedule I & II	**37,911**	**37,911**
Facility Circulation (22%)	8,340	8,340
Subtotal	**46,251**	**46,251**
Walls (10%)	4,625	4,625
Total Facility Authorization	**50,876**	**50,876**

Exceptions to Criteria:

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SPACE CRITERIA
(Continued)

	AUTHORIZED	REQUIRED
Schedule II		
1. Administrative Space		
a. Basic Space:		
30TH TROOP COMMAND	400	400
1175TH TRANSPORTATION COMPANY (-)	800	800
b. General Space:		
30TH TROOP COMMAND	5,460	5,460
1175TH TRANSPORTATION COMPANY (-)	1,820	1,820
Subtotal=	**8,480 SF**	**8,480 SF**

Exceptions to Criteria:

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SPACE CRITERIA
(Continued)

	AUTHORIZED	REQUIRED
Schedule II (cont)		
c. Special -- Admin Allowances		
TROOP COMMAND - 54 or Less Strength	1,950	1,950
2. Unit Storage Space (Including Arms Vault)		
a. Heated Storage		
30TH TROOP COMMAND	1,000	1,000
1175TH TRANSPORTATION COMPANY (-)	2,400	2,400
Subtotal=	**5,350 SF**	**5,350 SF**

Exceptions to Criteria:

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SPACE CRITERIA
(Continued)

	AUTHORIZED	REQUIRED
2. Unit Storage (continued)		
b. Unheated Storage	**0**	**0**
30TH TROOP COMMAND	0	0
1175TH TRANSPORTATION COMPANY (-)	0	0
c. Temporary Storage		
3. Locker Room Space		
a. Basic Space	200	200
b. Individual Space	2,898	2,898
4. Special Functions:		
Maint. Training Workbays	2,048	2,048
Supervisor's Office	100	100
Tool Room	200	200
Supply Room	300	300
Battery Room	200	200
Other	0	0
Subtotal	**5,946**	**5,946**
Total Schedule II	**19,776**	**19,776**
Exceptions to Criteria:		

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SPACE CRITERIA
(Continued)

	AUTHORIZED PARKING	REQUIRED PARKING
Military Vehicle Parking	**8,700 SY**	**8,700 SY**
WHEELED	1,000	1,000
TRAILERS	750	750
TRACKED	0	0
EQUIPMENT > 30 FT	0	0
FUEL & M977 HEMTT	350	350
HEMTT PLS/HET	6,600	6,600
Enclosed Military Vehicle Parking		
Ancillary Facility Support Items		
Wash Platform Access	0 SY	0 SY
Maint. Work Bay Access Apron	427 SY	427 SY
Service Access Apron	150 SY	150 SY
Loading Dock Access	0 SY	0 SY
Loading Ramp Access	0 SY	0 SY
Fuel Storage and Dispensing Sys	0 SY	0 SY
With 0 ea 3000 Gal Fuel Tank		
With 0 ea 5000 Gal Fuel Tank		
With 0 ea 7000 Gal Fuel Tank		
With 0 ea 10000 Gal Fuel Tank		
With 0 ea 20000 Gal Fuel Tank		
Fuel Stor and Disp System Acces	0 SY	0 SY
Cont'd Waste Han Fac Access	150 SY	150 SY
Track Vehicle Turning Pads	0 SY	0 SY
Fuel Truck Containment Area	100 SY	100 SY
MCOFT Pad	0 SY	0 SY
Curbing	2,000 SY	2,000 SY
Unheated Vehicle Storage	**0 SF**	**0 SF**
Rigid Pavement	**2,827 SY**	**2,827 SY**
Flexible Pavement	**10,072 SY**	**10,072 SY**
POV Parking	5,072	5,072
Access and Entrance Roads	5,000	5,000 1/
Security Fencing	**1,972 LF**	**1,972 LF**
Sidewalks	**1,122 SY**	**1,122 SY**

Exceptions to Criteria:
1/ Request heavy-duty paving for access and entrance roads due to the weight of vehicle traffic.

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SPACE CRITERIA
(Continued)

SHARE OF CONSTRUCTION COST FOR JOINT USE AREAS VISUAL

	ARNG	reserved	reserved	Total
AUTHORIZED STRENGTH	161			161
AUTHORIZED STRENGTH %	100.0%			100.0%

Net Area	Gross Area		ARNG SHARE	-	-	Total	
15,805	18,356	Schedule I Joint Use Areas	18,356	-	-	18,356	
19,776	21,556		21,556	-	-	21,556	EXAMPLE OF JOINT PRORATED SHARES
-	-	Schedule II Sole Use Areas	-	-	-	-	
-	-		-	-	-	-	
		Total DoD Schedule Joint and Sole Use				37,912	

Circulation (22%)	8,341	0	0	8,341	Total Circulation
Walls (10%)	4,625	0	0	4,625	Total Walls
Total	50,877	0	0	50,877	Total DoD Authorization

50,877	Total Facility

MILITARY PARKING AND ANCILLARY SUPPORT ITEMS VISUAL

	ARNG	reserved	reserved	Total	
SQUARE YARDAGE OF PARKING	8,700			8,700	
SQUARE YARDAGE %	100.0%			100.0%	
ANCILLARY SUPPORT ITEMS	-5,873	-	-	RIGID PAVEMENT	EXAMPLE OF JOINT PRORATED SHARES
	5,000	-	-	FLEXIBLE PAVEMENT	
	1,972	-	-	SECURITY FENCING	
	5,072	-	-	POV PARKING	
	1,122	-	-	SIDEWALKS	

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DETAILED COST ESTIMATE

	U/M	QTY	Unit Cost	(reserved	"Cost ($000)" (reserved)	(reserved)	reserved	Fed Cost Total
PRIMARY FACILITY								6,900.2
READINESS CENTER	SF	50,476	120					(6,057.2)
FLAMMABLE MATERIALS FACILITY	SF	100	40					(4.0)
CONTROLLED WASTE FACILITY	SF	300	40					(12.0)
UNHEAT METAL STOR BLDG	SF	0	35					(0.0)
ANTI-TERRIORISM/FORCE PROTECTION	LS	-	100,000					(100.0)
EMCS	LS	-	150,000					(150.0)
BUILDING INFORMATION SYSTEMS	LS	-	10,000					(10.0)
			0					(0.0)
EMERG POW GEN PAD AND HOOK-UP	LS	-	45,000					(45.0)
ORGANIZATIONAL PARKING	SY	8,700	60					(522.0)
SUPPORTING FACILITIES								1,223.3
SITE PREPARATION	LS	-	50,000					(50.0)
ANTI-TERRORISM/FORCE PROTECTION	LS	-	50,000					(50.0)
FINE GRADING & SEEDING	LS	-	25,000					(25.0)
PLANTING	LS	-	25,000					(25.0)
RIGID CONCRETE	SY	2,827	60					(169.6)
FLEXIBLE PAVING	SY	10,072	45					(453.2)
SECURITY FENCING	LF	1,972	20					(39.4)
CURBING (RIGID MATERIAL)	LF	2,000	75					(150.0)
SIDEWALKS	SY	1,122	50					(56.1)
ENCLOSED VEHICLE WASH SYSTEM	LS	-	0					(0.0)
EXTERIOR SECURITY LIGHTING	LS	-	75,000					(75.0)
LOADING DOCK	LS	-	0					(0.0)
LOADING RAMP	LS	-	0					(0.0)
DETACHED FACILITY SIGN	LS	-	5,000					(5.0)
EXTERIOR FIRE PROTECTION	LS	-	35,000					(35.0)
UTIL'S:WATER/SEWER/GAS/	LS	-	50,000					(50.0)
UTIL'S:ELECTRIC	LS	-	20,000					(20.0)
UTIL'S:INFORMATION TECHNOLOGY	LS	-	5,000					(5.0)
1 FLAGPOLE	LS	-	5,000					(5.0)
STORM DRAIN/BIO RETENT POND	LS	-	10,000					(10.0)
ONE-FOR-ONE OFFSET DEMO COSTS	LS	-	0					(0.0)
SUBTOTAL								8,123.5
COMMISSIONING CONTRACT (1% OF PRIMARY FACILITY)								(60.6)
SUBTOTAL								8,184.1
CONTINGENCY (5% X 8184)								(409.2)
SUBTOTAL								8,593.3
SUPERVISION, INSPECTION & OVERHEAD								(257.8)
SUBTOTAL								8,851.1
TOTAL PROJECT COST								8,851.1
O&M OFFSET DISPOSAL COST				(0.0)	(0.0)	(0.0)		0
EQUIP PROVIDED FROM OTHER FED APPR (NON-ADD)								(550.0)

