Final

ENVIRONMENTAL ASSESSMENT

PROPOSED CONSTRUCTION OF
ARMY AND AIR FORCE EXCHANGE SERVICE
MINI-MALL

Maxwell Air Force Base, Gunter Annex
Montgomery, Alabama

October 2003

Army and Air Force Exchange Service
Dallas, Texas

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Acronyms and Abbreviations

42 ABW	42nd Air Base Wing
µg/m^3	micrograms per cubic meter
AAFES	Army and Air Force Exchange Service
ACAM	Air Conformity Applicability Model
ADEM	Alabama Department of Environmental Management
ADT	average daily traffic
AEI	Air Emissions Inventory
AFI	Air Force Instruction
ALAGASCO	Alabama Gas Corporation
AQCR	Air Quality Control Region
AU	Air University
AVGAS	Aviation Grade Gasoline
Bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
BMPs	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CRMP	Cultural Resource Management Plan
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DoD	Department of Defense
DRMO	Defense Reutilization Marketing Office
EA	environmental assessment
EIAP	Environmental Impact Analysis Process
EIS	environmental impact statement
EO	Executive Order
°F	degrees Fahrenheit
FICON	Federal Interagency Committee on Noise
FONSI	Finding of No Significant Impact
FY	fiscal year
HAP	Hazardous Air Pollutant
HWMP	Hazardous Waste Management Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
INRMP	Integrated Natural Resource Management Plan
IRP	Installation Restoration Program
L_{dn}	day-night average sound level
MAFB	Maxwell Air Force Base
MAP	Management Action Plan
MCL	maximum contaminant level
MGD	million gallons per day
mg/m^3	milligrams per cubic meter
mph	miles per hour
MSA	Metropolitan Statistical Area
MSD/CEV	Maxwell Support Division/Civil Engineering Environmental Section
MSDS	Material Safety Data Sheet
msl	mean sea level
N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFRAP	No Further Remedial Action Planned
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O_3	ozone
Pb	lead
PM_{10}	particulate matter less than 10 microns in diameter
ppm	parts per million
PSD	Prevention of Significant Deterioration
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROI	region of influence
RPM	Remedial Project Manager
SEL	sound exposure level
SF	square foot
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	sulfur dioxide
SVE	Soil Vapor Extraction
TRPH	Total Recoverable Petroleum Hydrocarbons
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USBC	U.S. Bureau of the Census
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
VOC	volatile organic compound

EXECUTIVE SUMMARY

The 42d Air Base Wing (42 ABW) at Maxwell Air Force Base (MAFB), Alabama and the Army and Air Force Exchange Service (AAFES) have initiated a planning program at Gunter Annex (MAFB-Gunter Annex) to construct a new AAFES mini-mall to rectify various functional inadequacies within the existing shoppette and to consolidate other AAFES functions into one facility.

This environmental assessment (EA) evaluates the significance of potential environmental and human resource impacts associated with the implementation of the proposed action and No-Action Alternative at MAFB-Gunter Annex, Alabama. This EA describes existing conditions and potential impacts on environmental resources at the installation and within the region.

The proposed action is to construct a new 18,981 square foot (SF) AAFES mini-mall to replace the existing 5,632 SF shoppette (Building 820) and the 300 SF Auto Pride gasoline sales kiosk (Building 835), which are undersized, outdated, and no longer capable of providing adequate services to personnel and dependents associated with MAFB-Gunter Annex. The new mini-mall would also accommodate the concessions located in Building 401, which is programmed for demolition as part of a separate AF project. In addition to the shoppette, concessions, and gasoline sales, the one-story mini-mall would allocate 2,168 SF for a new restaurant.

Implementation of the proposed action would result in enhanced efficiency of AAFES operations by providing adequately sized and properly configured facilities, working space, and storage to meet AAFES' needs relative to existing customer demands. In addition, the proposed construction would consolidate common organizational and facility uses (i.e. concessions and shoppette functions), thereby reducing existing facility utilization inefficiencies. The mini-mall has been sited to minimize potential environmental and human resource impacts and has also been located in accordance with established land use plans and policies. In addition, the project would occur on previously disturbed land.

The EA evaluated 12 resource areas to identify potential environmental consequences: air quality, noise, land use, geological resources, water resources, biological resources, transportation and circulation, cultural resources, socioeconomics, environmental justice and protection of children, hazardous materials and wastes, and utilities. Impacts resulting from proposed construction activities would be temporary and minor; no long-term impacts would result from implementation of the proposed action at the installation. Direct, indirect, and cumulative impacts associated with the proposed action and No-Action Alternative at the installation would not be significant for all resource areas. Specific resource areas are summarized below.

Air Quality: Implementation of the proposed action would result in minor and temporary increases in criteria pollutant emissions associated with proposed construction activities. However, no long-term increase in criteria pollutant emissions would occur. Fugitive dust emissions (particulate matter less than 10 microns in diameter [PM_{10}]) would be reduced by

employing dust minimization practices. Implementation of the proposed action would not lead to an exceedance of *de minimis* thresholds and estimated criteria pollutant emissions would not violate the National Ambient Air Quality Standards (NAAQS). Determination of conformity to the Alabama State Implementation Plan is not required. Therefore, no significant impacts to air quality would occur as a result of implementation of the proposed action.

Noise: Under the proposed action, minor, temporary impacts to the noise environment in the vicinity of the proposed construction site would occur. The use of heavy equipment for site preparation and development (e.g., vegetation removal, grading, and back fill) could potentially generate noise levels above average ambient noise levels. However, noise levels would be typical of standard construction activities; would cease with the completion of proposed construction activities; and would only occur during normal working hours (i.e., between 7:00 A.M. and 5:00 P.M., Monday through Friday). Furthermore, sound levels could be reduced through the use of equipment sound mufflers. The operation and use of the proposed facility would not generate significant noise levels and the noise environment at the installation would continue to be dominated by vehicular traffic. Therefore, no significant impacts to the noise environment as a result of implementation of the proposed action would occur.

Land Use: Implementation of the proposed action would result in beneficial impacts to land use at MAFB-Gunter Annex. Use of the site selected for the proposed action is in accordance with the adopted Comprehensive Plan for MAFB-Gunter Annex and all project components will be designed and sited to be compatible with existing base land use. The proposed action would be centrally located within the Community Commercial and Community Services land use zones, thereby maintaining the functional relationship among community facilities. Furthermore, the site would be easily accessible to all family housing areas and within walking distance of the majority of the troop housing and community support areas. The site is also accessible to military personnel residing in the civilian community. Therefore, impacts to land use would not be significant.

Geological Resources: Construction activities associated with the proposed action would not significantly affect the geologic units underlying the installation as no unique geologic features or geologic hazards are present. Although ground disturbance would occur at the installation during construction, the construction would occur over previously disturbed surfaces. In addition, while proposed construction activities would require some minimal grading, no significant topographic features would be affected as a result of development associated with the proposed action. Soils would be disturbed during grading activities associated with proposed construction. However, implementation of Best Management Practices (BMPs) during construction would reduce impacts to soils associated with grading and clearing activities. In addition, standard erosion control measures (e.g., silt fencing, sediment traps, application of water sprays, and revegetation of disturbed soils) would be implemented to reduce potential impacts related to these characteristics. Therefore, no significant impacts to geological resources would occur as a result of implementation of the proposed action.

Water Resources: Construction would have minor localized (i.e., site-specific) effects on surface water hydrology; however, BMPs would be incorporated during construction to minimize potential erosion, runoff, and sedimentation. The proposed action would disturb greater than one acre of land at MAFB-Gunter Annex. Therefore, AAFES would contact the Alabama Department of Environmental Management (ADEM) Water Division and file a Notice of Registration for NPDES General Permit coverage. In addition, a Construction Best Management Practices Plan would be developed and implemented on-site for the duration of the construction period. Proposed construction activities would not occur within a 100-year floodplain zone. Because the site of the proposed action is already nearly impervious, no appreciable net increase in stormwater discharge volumes and intensities are anticipated following completion of the proposed action. Site disturbance and construction associated with the proposed action are not anticipated to affect groundwater resources. Construction operations would not reach depths that could affect groundwater resources. Furthermore, because no appreciable increase in impervious surface is anticipated, the impact to the recharge area of the surficial aquifer upon which the project site is located would be minimal. Therefore, no significant impacts to water resources would occur as a result of implementation of the proposed action.

Biological Resources: Construction associated with the proposed action would require vegetation removal (i.e. grass) in landscaped and previously disturbed areas. However, due to the lack of sensitive vegetation at the proposed site, proposed construction would not have significant impacts on vegetation. No Federally-listed endangered, threatened, or proposed species, or their designated critical habitat under the jurisdiction of the USFWS, occur at or in the vicinity of the proposed action. Furthermore, the Alabama Department of Conservation and Natural Resources concludes that the closest sensitive species to the proposed action is recorded as occurring in the Alabama River approximately four miles from the site of the proposed action. There are no delineated wetlands at MAFB-Gunter Annex. Therefore, there would be no impacts to biological resources as a result of implementation of the proposed action.