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DETAILED REQUIREMENT STATEMENTS

1. GENERAL

The 30th Troop Command and Headquarters of the 1175th Transportation Company (-) are located in an inadequate facility. This facility is 52 years old and has been determined to be unfeasible for rehabilitation. The facility is inadequate to fully support the units due to the lack of adequate parking, storage and training areas. Local surplus school buildings have been surveyed and none have determined satisfactory for armory facilities. A demographic study has been conducted and it has been determined that the general population pool is adequate to meet future manning requirements of all units proposed for stationing at this facility.

2. DATA ON ACCOMMODATIONS NOW IN USE:

The Tullahoma Readiness Center lack adequate training, administrative and storage space. There is limited military vehicle and off-street parking space. Other deficiencies include inadequate heating, plumbing and electrical systems. The facility are 52 years old and no longer meet the needs of the units. It has been determined that rehabilitation or expansion on all of the sites is not feasible. No facility exists to house these units stationed in the area.

3. ANALYSIS OF DEFICIENCY:

Lack of adequate classrooms, supply rooms, arms vaults, showers, kitchen facilities, and parking areas adversely affect the training and quality of life of current units and make meeting their mission essential training requirements difficult if not impossible.

4. ANALYSIS OF ALTERNATE FACILITIES AND LOCATIONS:

No ARNG facilities are available to adequately house these units in the area. All existing ARNG facilities in the area have been surveyed and none can be expanded to meet this requirement.

5. ANALYSIS OF CRITERIA FOR NEW CONSTRUCTION:

The size and capacity is in accordance with NG Pam 415-12, dated 23 July 2003. The workload has been adequately defined. A definitive design is being used for this project because of the unique areas authorized for the assigned units.

6. STATEMENT OF PROGRAM RELATED EQUIPMENT:

Furniture, kitchen equipment, physical fitness equipment, and information systems (OMARNG) and security systems (OPA) will be requested in FY 2008.

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DETAILED REQUIREMENT STATEMENTS

7. DISPOSITION OF PRESENT ACCOMMODATIONS:

INSNO/FACTO	TITLE	SF	DISPOSITION	COST
47D85-00001	TULLAHOMA RC	15,995	REVERT TO TRAINING SITE USE	$0

8. SURVIVAL MEASURES:
NONE

9. CONTRIBUTION TO READINESS:

a. How will readiness be enhanced by the construction of this project?
Readiness will be enhanced by providing a readiness center with adequate troop areas, interior and exterior, capable of supporting the training, supply, administrative and maintenance missions of assigned units. Housing two units of the Tennessee National Guard in one location will enhance both organizations.

b. How will readiness be impaired by deferring this project to a future program year?
There are deficiencies in the readiness centers currently housing these units (troop use areas, classrooms, messing facilities), the corrections of which are necessary to accomplish their assigned missions. By deferring this project, training, administration and troop morale will suffer, all of which impact on readiness.

c. How and why does this project contribute more to readiness than other projects?
This project has been given high priority in keeping within the states plan to replace older, inadequate readiness centers at inadequate sites which will save in operating costs, provide adequate parking and areas for training to meet readiness objectives.

10. CLEAN AIR ACT AMENDMENT OF 1990:
Permitting and other procedural requirements mandated by State, Interstate, and local air pollution control agencies will be complied with for this project (if applicable). Copies of all Federally required permits and/or registration applications and responses will be been forwarded to the US Army Center for Health Promotion and Preventive Medicine, ATTN: MCHB-TS-EAP, Aberdeen Proving Ground, MD 21010-5422.

11. PROTECTION OF WETLANDS:
Project has been evaluated for compliance with Executive Order No. 11990 and is not sited in wetland.

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DETAILED REQUIREMENT STATEMENTS

12. REQUEST FOR "EXCEPTION TO CRITERIA": (List all exceptions to criteria cited on the DD Forms 1390/91)

Request use of heavy duty flexible paving for access road and throat due to the weight of the HET trucks and trailers. Without this exception, the access road will rapidly deteriorate with the large truck traffic.

13. TELECOMMUNICATIONS:

Telecommunications services and equipment are required. Telecommunications equipment not specifically authorized by NGR 105-23 will be provided by other than ARNG federal funds.

14. ECONOMIC ANALYSIS:

An economic analysis has been conducted and is on file in the facility management office. A screening of available properties has been conducted as part of the economic analysis. The result of the analysis indicates that no adequate facility is available to meet the mission requirements and construction of this project is the best alternative.

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NATIONAL ENVIRONMENTAL POLICY ACT: Project has been analyzed for potential environmental impact in accordance with AR 200-2. Appropriate environmental documentation is attached.

POLLUTION ABATEMENT: The design of proposed project includes, where appropriate, the provision of facilities for air and water pollution control IAW Executive Order No. 11752.

COASTAL ZONE PLAN: In accordance with the provisions of Section 102(2)(c) of the National Environmental Policy Act of 1969, the project has been reviewed, and it is determined to be in compliance with the State's Coastal Zone Plan.

ENDANGERED SPECIES ACT: Proposed project is in consonance with Section 7 of the Endangered Species Act (P.L. 93-205(87) STAT. as amended).

FALLOUT PROTECTION: In accordance with Section 601 of Public Law 89-568, as amended, the design of this project has been prepared to maximize fallout protection. Fallout shelters have been excluded form any structure only for the following reason: (1) Adequate protection areas are available to fulfill a station's requirements; (2) The presence of personnel during a period of fallout radiation would impair facility operations; or (3) Economic limitations necessitated either deferral or accomplishment by some other means.

FLOOD HAZARD: Project has been evaluated for flood hazards in compliance with Executive Order 11988, and the facility is not sited in an area known to be subjected to flooding.

DESIGN FOR ACCESSIBILITY OF PHYSICALLY HANDICAPPED PERSONNEL: In accordance with Public Law 90-480, provisions for the physically handicapped personnel will by provided for, where appropriate, in the design of the facility.

VENDING FACILITIES FOR THE BLIND: Project has been evaluated for the provision of vending facilities to be operated by blind persons in compliance with DHEW Rule, 45 CFR-1369, and the State Licensing Board has not sanctioned operation of a blind vending concession at the proposed location.

NATIONAL HISTORIC PRESERVATION ACT OF 1966: A survey has been completed, and it revealed that this undertaking will not affect, either directly or indirectly, and property included in, or eligible for, inclusion in the National Register of Historic Places.

RESERVE MANPOWER POTENTIAL: The Reserve Manpower Potential to meet and maintain authorized officer and enlisted strengths of all reserve units in the areas where units are to be located has been reviewed in accordance with the procedures described in DOD Directive 1225.7. It has been determined, in coordination with the other military departments having reserve units in the area, that the number of units of the reserve components presently located in the area, and those units having been allocated to this area for future activation, is not and shall not be larger than the number that reasonably may be maintained at authorized strength.

GUS L. HARGETT, JR.
MAJOR GENERAL
THE ADJUTANT GENERAL

ATFP POC: Pat Tuggle, COL (615) 313-3076 CFMO: Willard G. Finch, COL (615) 313-2610

COST CALCULATION WORKSHEET

Project Number: 420181 Year: FY08

DOD Cost of Facility (DODCF): 145

DOD Facility Size: 30000

Area Cost Factor for location (ACF): 85

ACF *DODCF= New DOD Cost of Facility

New DOD Cost of Facility: 12325

Actual Building Size of Project: #REF!

Actual Bldg Size/DOD Facility size= Size Relationship Ratio

Size Relationship Ratio: #REF!

Look Up Size Adjustment Factor (SAF): 0.993

SAF * New DOD Cost of Facility= Max cost per SF

Max Cost Per SF: 12238.725

Inflation Factor: 1.036

FYXX Max Cost/SF: 12679.3191

FY 2012

1. COMPONENT NGB	FY 2012 GUARD AND RESERVE MILITARY CONSTRUCTION	2. DATE 15-Feb-06
3. INSTALLATION AND LOCATION VTS TULLAHOMA	INSNO= 47D85	4. AREA CONSTR COST INDEX 0.85

5. FREQUENCY AND TYPE OF UTILIZATION

NORMAL MAINTENANCE FIVE DAYS PER WEEK, WITH A TWO-DAY TRAINING ASSEMBLY TWO OR THREE TIMES PER MONTH.

6. OTHER ACTIVE/GUARD/RESERVE INSTALLATIONS WITHIN 15 MILES RADIUS

Component	Location	Distance	Type Facility	Square Footage	Year con'st
ARNG	WINCHESTER	15 MILES	READINESS	25,682 SF	1991
ARNG	SHELBYVILLE	17 MILES	READINESS	17,795 SF	1980

7. PROJECTS REQUESTED IN THIS PROGRAM:

CATEGORY CODE	PROJECT TITLE	SCOPE	COST ($000)	DESIGN STATUS START	DESIGN STATUS CMPL
21407	FIELD MAINTENACE SHOP	3,612 SM *38,879 SF*	7,242	9-Jun-09	11-Mar-06
		SM *SF*			
		SM *SF*			

8. STATE GUARD/RESERVE FORCES FACILITIES BOARD RECOMMENDATION

FACILITIES IDENTIFIED IN ITEM #6 HAVE BEEN EXAMINED BY THE STATE RESERVE FORCES FACILITIES BOARD FOR POSSIBLE JOINT USE/EXPANSION. THE BOARD RECOMMENDATIONS ARE UNILATERAL CONSTRUCTION.

18-Jan-06
(Date)

9. LAND ACQUISITION REQUIRED

NONE

0
(Number of acres)

10. PROJECTS PLANNED IN NEXT FOUR YEARS

CATEGORY CODE	PROJECT TITLE	SCOPE	COST $(000)

SRM BACKLOG ($000): $16

A SITE SURVEY HAS BEEN COMPLETED AND THE SITE IS SUITABLE FOR CONSTRUCTION OF THE PROPOSED PROJECT AT THE ESTIMATED COST INDICATED.

1. COMPONENT	FY 2012 GUARD AND RESERVE MILITARY CONSTRUCTION	2. DATE
NGB		15-Feb-06

3. INSTALLATION AND LOCATION
VTS TULLAHOMA INSNO= 47D85

11. PERSONNEL STRENGTH AS OF 28/12/05

	PERMANENT				GUARD/RESERVE		
	TOTAL	OFFICER	ENLISTED	CIVILIAN	TOTAL	OFFICER	ENLISTED
AUTHORIZED	33	4	29	0	802	68	734
ACTUAL	33	4	29	0	730	50	680

Percentage =91.0%

12. RESERVE UNIT DATE

UNIT DESIGNATION			STRENGTH AUTHORIZED	STRENGTH ACTUAL
1175TH TRANS CO (-) (HET)			156	156
UIC: WPC9A	TSPN: 35675	MTOE/TDA: 55739LNG02		
30TH TROOP COMMAND			45	45
UIC: W77AA	TSPN:	MTOE/TDA: NGW77AA		
DET 1, A90TH ENGR CO			59	48
UIC: WVMR/	TSPN: 18278	MTOE/TDA: 05113LNG02		
212TH ENGR CO (DUMP TRUCK)			66	76
UIC: WPCO/	TSPN: 31346	MTOE/TDA: 05424LNG01		
HHB 1-115TH FA BN			119	112
UIC: WPBJT	TSPN: 21862	MTOE/TDA: 06425LNG04		
BTRY A, 1-115TH FA BN			115	98
UIC: WPBJA	TSPN: 21862	MTOE/TDA: 06425LNG04		
		SUB-TOTAL	560	535

13. MAJOR EQUIPMENT AND AIRCRAFT

TYPE	CO-LOCATED AUTHORIZED MAINTENANCE	NON CO-LOCATED AUTHORIZED MAINTENANCE
WHEELED	30	170
TRAILERS	18	63
TRACKED	0	11
EQUIPMENT > 30 FT	0	21
FUEL & M977 HEMMT	2	2
HEMTT PLS/HET	24	0

14. OUTSTANDING POLLUTION AND SAFETY DEFICIENCIES:

	($000)
A. AIR POLLUTION	NONE
B. WATER POLLUTION	NONE
C. OCCUPATIONAL SAFETY AND HEALTH	NONE

DD FORM MAY 78 1390s2

1. COMPONENT	FY 2012 GUARD AND RESERVE MILITARY CONSTRUCTION	2. DATE
NGB		15-Feb-06

3. INSTALLATION AND LOCATION
VTS TULLAHOMA INSNO= 47D85

11. PERSONNEL STRENGTH AS OF 28/12/05

	PERMANENT				GUARD/RESERVE		
	TOTAL	OFFICER	ENLISTED	CIVILIAN	TOTAL	OFFICER	ENLISTED
AUTHORIZED							
ACTUAL							

12. RESERVE UNIT DATE

UNIT DESIGNATION				STRENGTH AUTHORIZED	STRENGTH ACTUAL
BTRY B, 1-115TH FA BN				115	90
	UIC: WPBJB	TSPN: 21862	MTOE/TDA: 06425LNG04		
BTRY C (-), 1-115TH FA BN				60	51
	UIC: WPBJC	TSPN: 21862	MTOE/TDA: 06425LNG04		
DET 1 BTRY C 1-115TH FA BN				55	44
	UIC: WPBJC	TSPN: 21862	MTOE/TDA: 06425LNG04		
1115 OD DET				12	10
	UIC: WTR9A	TSPN: 31131	MTOE/TDA: 43209LNG38		
			SUB-TOTAL	242	195

13. MAJOR EQUIPMENT AND AIRCRAFT

TYPE	AUTHORIZED MAINTENANCE	AUTHORIZED PERMANENT PARKING

($000)

A. AIR POLLUTION
B. WATER POLLUTION
C. OCCUPATIONAL SAFETY AND HEALTH

DD FORM MAY 78 1390s2

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO= 47D86	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST *($000)*
0505896A	21407	470034A	$7,242