Transportation and Circulation: Implementation of the proposed action would result in a minor temporary increase in average daily traffic volumes on-base and within the vicinity of the installation during construction activities. However, construction-related traffic would constitute a small percentage of traffic in the region and most vehicles would remain on site for the duration of construction activities. From an operational standpoint, the proposed action would result in beneficial impacts to vehicle circulation. The proposed action would consolidate related uses that are currently located in buildings throughout the installation (i.e. concessions and shoppette), thereby reducing vehicle trips and overall congestion at the installation. In addition, the site of the proposed action is located in an ideal location for a retail establishment, facilitating efficient vehicular movement within and around the site from several streets. An increase in vehicle trips on adjacent roads may be realized as a result of the new mini-mall. However, the increase in traffic levels would not significantly affect safety and/or the capacity of roads at the installation and within the region. There would be no impacts to existing installation parking as adequate parking would be accommodated on-site.

Cultural Resources: The proposed construction would take place in an area previously disturbed by urban development. All regulations and policies relevant to the protection of cultural resources would be adhered to by AAFES during the construction process. However, no archaeological sites or architectural resources are known to exist at, or in the vicinity of, the proposed action. In addition, the Alabama State Historic Preservation Office concurs that the proposed action would have no effect on any known cultural resources listed or eligible for the National Register of Historic Places. Therefore, no significant impacts to cultural resources would occur as a result of implementation of the proposed action.

Socioeconomics: Employment levels and annual sales are projected to increase under the proposed action. Thus, while there would likely be a loss in sales tax revenues to the surrounding areas, as well as a minor loss in revenue to local and regional merchants from AAFES-owned and operated business sales, there would also be an offsetting benefit to the economy through increased state and local tax revenue from privately-owned and operated businesses within the mini-mall, the creation of 12 new jobs, and procurements for construction of the mini-mall. The multiplier effect would amplify these benefits, resulting in additional growth through reinvestment in the region. As a result of this offsetting activity, no significant adverse impacts to socioeconomic resources are anticipated.

Environmental Justice and Protection of Children: Under the proposed action, construction activities would be limited to the 5.4 acre site chosen for the mini-mall. Analyses of resource areas conclude that populations (including minority and low-income populations) within and outside the installation would not be significantly impacted. Therefore, implementation of the proposed action would not disproportionately impact minority or low-income populations. Implementation of the proposed action would not result in environmental health risks or safety risks to children, as no housing or facilities for children exist adjacent to, or in the immediate vicinity of, the site of the proposed action. Therefore, no significant impacts to children from health risks or safety risks would occur as a result of implementing the proposed action.

Hazardous Materials and Wastes: The proposed action is not expected to have an impact on the management of hazardous materials at MAFB-Gunter Annex and the proposed mini-mall operation is not considered a generator of hazardous materials or hazardous waste. The mini-mall operation would be expected to follow all mandates outlined in the various management plans that have been developed for the tenants of MAFB and MAFB-Gunter Annex. Review of documents describing the investigations and actions completed to date for the nearby former ST-004 IRP site indicates that the underground pipelines associated with the out-of-use AVGAS Distribution System remain in the area of the proposed action. Specifically, the pipelines, which are located approximately 3 feet bgs, run in a north-south direction through the area proposed for the construction of the building that would house the new mini-mall. Despite the ST-004 site being closed under the IRP and the Alabama UST Program, it is possible that the surrounding soils may have been contaminated prior to the draining and filling of the lines, and this contamination may still exist in the proposed construction site. In order to minimize the threat of exposure to potentially contaminated soils at the site, any soils excavated as part of the proposed action would be properly segregated by the construction contractor and then sampled by

representatives of the Environmental Section at MAFB. Sample results would determine whether soils can be reused on the site or require proper disposal off-site at a facility permitted to receive the soils pursuant to appropriate State of Alabama regulations. Furthermore, procedures to minimize dust during excavation and construction will be implemented on-site. Therefore, no significant impacts would occur as a result of implementing the proposed action.

Utilities: No daily limits are placed on MAFB-Gunter Annex regarding the consumption of electricity, natural gas, and potable water. In addition, regional facilities that would handle wastewater and solid waste from the proposed action have adequate capacity to accommodate anticipated minimal increases. Therefore, no significant impacts to utilities would occur as a result of implementation of the proposed action.

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FINDING OF NO SIGNIFICANT IMPACT

CONSTRUCTION OF ARMY AND AIR FORCE EXCHANGE SERVICE MINI-MALL
AT
MAXWELL AIR FORCE BASE, GUNTER ANNEX, ALABAMA

Agency: United States Air Force

Purpose: The 42d Air Base Wing (ABW) at Maxwell Air Force Base (MAFB), Alabama and the Army and Air Force Exchange Service (AAFES) have initiated a planning program at Gunter Annex (MAFB-Gunter Annex) to construct a new AAFES mini-mall to rectify various functional inadequacies within the existing shoppette and to consolidate other AAFES functions into one facility.

Proposed Action: The proposed action is to construct a new 18,981 SF AAFES mini-mall at MAFB-Gunter Annex, Alabama to replace the existing 5,632 SF shoppette (Building 820) and the 300 SF Auto Pride gasoline sales kiosk (Building 835), which are undersized, outdated, and no longer capable of providing adequate services to personnel and dependents associated with MAFB-Gunter Annex. The new mini-mall would also accommodate the concessions located in Building 401, which is programmed for demolition as part of a separate USAF project. Potential effects associated with that project will be evaluated separately under NEPA. In addition to the shoppette, concessions, and gasoline sales, the one-story mini-mall would allocate 2,168 SF for a new restaurant. Three 13,000-gallon underground storage tanks (USTs) containing gasoline would serve four pump stations under a canopy on the east side of the building. A drive-through service lane for the restaurant would be constructed at the south side of the building. The proposed action would require a total site area of 4.0 acres. Upon completion of the new mini-mall, Buildings 820, 835, and 401 would be vacated by AAFES and the facilities returned to the installation.

Summary of Findings: The Environmental Assessment (EA) provides an analysis of the potential environmental impacts resulting from implementing the proposed action. Evaluation of the proposed action indicates that the natural and human environment would not be significantly impacted by proceeding with construction of the new mini-mall. Specific resource areas are summarized below.

Air Quality: Implementation of the proposed action would result in minor and temporary increases in criteria pollutant emissions associated with proposed construction activities. However, no long-term increase in criteria pollutant emissions would occur. Implementation of the proposed action would not lead to an exceedance of *de minimis* thresholds and estimated criteria pollutant emissions would not violate the National Ambient Air Quality Standards (NAAQS). Determination of conformity to the Alabama State Implementation Plan is not required. Therefore, no significant impacts to air quality would occur as a result of implementation of the proposed action.

Noise: Under the proposed action, minor, temporary impacts to the noise environment in the vicinity of the proposed construction site would occur. However, noise levels would be typical of standard construction activities; would cease with the completion of proposed construction activities; and would only occur during normal working hours (i.e., between 7:00 A.M. and 5:00 P.M., Monday through Friday). The operation and use of the proposed facility would not generate significant noise levels and the noise environment at the installation would continue to be dominated by vehicular traffic. Therefore, no significant impacts to the noise environment as a result of implementation of the proposed action would occur.

Land Use: Implementation of the proposed action would result in beneficial impacts to land use at MAFB-Gunter Annex. Use of the site selected for the proposed action is in accordance with the adopted Comprehensive Plan for MAFB-Gunter Annex and all project components will be designed and sited to be compatible with existing base land use. The proposed action would be centrally located within the Community Commercial and Community Services land use zones, thereby maintaining the functional relationship among community facilities. Furthermore, the site would be easily accessible to all family housing areas and within walking distance of the majority of the troop housing and community support areas. The site is also accessible to military personnel residing in the civilian community. Therefore, impacts to land use would not be significant.

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Water Resources: Construction would have minor localized (i.e., site-specific) effects on surface water hydrology; however, BMPs would be incorporated during construction to minimize potential erosion, runoff, and sedimentation. The proposed action would disturb greater than one acre of land at MAFB-Gunter Annex. Therefore, AAFES would contact the ADEM Water Division and file a Notice of Registration for NPDES General Permit coverage. In addition, a Construction Best Management Practices Plan would be developed and implemented on-site for the duration of the construction period. Proposed construction activities would not occur within a 100-year floodplain zone. Because the site of the proposed action is already nearly impervious, no appreciable net increase in stormwater discharge volumes and intensities are anticipated following completion of the proposed action. Site disturbance and construction associated with the proposed action are not anticipated to affect groundwater resources. Construction operations would not reach depths that could affect groundwater resources. Furthermore, because no appreciable increase in impervious surface is anticipated, the impact to the recharge area of the surficial aquifer upon which the project site is located would be minimal. Therefore, no

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Cultural Resources: The proposed construction would take place in an area previously disturbed by urban development. All regulations and policies relevant to the protection of cultural resources would be adhered to by AAFES during the construction process. However, no archaeological sites or architectural resources are known to exist at, or in the vicinity of, the proposed action. In addition, the Alabama State Historic Preservation Office concurs that the proposed action would have no effect on any known cultural resources listed or eligible for the National Register of Historic Places. Therefore, no significant impacts to cultural resources would occur as a result of implementation of the proposed action.