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	#NAME? *($000)*
PRIMARY FACILITY				4,732
FIELD MAINTENACE SHOP	SF	35,804	127	(4,547)
FLAMMABLE MATERIALS FACILITY	SF	175	40	(7)
CONTROLLED WASTE FACILITY	SF	300	40	(12)
UNHEATED METAL STORAGE BUILDING	SF	2,600	35	(91)
			0	
ANTI-TERRORISM/FORCE PROTECTION	LS	-	25,000	(25)
ENERGY MANAGEMENT CONTROL SYSTEM	LS	-	50,000	(50)
SUPPORTING FACILITIES				1,964
ELECTRIC SERVICE	LS	-	15,000	(15)
WATER, SEWER, GAS	LS	-	50,000	(50)
STEAM AND/OR CHILLED WATER DISTTRIBUTION				
PAVING, WALKS, CURBS AND GUTTERS			1,292,800	(1,293)
STORM DRAINAGE	LS	-	10,000	(10)
SITE IMP (50) DEMO ()	LS	-	50,000	(50)
INFORMATION SYSTEMS	LS	-	5,000	(5)
ANTITERRIORISM/FORCE PROTECTION	LS	-	25,000	(25)
OTHER	LS	-	516,500	(517)
ESTIMATED CONTRACT COST				6,697
CONTIGENCY PERCENT (5.00%)				(335)
SUBTOTAL				7,031
SUPERVISION, INSPECTION & OVERHEAD				(211)
TOTAL REQUEST				7,242
TOTAL REQUEST ROUNDED				7,300
INSTALLED EQT-OTHER APPROPRIATIONS				(25)

10. DESCRIPTION OF PROPOSED CONSTRUCTION

Consists of a maintenance facility with six (6) maintenance workbays, plus adminstrative, personnel, and work areas. Constructed of masonry block with bick veneer, concrete floors, masonry block partitions with a built-up or single membrane roofing system. Supporting facilities include military and customer vehicle parking, fencing, wash platform, fuel storage and dispensing system, lube & Inspection rack, load ramp, control waste handling facility, sidewalks, outside lighting, and access roads. Physical Security and Force Protection measures will be incorporated into design including maximum feasible standoff distance from roads, parking areas, and vehicle unloading areas, berems, heavy landscaping and bollards to prevent access when standoff distance cannot be maintained.

AIR CONDITIONING- 8.08666666666667 TON

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO= 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	21407	470034A	$7,242

11. REQUIREMENT: 3,612 SM 38,879 SF ADEQUATE: SM 0 SF SUBSTANDARD: 330 SM 3,550 SF

PROJECT:

Construct a new 3,612 SM (38,879 SF) FMS facility and the infrastructure to support this facility as stated above. Location is on a 25 acre, Federally licensed, VTS training site on AEDC, Tullahoma, TN. (Current Mission)

REQUIREMENT:

The facility is required to maintain equipment and issue/turn-in for peacetime training and ensure the equipment is prepared for mobilization. The FMS is an ARNG maintenance facility which provides full-time GS level support to a Troop Command, one FA Battalion and one Engineer Company (-). No other adequate facilities are available to support the units. The 2006 TNARNG Master Plan has evaluated and recommended that the FMS should be collocated with the VTS Tullahoma, TN training complex. The new facility will be constructed on approximately 25 acres of the training site located on Federal land.

CURRENT SITUATION:

The current facility is in poor condition, does not meet current building codes or criteria, and is 1/10 the size authorized to support the facility mission. The facilities size can not support the TNARNG's Master Plan of consolidating the Tullahoma FMS and the Winchester FMS.

IMPACT IF NOT PROVIDED:

If the project is not approved, the present facility's lack of adequate space will reduce maintenance efficiency, training and mobilization readiness standards will continue to decline. Lack of adequate military vehicle parking will cause environmental damage, decrease efficiency, and create work backlog.

ADDITIONAL:

Alternative methods of meeting thie requirement have been explored during project development. This project is the only feasible option to meet this requirement. Sustainable principles will be integrated into the design, development, and construction o fthe project in accordance with Executive Order 13123 and other applicable laws and Executive Orders.

JOINT USE CERTIFICATION:

The Deputy Assistant Secretary of the Army (Installations and Housing) certifies that this project has been considered for joint use potential. This facility will be available for use by other components.

ANTITERRORISM/FORCE PROTECTION:

This project has been coordinated with the installation physical security plan. All required physical security and anti-terrorism/force protection measures are included.

GUS L. HARGETT, JR.
MAJOR GENERAL
THE ADJUTANT GENERAL

ATFP POC: Pat Tuggle COL 615-313-3076

CFMO: Willard G. Finch COL 615-313-2610

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO = 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	21407	470034A	$7,242

12. SUPPLEMENTAL DATE

a. ESTIMATED DESIGN DATA:

(1) STATUS:

(a) DATE DESIGN STARTED	Jun-09
(b) PERCENT COMPLETE AS OF JANUARY 2011	95%
(c) DATE DESIGN EXPECTED TO BE 35% COMPLETE	Dec-09
(d) DATE DESIGN EXPECTED TO BE 100% COMPLETE	Mar-06
(e) PARAMETRIC COSTS USED TO DEVELOP COSTS	NO
(f) TYPE OF DESIGN CONTRACT	Design-Bld-Build

(g) AN ENERGY STUDY AND LIFE CYCLE COST ANALYSIS WILL BE DOCUMENTED DURING FINAL DESIGN.

(2) BASIS:

(a) STANDARD OR DEFINITIVE DESIGN YES ___ NO X

(b) WHERE DESIGN WAS MOST RECENTLY USED _____

(3) TOTAL DESIGN COST (c)=(a)+(b) or (d)+(e)

(a) PRODUCTION OF PLANS AND SPECIFICATIONS	(0.0)
(b) ALL OTHER DESIGN COSTS	(0.0)
(c) TOTAL	(631.0)
(d) CONTRACT	(631.0)
(e) IN-HOUSE	(0.0)

(4) CONSTRUCTION CONTRACT AWARD DATE	Sep-12
(5) CONSTRUCTION START	Sep-12
(6) CONSTRUCTION COMPLETION DATE	Sep-12

b. EQUIPMENT ASSOCIATED WITH THIS PROJECT WHICH WILL BE PROVIDED FROM OTHER APPROPRIATIONS

EQUIPMENT NOMENCLATURE	PROCURING APPROPRIATION	FISCAL YEAR APPROPRIATION OR REQUESTED	COST ($000)
TELCOM	OMARNG	2013	15,000
FURNITURE	OMARNG	2013	10,000
		TOTAL	25,000

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO= 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	21407	470034A	$7,242

ANTITERRORISM/FORCE PROTECTION: This project has been coordinated with the installations AT/FP plan. Risk and threat analysis have been performed in accordance with DA Pam 190/51 and TM 5-853-1, respectively. Only protective measures required by regulation and ONLY the minimum standards required by the "Unified Facilities Criteria 4-010-01, DoD Minimum Antiterrorism Standards for Buildings" dated 8 Oct 03 are needed. They are included in the cost estimate and description of construction.

ANTITERRORISM/FORCE PROTECTION: SUMMARY OF RISK AND THREAT ANALYSIS

1. Method used to perform the risk & threat analysis:

2. Members of the planning board that performed the risk & threat Analysis were:

NAME/RANK POSITION/TITLE

3. Findings of the risk & threat Analysis:

4. Design basis threat level and level of protection:

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO= 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	21407	470034A	$7,242

ANTITERRORISM/FORCE PROTECTION: SUMMARY OF RISK AND THREAT ANALYSIS (CONTINUED)

5. Description of the operational measures that will be taken to mitigate the threat:

6. Design strategies for mitigation of specific aggressor tactics to provide required level of protection and the effect on construction cost for applying those measures:

7. Detailed description of AT/FP construction features required:

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THE ADJUTANT GENERAL

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Willard G. Finch COL/615-313-2610

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO = 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	21407	470034A	$7,242