Socioeconomics: Employment levels and annual sales are projected to increase under the proposed action. Thus, while there would likely be a loss in sales tax revenues to the surrounding areas, as well as a minor loss in revenue to local and regional merchants from AAFES-owned and operated business sales, there would also be an offsetting benefit to the economy through increased state and local tax revenue from privately-owned and operated businesses within the mini-mall, the creation of 12 new jobs, and procurements for construction of the mini-mall. The multiplier effect would amplify these benefits, resulting in additional growth through reinvestment in the region. As a result of this offsetting activity, no significant adverse impacts to socioeconomic resources are anticipated.

Environmental Justice and Protection of Children: Under the proposed action, construction activities would be limited to the 5.4 acre site chosen for the mini-mall. Analyses of resource areas conclude that populations (including minority and low-income populations) within and outside the installation would not be significantly impacted. Therefore, implementation of the proposed action would not disproportionately impact minority or low-income populations. Implementation of the proposed action would not result in environmental health risks or safety risks to children, as no housing or facilities for children exist adjacent to, or in the immediate vicinity of, the site of the proposed action. Therefore, no significant impacts to children from health risks or safety risks would occur as a result of implementing the proposed action.

Hazardous Materials and Wastes: The proposed action is not expected to have an impact on the management of hazardous materials at MAFB-Gunter Annex and the proposed mini-mall operation is not considered a generator of hazardous materials or hazardous waste. Review of documents describing the investigations and actions completed to date for the nearby former ST-004 IRP site indicates that the underground pipelines associated with the out-of-use AVGAS Distribution System remain in the area of the proposed action. Specifically, the pipelines, which are located approximately 3 feet bgs, run in a north-south direction through the area proposed for the construction of the building that would house the new mini-mall. Despite the ST-004 site being closed under the IRP and the Alabama UST Program, it is possible that the surrounding soils may have been contaminated prior to the draining and filling of the lines, and this contamination may still exist in the proposed construction site. In order to minimize the threat of exposure to potentially contaminated soils at the site, any soils excavated as part of the proposed action would be properly segregated by the construction contractor and then sampled by representatives of the Environmental Section at MAFB. Sample results would determine whether soils can be reused on the site or require proper disposal off-site at a facility permitted to receive the soils pursuant to appropriate State of Alabama regulations. Furthermore, procedures to minimize dust during excavation and construction will be implemented on-site. Therefore, no significant impacts would occur as a result of implementing the proposed action.

Utilities: No daily limits are placed on MAFB-Gunter Annex regarding the consumption of electricity, natural gas, and potable water. In addition, regional facilities that would handle wastewater and solid waste from the proposed action have adequate capacity to accommodate anticipated minimal increases. Therefore, no significant impacts to utilities would occur as a result of implementation of the proposed action.

Finding of No Significant Impact (FONSI): After review of the EA prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations, and Air Force Instruction 32-7061, I have determined that the proposed action would not have significant adverse impacts on the natural and human environment; therefore, an Environmental Impact Statement does not need to be prepared.

John A Neubauer

JOHN A. NEUBAUER
Colonel, USAF
Commander, 42d Air Base Wing

10 OCT 03

Date

ENVIRONMENTAL ASSESSMENT

PROPOSED CONSTRUCTION OF ARMY AND AIR FORCE EXCHANGE SERVICE MINI-MALL AT MAXWELL AIR FORCE BASE-GUNTER ANNEX, ALABAMA

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1 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

Maxwell Air Force Base is a United States Air Force Base (AFB) under the Air Education and Training Command (AETC). Maxwell AFB (MAFB) currently occupies approximately 2,475 acres of lands in Montgomery County in Central Alabama. Gunter Annex (MAFB-Gunter Annex) is located approximately six miles northeast of MAFB and contains approximately 365 acres (Figure 1-1). MAFB and MAFB-Gunter Annex are headquarters to Air University (AU) and the 42d Air Base Wing (42 ABW). The 42 ABW's primary mission is to provide support to AU, the Air Force's professional military education center.