SPACE CRITERIA

SCHEDULE I	AUTHORIZED	REQUIRED
OFFICE AREA	**1,430 SF**	**1,430 SF**
General Supervisor	0	0
Supervisor	100	100
Production Controller	0	0
Inspection & Library	200	200
Automation Clerk	200	200
Common IT Space	100	100
IT Support Activities	0	0
Classroom	830	830
PERSONNEL AREA	**3,537 SF**	**3,537 SF**
Latrine	580	580
Locker Room	521	521
Break/Assembly Area	996	996
Physical Fitness Area	1,440	1,440
WORK AREA	**2,650 SF**	**2,650 SF**
Tool Room	700	700
Supply Room	1,100	1,100
Battery Room	350	350
Comm/Elec Room	0	0
Instrument Repair	0	0
Small Arms Repair	0	0
Small Arms Test Room	0	0
Vault (Small Arms)	0	0
Vault (CBT Veh Arms)	0	0
Injector Test Room	0	0
Fuel and Ignition Repair Shop	0	0
Basic Issue Storage	0	0
Machine Shop	0	0
Carpenter Shop	0	0
Lumber Storage Shed	0	0
Canvas Shop	0	0
Missile Repair Shop	0	0
Missile Vault	0	0
Calibration Room	0	0
Calibration Storage	0	0
Glass Repair	0	0
Radiator Test and Repair	0	0
COMSEC Repair Room	0	0
Radiation Calibration	0	0
Bulk POL Storage for Lube Syster	0	0
Bulk POL Storage	500	500
TOTAL SCHEDULE I	**7,617 SF**	**7,617 SF**
LIFTING DEVICES		
15 Ton Crane	2 EA	2 EA
30 Ton Crane	0 EA	0 EA
7.5 ton Welding Bay Crane	1 EA	1 EA
7.5 ton Body Shop Bay Crane	0 EA	0 EA
5 ton Engine Test Cell Crane	0 EA	0 EA
3.5 ton Transmission Test Cell Cr	0 EA	0 EA
1 ton Machine Shop Crane	0 EA	0 EA
0.5 ton Radiator Repair Shop Crar	0 EA	0 EA
0.5 ton Fuel and Ignition Repair Sl	0 EA	0 EA
0.5 ton Canvas Repair Shop Cran	0 EA	0 EA

Exceptions to Criteria:

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO = 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	21407	470034A	$7,242

	AUTHORIZED	REQUIRED
SCHEDULE II		
WORKBAY AUTHORIZATIONS		
Standard Maintenance Workbays	12,288	12,288
Special Purpose Workbays		
Warm-up Bay	0	0
Welding Bay	0	0
Wash Bay	0	0
Paint Stripping Bay	0	0
Paint Stripping Mechanical Room	0	0
Paint Preparation Bay	0	0
Paint Prep Mechanical	0	0
Paint Booth	0	0
Paint Booth Mechanical	0	0
Paint Kitchen	0	0
Per/Equip Hygiene Maint	0	0
Lubrication Bay	2,048	2,048
Engine/Transmission Test Cell	0	0
Eng/Trans Test Cell Mechanical	0	0
Electronic Bay	2,048	2,048
Body Shop	2,048	2,048
Inspection Bay	0	0
Total Schedule II	**18,432 SF**	**18,432 SF**
SPACE RECAPITULATION		
Schedule I Net Square Footage	7,617	7,617
Schedule II Net Square Footage	18,432	18,432
Subtotal	**26,049 SF**	**26,049 SF**
Mech/Elec (5% net schedule I & II)	1,302	1,302
Custodial Room (3% net sch I & II)	781	781
Telecom/Info Tech (1% net sch I & II)	260	260
Subtotal	**28,133 SF**	**28,133 SF**
Flammable Materials Storage	**175 SF**	**175 SF**
Controlled Waste Facility	**300 SF**	**300 SF**
Bulky Equipment Storage	**600 SF**	**600 SF**
Enclosed Unheated Storage	**2,600 SF**	**2,600 SF**
Circulation (15% net, ex workbay)	1,694	1,694
Circulation (10% workbay net)	1,843	1,843
Subtotal	**35,345 SF**	**35,345 SF**
Walls (10% total facility net)	3,534	3,534
Gross Facility	**38,879 SF**	**38,879 SF**
Total Scope	**38,879 SF**	**38,879 SF**

Exceptions to Criteria:

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO = 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	21407	470034A	$7,242

	AUTHORIZED	REQUIRED
MILITARY VEHICLE PARKING	**10,791 SY**	**10,791 SY**
(10% OF NON-COLLOCATED VEHICLES)		
WHEELED	850	850
TRAILERS	315	315
TRACKED	83	83
EQUIPMENT > 30 FT	158	158
FUEL & M977 HEMMT	35	35
HEMTT PLS/HET	0	0
MILITARY VEHICLE PARKING		
(COLLOCATED VEHICLES)		
WHEELED	1,500	1,500
TRAILERS	900	900
TRACKED	0	0
EQUIPMENT > 30 FT	0	0
FUEL & M977 HEMMT	350	350
HEMTT PLS/HET	6,600	6,600
ANCILLARY FACILITY SUPPORT ITEMS		
WASH PLATFORM ACCESS	250 SY	250 SY
WASH PLATFORM	115 SY	115 SY
LUB AND INSP RACK ACCESS	300 SY	300 SY
MAINTENANCE BAY ACCESS APRON	3,413 SY	3,413 SY
SERVICE ROAD ACCESS	150 SY	150 SY
LOADING DOCK ACCESS	250 SY	250 SY
LOADING RAMP ACCESS	250 SY	250 SY
FUEL STOR & DISPEN SYS	75 SY	75 SY
FUEL STOR & DISP SYS ACCESS	250 SY	250 SY
ENCL'D UNHEAT'D STOR ACCESS	150 SY	150 SY
CONT'D WASTE HAN FAC ACCESS	150 SY	150 SY
CANNIBALIZATION AREA	0 SY	0 SY
BII STOR LOAD DOCK ACCESS	300 SY	300 SY
SUP ROOM LOAD DOCK ACCESS	300 SY	300 SY
TRACK VEHICLE TURNING PADS	0 SY	0 SY
FUEL TRUCK CONT AREA	200 SY	200 SY
RIGID PAVEMENT	**16,944 SY**	**16,944 SY**
FLEXIBLE PAVEMENT	**6,440 SY**	**6,440 SY**
POV PARKING	1,040	1,040
CUSTOMER PARKING	400	400
ACCESS AND ENTRANCE ROADS	5,000	5,000
FENCING	1,426 LF	1,426 LF
CURBING	200 LF	200 LF
SIDEWALKS	7,161 SF	7,161 SF

Exceptions to Criteria:

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION	2. DATE	REPORT CONTROL SYMBOL
NGB	PROJECT DATA *(Continuation)*	16-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO= 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	21407	470034A	$7,242

DETAILED COST ESTIMATE

	U/M	QTY	Unit Cost	Cost ($000) Total
PRIMARY FACILITY				**4,732.2**
FIELD MAINTENACE SHOP	SF	35,804	127	(4,547.2)
FLAMMABLE MATERIALS FACILITY	SF	175	40	(7.0)
CONTROLLED WASTE FACILITY	SF	300	40	(12.0)
UNHEATED METAL STORAGE BUILDING	SF	2,600	35	(91.0)
			0	
ANTI-TERRORISM/FORCE PROTECTION	LS	-	25,000	(25.0)
ENERGY MANAGEMENT CONTROL SYSTEM	LS	-	50,000	(50.0)
SUPPORTING FACILITIES				**1,964.3**
SITE PREPARATION	LS	-	50,000	(50.0)
ANTI-TERRIORISM/FORCE PROTECTION	LS	-	25,000	(25.0)
FINE GRADING & SEEDING	LS	-	25,000	(25.0)
PLANTING	LS	-	25,000	(25.0)
RIGID CONCRETE PAVING	SY	16,944	60	(1,016.6)
FLEXIBLE PAVING	SY	6,440	35	(225.4)
SECURITY FENCING	LF	1,426	20	(28.5)
CURBING (FLEXIBLE OR RIGID)	LF	200	75	(15.0)
SIDEWALKS	SF	7,161	5	(35.8)
WASH PLATFORM	LS	-	20,000	(20.0)
FUEL STROAGE AND DISPENSING SYSTEM	LS	-	125,000	(125.0)
EXTERIOR SECURITY LIGHTING	LS	-	75,000	(75.0)
2 LUBE AND INSPECTION RACKS	LS	-	25,000	(25.0)
LOADING RAMP	LS	-	15,000	(15.0)
DETACHED FACILITY SIGN	LS	-	3,000	(3.0)
EXTERIOR FIRE PROTECTION	LS	-	25,000	(25.0)
UTIL'S:WATER/SEWER/GAS/	LS	-	50,000	(50.0)
UTIL'S:ELECTRIC/	LS	-	15,000	(15.0)
UTIL'S:INFORMATION TECHNOLOGY/	LS	-	5,000	(5.0)
0 FLAGPOLE	LS	-	0	(0.0)
BIO RETENTION POND	LS	-	10,000	(10.0)
AUTHORIZED CRANES	LS	-	150,000	(150.0)
			0	(0.0)
			0	(0.0)
SUBTOTAL				**6,696.5**
CONTINGENCY (5% X 6696.5)				334.8
SUBTOTAL				**7,031.3**
SUPERVISION, INSPECTION & OVERHEAD				210.9
TOTAL PROJECT REQUEST				**7,242.2**
EQUIP PROVIDED FROM OTHER FED APPR (NON-ADD)				25.0

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO= 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505898A	21407	470034A	$7,242

DETAILED REQUIREMENT STATEMENTS

1. GENERAL

The Field Maintenance Shop, currently located in Tullahoma, Tn, will support 1175TH TRANS CO (-) HET, 30TH TROOP COMMAND, TNARNG TRAINING SITE which will be collocated, and DET 1, 190TH ENGR CO, 212TH ENGR CO (DUMP TRK), HHSB, 1-115TH FA BN, BTRY A, 1-115TH FA BN, BTRY B, 1-115TH FA BN, BTRY C, 1-115TH FA BN, and DET 1, BTRY C, 1-115TH FA BN will be non-collocated. This facility will provide maintenance support to 270 wheeled vehicles, 5 track vehicles, 1 fuel vehicle, 24 HET system vehicles and 18 pieces of equipment over 30 feet.

2. DATA ON ACCOMMODATIONS NOW IN USE:

The existing Maintenance Shop, built in 1955, has only 3,550 SF of functional space. The space cannot support the modern go-to-war unit artillery equipment with the current undersized workbay configuration and contains less than 1/10th of the authorized space for vehicles for vehicles currently assigned to the FMS. The workbays are not large enough to support artillery vehicles, the oversized HET vehicles and the administration, supply and latrine space is critically deficient.

3. ANALYSIS OF DEFICIENCY:

It is extrmely difficult for the maintenance personnel to work in these inadequate conditions. The increase in manpower and equipment without a correlating increase in space has resulted in an absolete FMS. A new facility with adequate space will provide the maintenance personnel a safe and adequate place to perform maintenance training and prepare the units for mobilization.

4. ANALYSIS OF ALTERNATE FACILITIES AND LOCATIONS:

There are no other ARNG facilities within 15 miles which could be used or expanded to provide the function of this facility.

5. ANALYSIS OF CRITERIA FOR NEW CONSTRUCTION:

The size and capacity is in accordance with NG Pam 415-12, 23 July 2003, for a maintenance shop which is designed to accommodate an organization of the strength and type of units that will occupy the facility upon completion.

6. STATEMENT OF PROGRAM RELATED EQUIPMENT:

TELCOM equipment, OMARNG, and Furniture, OMARNG, will be requested in FY 13.

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO= 47D85	FIELD MAINTENACE SHOP

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DETAILED REQUIREMENT STATEMENTS

7. DISPOSITION OF PRESENT ACCOMMODATIONS:

INSNO/FACTO	TITLE	SF	DISPOSITION	COST
47D80	Tullahoma OMS	3,550	VTS, Tullahoma Training Site	$0

8. SURVIVAL MEASURES:
Not Applicable.

9. CONTRIBUTION TO READINESS:

a. How will readiness be enhanced by the construction of this project?
The construction of this facility will contribute to the maintenance, storage and security of United States property.

b. How will readiness be impaired by deferring this project to a future program year?
The existing facility is not conducive to work, recruiting, and retention.

c. How and why does this project contribute more to readiness than other projects?
By deferring this project, training, administration and troop morale will suffer, all of which impact on readiness.

10. CLEAN AIR ACT AMENDMENT OF 1990:
There are no state, interstate or local air pollution control agencies that require permitting or registration for this project.

11. PROTECTION OF WETLANDS:
Project has been evaluated for compliance with Executive Order No. 11990 and is not sited in wetland.

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
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DETAILED REQUIREMENT STATEMENTS

12. REQUESTS FOR EXCEPTIONS TO CRITERIA

13. TELECOMMUNICATIONS:

Telecommunications services and equipment are required. Telecommunications equipment not specifically authorized by NGR 105-23 will be provided by other than ARNG federal funds.

14. ECONOMIC ANALYSIS:

An economic analysis has been conducted and is on file in the facility management office. A screening of available properties has been conducted as part of the economic analysis. The result of the analysis indicates that no adequate facility is available to meet the mission requirements and construction of this project is the best alternative.

1. COMPONENT	FY 2012 MILITARY CONSTRUCTION PROJECT DATA *(Continuation)*	2. DATE	REPORT CONTROL SYMBOL
NGB		15-Feb-06	

3. INSTALLATION AND LOCATION		4. PROJECT TITLE
VTS TULLAHOMA	INSNO= 47D85	FIELD MAINTENACE SHOP

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
0505896A	21407	470034A	$7,242

NATIONAL ENVIRONMENTAL POLICY ACT: Project has been analyzed for potential environmental impact in accordance with AR 200-2. Appropriate environmental documentation is attached.

POLLUTION ABATEMENT: The design of proposed project includes, where appropriate, the provision of facilities for air and water pollution control IAW Executive Order No. 11752.

COASTAL ZONE PLAN: In accordance with the provisions of Section 102(2)(c) of the National Environmental Policy Act of 1969, the project has been reviewed, and it is determined to be in compliance with the State's Coastal Zone Plan.

ENDANGERED SPECIES ACT: Proposed project is in consonance with Section 7 of the Endangered Species Act (P.L. 93-205(87) STAT. as amended).

FALLOUT PROTECTION: In accordance with Section 601 of Public Law 89-568, as amended, the design of this project has been prepared to maximize fallout protection. Fallout shelters have been excluded form any structure only for the following reason: (1) Adequate protection areas are available to fulfill a station's requirements; (2) The presence of personnel during a period of fallout radiation would impair facility operations; or (3) Economic limitations necessitated either deferral or accomplishment by some other means.

FLOOD HAZARD: Project has been evaluated for flood hazards in compliance with Executive Order 11988, and the facility is not sited in an area known to be subjected to flooding.

DESIGN FOR ACCESSIBILITY OF PHYSICALLY HANDICAPPED PERSONNEL: In accordance with Public Law 90-480, provisions for the physically handicapped personnel will by provided for, where appropriate, in the design of the facility.

VENDING FACILITIES FOR THE BLIND: Project has been evaluated for the provision of vending facilities to be operated by blind persons in compliance with DHEW Rule, 45 CFR-1369, and the State Licensing Board has not sanctioned operation of a blind vending concession at the proposed location.

NATIONAL HISTORIC PRESERVATION ACT OF 1966: A survey has been completed, and it revealed that this undertaking will not affect, either directly or indirectly, and property included in, or eligible for, inclusion in the National Register of Historic Places.