The Army and Air Force Exchange Service (AAFES) operates several facilities at MAFB-Gunter Annex in support of a regional population of approximately 29,713 people (includes military, military dependents, and civilian employees). Building 820 is a 5,632 square foot (SF) shoppette. Building 835 is a 300 SF Auto Pride gasoline sales kiosk adjacent to Building 820. Building 401 is a 5,826 SF concessions facility which includes a laundry, drycleaners, alterations shop, and beauty and barber shops (Figure 1-2).

Building 820 was constructed in 1941 and renovated in 1998 to house the AAFES shoppette. Despite the renovations, the building is undersized and unsuitable to adequately support current sales levels. Building 401 is programmed to be demolished in order to provide space for the nearby chapel and the Non-commissioned Officers' Academy. In order to provide space for the concessions that are located in Building 401, and to remedy the issues associated with the existing shoppette, construction of a new mini-mall facility has been proposed.

1.2 LOCATION OF THE PROPOSED ACTION

The proposed action would take place at MAFB-Gunter Annex in Montgomery, Alabama. The site for the proposed construction is in the north central portion of the installation within the Community Support land use zone (Figure 1-2). The preferred site is a 5.4-acre parcel of undeveloped land just east of the existing shoppette. It is bounded to the north by the commissary parking lot, to the east by North Turner Boulevard, to the west by the existing shoppette parking lot, and to the south by Spaatz Street.

1.3 DECISION TO BE MADE AND THE DECISION MAKER

The decision to be made with respect to the proposed action is whether a new AAFES mini-mall will be constructed at MAFB-Gunter Annex. The purpose of this Environmental Assessment (EA) is to evaluate the potential impacts upon the natural and built environment, should the proposed action be implemented.

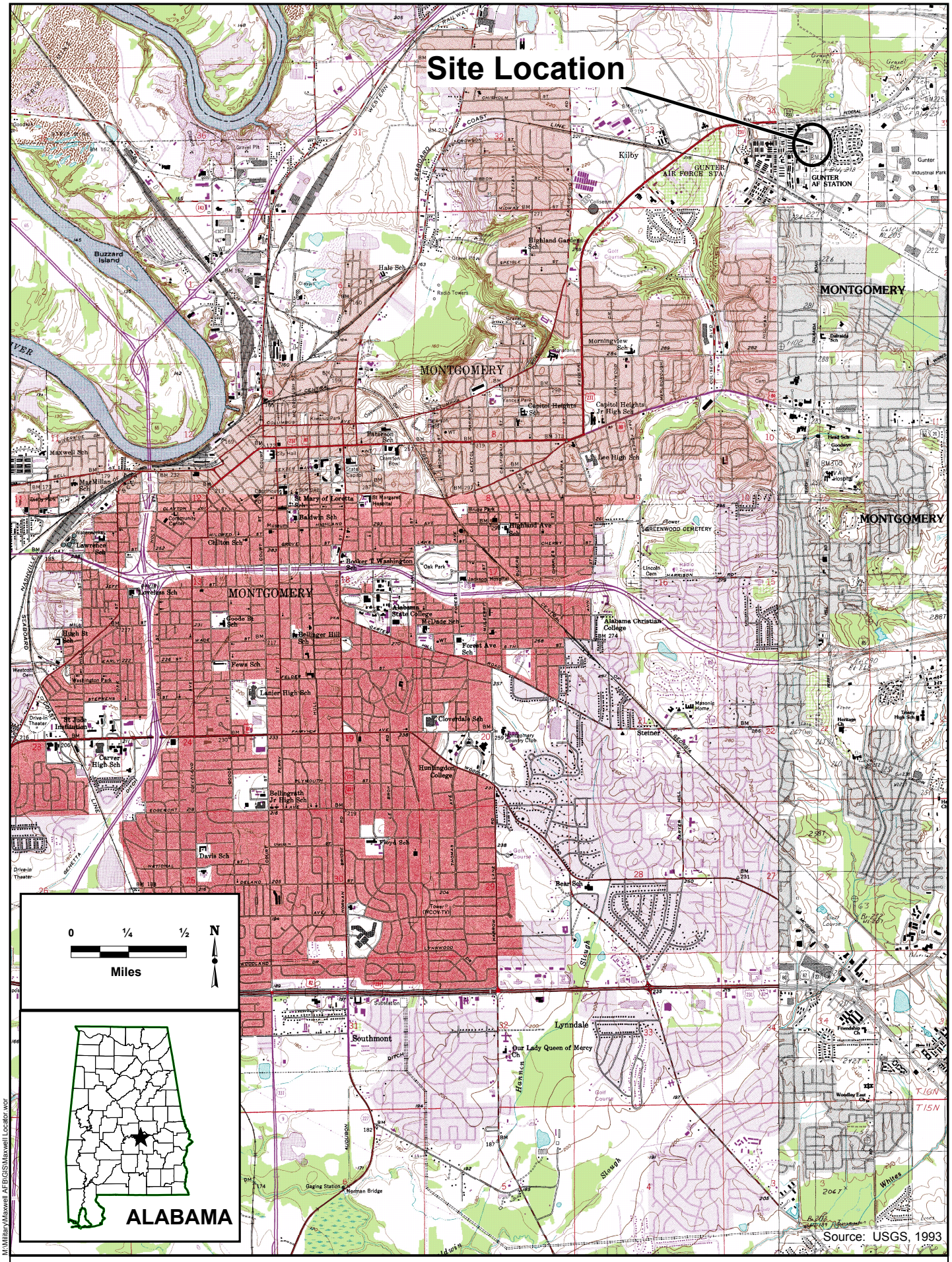

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Figure 1-1 Regional Location Map
Maxwell Air Force Base - Gunter Annex, AL

AAFES

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Project Manager: K. Martin
Prepared By: A. Long
Project No: P-2047