RESERVE MANPOWER POTENTIAL: The Reserve Manpower Potential to meet and maintain authorized officer and enlisted strengths of all reserve units in the areas where units are to be located has been reviewed in accordance with the procedures described in DOD Directive 1225.7. It has been determined, in coordination with the other military departments having reserve units in the area, that the number of units of the reserve components presently located in the area, and those units having been allocated to this area for future activation, is not and shall not be larger than the number that reasonably may be maintained at

GUS L. HARGETT, JR.
MAJOR GENERAL
THE ADJUTANT GENERAL

Pat Tuggle COL/615-313-3076

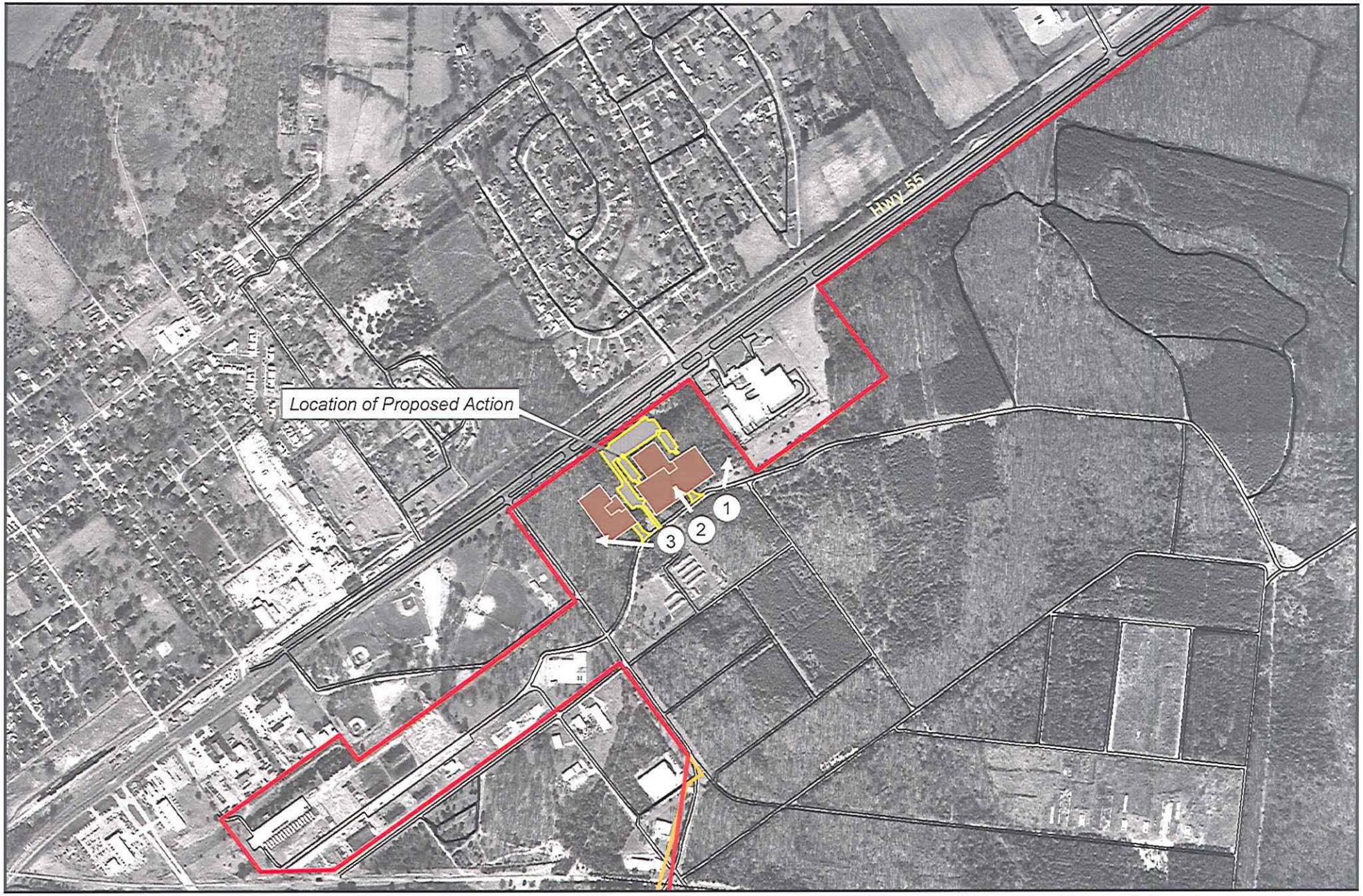
Willard G. Finch COL/615-313-2610

Appendix B
Site Photographs

Photo 1: Northern Portion of Proposed Action Location

Photo 2: Central Portion of Proposed Action Location

Photo 3: Southern Portion of Proposed Action Location



LEGEND

- Roads
- Tullahoma Training Site Boundary
- Photo Location Direction
- Parking Area
- Building

N

0 1,000 2,000 Feet

Figure B-1
Locational Direction of Photos
Construction and Operation of TNARNG Readiness Center and Field Maintenance Shop
Final Environmental Assessment

File Path: G:\projects2\Arnold\AFID\Locational_Direction_of_Photos.mxd Date: 05/15/2007 User: JGalloway

Appendix C

Correspondence with Tennessee SHPO

TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

December 19, 2006

Mr. Richard McWhite
Headquarters Arnold Engineering Development Center (AFMC)
AEDC/SDE
100 Kindel Drive, Suite A-228
Arnold AFB, Tennessee 37389-1228

RE: DOD, ARCHAEOLOGICAL ASSESSMENT, AAFB/PROBABILITY & DISTURBED AREAS, UNINCORPORATED, COFFEE COUNTY, TN

Dear Mr. McWhite:

At your request, our office has reviewed the above-referenced documentation regarding probability and disturbed areas on Arnold AFB with regards to archaeological resources. Based on the information provided, we concur that the areas delineated as disturbed on the map enclosed with your correspondence, require no additional archaeological investigation for the presence of National Register of Historic Places eligible resources.

If project plans are changed or archaeological remains are discovered during future construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Your cooperation is appreciated.

Sincerely,

Richard G. Tune
Deputy State Historic
Preservation Officer

RGT/jmb

TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

December 19, 2006

Mr. Richard McWhite
Headquarters Arnold Engineering Development Center (AFMC)
AEDC/SDE
100 Kindel Drive, Suite A-228
Arnold AFB, Tennessee 37389-1228

RE: DOD, PHASE I ARCHAEOLOGICAL ASSESSMENT, TNARNG VOLUNTEER TRAINING SITE, TULLAHOMA, COFFEE COUNTY,

Dear Mr. McWhite:

At your request, our office has reviewed the above-referenced archaeological survey report in accordance with regulations codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739). Based on the information provided, we concur with the authors that the project area contains historic resources potentially eligible for listing in the National Register of Historic Places. We concur with your agency that the archaeological resources within the 100 acres of the TNARNG Volunteer Training site surveyed for the current study were heavily disturbed during the abandonment and dismantling of the on-site facilities. However, the historic significance of the development of this facility cannot be denied. Again, in concurrence with your agency's determinations, our office recommends additional archival and ethnographic study of the background and development of the facility and the people associated with it. No additional archaeological investigation is warranted within the current study area.

Questions and comments may be directed to Jennifer M. Barnett (615) 741-1588, ext. 17.

Your cooperation is appreciated.

Sincerely,

Richard G. Tune
Deputy State Historic
Preservation Officer

RGT/jmb

Alexander Archæological Consultants, Inc.
P.O. Box 62
209 Walker Road
Wildwood, Georgia 30757

December 21, 2006

Richard McWhite
AAFB Cultural Resources Manager
AEDC/SDE
100 Kindel Dr., Suite A-228
Arnold AFB, TN 37389-1228
931-454-5086

Re: Arnold Air Force Base Archaeological Survey

Mr. McWhite;

Please find enclosed five (5) copies of our report entitled *The 2006 Phase I Archaeological Survey of 597 Acres Within Arnold Air Force Base, Coffee and Franklin Counties, Tennessee*. We have sent one (1) copy of the report and a digital copy of the report to Mr. Hoekstra at STEP, Inc. Results of the survey were minimal. One previously recorded archaeological site was investigated and it is recommended not eligible for nomination to the National Register of Historic Places.

If you have any comments of questions, please contact me at the address listed below. It has been a pleasure to complete this project, and we look forward to working with you in the future.

Regards,

Lawrence S. Alexander
Principal Investigator

cc file

office: 706.820-4344 *fax:* 706.820-4076 *email:* aacstaff@bellsouth.net

DEPARTMENT OF THE AIR FORCE
AIR FORCE MATERIEL COMMAND LAW OFFICE (AFMC)
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

MEMORANDUM FOR USAF HQ AFMC/A7CVO 29 Nov 06
Attn: Melanie Pershing

SUBJECT: Draft Environmental Assessment and Draft Finding of No Significant Impact for the Construction and Operation of TNARNG Readiness Center and Field Maintenance Shop

FROM: AFMCLO/JAV

1. I have reviewed the Draft Environmental Assessment (EA) concerning the Construction and Operation of the Tennessee Army National Guard (TNARNG) Readiness Center and Field Maintenance Shop located at Arnold AFB, Tennessee. Currently the U.S. Air Force, pursuant to license L-97-001, allows the TNARNG to use a portion of Arnold AFB for training purposes. The TNARNG proposes to construct a new Readiness Center and Field Maintenance Shop as well as supporting parking areas. This would replace current facilities that are over fifty years old. This new construction would utilize the current area plus an additional 6.2 acres.

2. The Draft EA reviewed the proposed action as well as a No Action Alternative. Also considered were alternative sites and a proposal to renovate and expand the existing facilities. The alternative sites were rejected due to their proximity to a threatened flower species, the Eggert's sunflower, and would have also resulted in the loss of recreational lands designated for handicap wheelchair hunting. The proposal to renovate and expand the existing facilities was rejected as it would have been cost-prohibitive. Significant renovations to upgrade inadequate heating, plumbing and electrical systems plus new construction made this alternative not practicable. The No Action Alternative that was carried forward to the Draft EA would be not to construct the new facilities and to maintain the existing facility as is. Due to the age of the facilities and the fact that transportation vehicles are larger than those originally planned for the facility makes the current facility inadequate and the TNARNG mission would be restricted.

3. The Draft EA adequately discusses the affected environment including land use, geomorphology, hydrology, water quality, biological resources, safety and occupational health, noise, air quality, IRP and hazardous materials, traffic flow and

utility infrastructure, and socioeconomic factors. During construction there would be temporary impacts on air quality, wildlife, traffic flow, noise, and surface water runoff. With the use of best management practices these impacts would be minimal. With the resulting conversion of 6.2 acres of land from pervious surfaces to impervious surfaces, there would be an increase in stormwater runoff. Tennessee requires that a stormwater permit be obtained if one acre or more of land is disturbed during construction. As part of that permit, onsite stormwater controls and best management practices would have to be implemented and should minimize any negative impacts. The loss of the 6.2 acres impacts wildlife and plant life as well but as there are no threatened species on this acreage and the existing wildlife will migrate to nearby areas, its impact is not significant.

4. The Draft EA states on page 4-6, paragraph 4.10.1, concerning Cultural Resources, that the location of the proposed action has not been surveyed and that a Phase 1 survey needs to be conducted prior to construction. Until this survey is completed, the proposed construction cannot be initiated. It would have made more sense for this survey to have been conducted prior to the drafting of this EA as this information must be included in the EA before it can be found legally sufficient. The same problem makes the draft Finding of No Significant Impact not legally justifiable. No one can say whether there will be an impact until this survey is completed and analyzed.

5. Since the cultural resources survey of the location has not been completed, I do not believe this draft EA is legally sufficient. I did not note any problems with any other areas of the draft EA other than the incompleteness in the area of Cultural Resources. I recommend that the Phase 1 survey be conducted and this information included in the draft EA. Only with this information included can a reviewer adequately review the EA. The issue of a FONSI is premature until the information is gathered.

WILLIAM L. HEGARTY, MAJOR, USAFR
Assistant Staff Judge Advocate

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS ARNOLD ENGINEERING DEVELOPMENT CENTER (AFMC)
ARNOLD AIR FORCE BASE, TENNESSEE

13 Dec 2006

704 CES/CEV
100 Kindel Drive, Suite A-228
Arnold AFB TN 37389-1228

Jennifer Barnett
Tennessee Department of Environment and Conservation
Division of Archaeology
Cole Building #3
1216 Foster Avenue
Nashville, TN 37210

Re: Phase 1 Archaeological Survey on 100 Acres of the Tennessee Army National Guard Tullahoma Volunteer Training Site in Coffee County, Tennessee

Dear Jennifer,

It is our understanding that you have already received subject report from the TNARNG. As you know, the Tullahoma Volunteer Training Site is located on Arnold AFB. Therefore all Sec 106 Consultations will be initiated by the Air Force. The Air Force has concern over the subject report's conclusion that an 8.3 acre area at Site 40CFR310 is potentially eligible for the National Register of Historic Places (NRHP). The NRHP-eligibility recommendation is questioned for the following reasons:

- The additional recommended research on Camp Forrest and the African American troop presence there may be needed, but we question whether archaeological investigations in the 8.3 acre area defined have the potential to provide any significant data. As pointed out in the report under NRHP Eligibility Criteria on page 34, integrity is the paramount qualification. Has a potential for integrity been demonstrated by this project or other projects in the area? Portions of the concrete and brick structural work remain and underground piping including sewer system piping is present but these have minimal integrity. We have plans and photos (aprx. 160), for the layout and appearance of the structures and their organization which give a much clearer picture. Seven positive shovel tests and 77 artifacts, most of which is structural in nature, in an area of 100 acres is minimal and supports findings in other areas of Camp Forrest indicating the nature of the dismantling of the structures and subsequent disturbance. We agree that additional research on a number of aspects of Camp Forrest could provide important information,

but believe that such avenues as archival research and informant interview would be much more productive.

- The high frequency of metal detector hits identified in Block D are most probably associated with demolition debris as evidenced by the shovel test recovery instead of personal effects or government-issue items. Any personal effects recovered are not necessarily associated with the African American troops. There were the people who constructed Camp Forrest, the troops and other personnel that used it, and the people who did the demolition. Association with the troops, after the ground disturbance from demolition, would be hard to demonstrate.

- Anecdotal information on post-demolition clean-up from all reports.

Reville to Taps by Michael R. Bradley, 1993, pp. 180-181.

"Buildings were removed in two ways. About 600 structures were acquired by the state and were moved to college campuses to house many of the veterans who were coming to those campuses under the terms of the G. I. Bill of Rights. Many of these buildings went to the University of Tennessee in Knoxville and to Tennessee Technological University in Cookville where a few can still be seen in 1993. The Red Cross office building was moved into the town of Tullahoma where it is still in use by the Red Cross. One chapel was moved to Cowan, Tennessee, where it still serves as a church edifice.

Most of the buildings were torn down and the lumber sold as scrap. Zachariah Pickett worked at this task. "My job was to pull the bent nails out of each board. It was about the best job I ever had. I got to work in the shade and I got paid the same as the ones working in the Sun." Local residents are quick to point out some still standing structures which were built with the surplus lumber from Camp Forrest.

Sam Schraber recalls loading box cars with scrap metal from Camp Forrest. He says there was a mound of scrap metal ten feet high for three hundred yards along the railroad."

I am requesting your feedback on our concerns before an official Air Force position is reached concerning the findings of subject Phase 1 report. Please contact me at 931-454-5086 or Shawn Chapman at 931-454-6708 with any questions.

Sincerely

RICHARD MCWHITE
CULTURAL RESOURCES MANAGER
ARNOLD AFB, TN