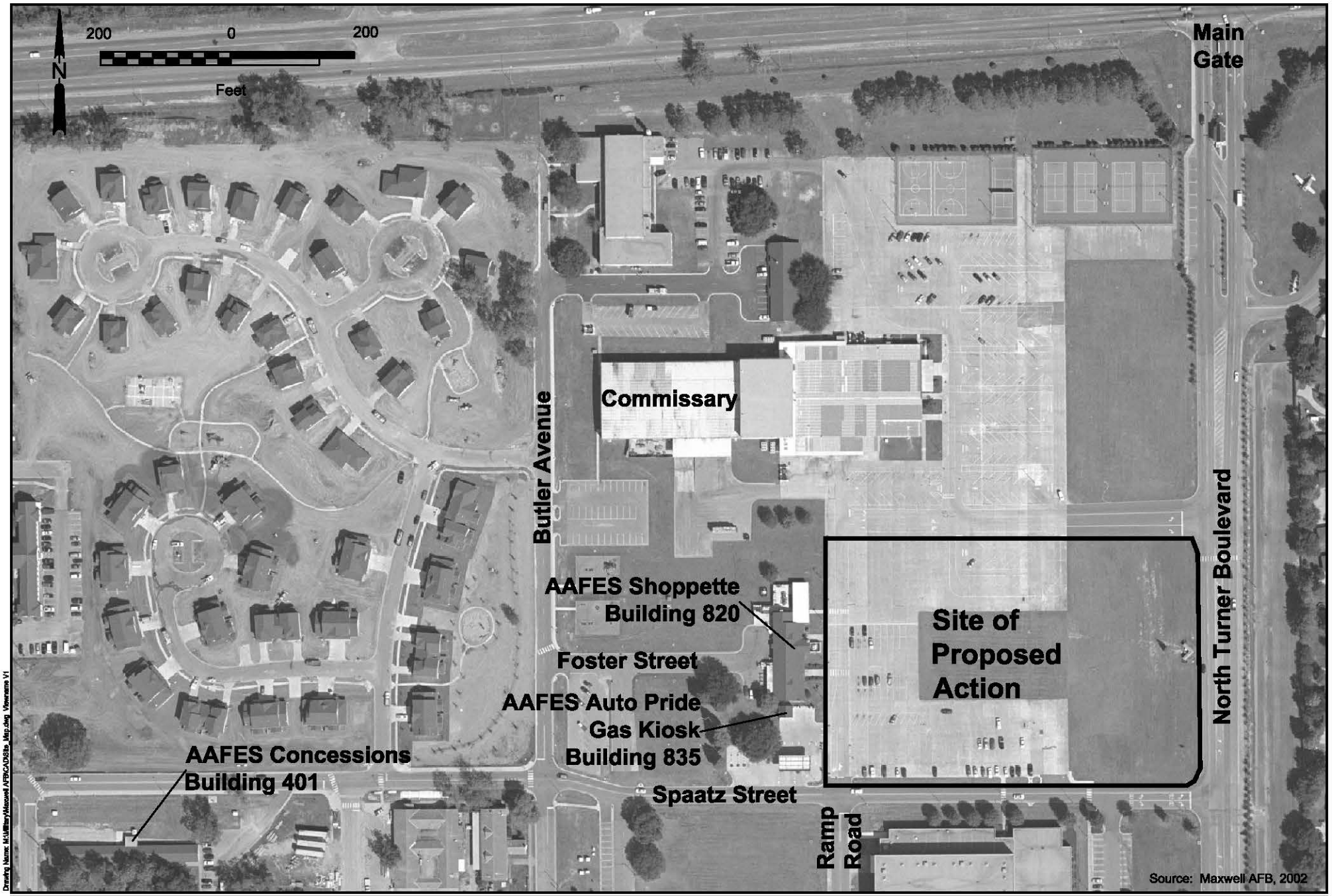

Figure 1-2 Site Map
Maxwell Air Force Base-Gunter Annex, AL

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Project Manager: K. Martin
Prepared By: A. Long
Project No: 2047

Based upon the analysis documented in this EA, the Air Force will make one of the following decisions regarding the proposed action:

1. Choose the proposed action (as described in Section 2.0) and sign a Finding of No Significant Impact (FONSI), allowing implementation of the proposed action;

2. Initiate the preparation of an Environmental Impact Statement (EIS) is it is determined that significant impacts to the affected environment would occur upon implementation of the proposed action; or

3. Select the no-action alternative, whereby no changes to existing conditions would occur.

1.4 SCOPE OF THE ENVIRONMENTAL REVIEW

The intent of this EA is to identify potential impacts associated with the proposed action and alternatives to the proposed action, including the no-action alternative. In doing so, this EA will evaluate the following resource categories:

- Air Quality
- Noise
- Land Use
- Geologic Resources
- Water Resources
- Biological Resources
- Transportation and Circulation
- Cultural Resources
- Socioeconomics
- Environmental Justice and Protection of Children
- Hazardous Materials and Waste
- Utilities

This EA will also address cumulative impacts, and the compatibility of the proposed action and alternatives with the objectives of federal, regional, state, and local land use plans, policies, and controls. The relationship between the short-term use of the environment and its long-term productivity, as well as an assessment of any irreversible and irretrievable commitments of resources associated with the alternative, will also be evaluated.

1.5 APPLICABLE REGULATORY REQUIREMENTS

The Environmental Impact Analysis Process (EIAP) is the process by which Federal agencies facilitate compliance with environmental regulations. The primary legislation affecting these agencies' decision-making process is the National Environmental Policy Act (NEPA) of 1969. This act and other facets of the EIAP are described below.

1.5.1 National Environmental Policy Act

This act requires that Federal agencies consider potential environmental consequences of proposed actions in their decision-making process. The intent of NEPA is to protect, restore, or enhance the environment through well-informed Federal decisions. The Council on Environmental Quality (CEQ) was established under NEPA for the purpose of implementing and overseeing Federal policies as they relate to this process. In 1978, the CEQ issued *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations [CFR] §1500-1508). These regulations specify that an EA be prepared to:

- briefly provide sufficient analysis and evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a FONSI;
- aid in an agency's compliance with NEPA when an EIS is deemed unnecessary; and
- facilitate EIS preparation when one is necessary.

Further, to comply with other relevant environmental requirements and to assess potential environmental impacts, the EIAP and the decision-making process involve a thorough examination of all environmental issues pertinent to the proposed action.

1.5.2 Interagency and Intergovernmental Coordination for Environmental Planning

NEPA and CEQ regulations require intergovernmental notifications prior to making any statement of potential environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), the USAF, in coordination with AAFES, notifies relevant federal, state, and local agencies and allows them to make known their environmental concerns specific to the proposed action. Comments from these entities are addressed and incorporated into the environmental impact analysis process.

1.6 ORGANIZATION OF THE DOCUMENT

The purpose of this EA is to evaluate any potential impacts associated with the proposed action and the alternatives to the proposed action, including the no-action alternative. Section 2 of this document provides a description of the proposed action and alternatives. Section 3 provides a baseline assessment of specific resource areas within the affected environment. These resource areas include specific elements of both the natural and built environment. Finally, Section 4 evaluates the potential impacts of both the proposed action and the alternatives on the resource areas described in Section 3.

2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

Section 2 describes the proposed action and alternatives to the proposed action, including the no-action alternative. This section discusses the history of the formulation of alternatives, including those eliminated from further consideration. The proposed action and all other alternatives are described in detail, and a comparison matrix is provided that summarizes the effects of all alternatives. Finally, the preferred alternative is identified.

In general, the proposed action involves constructing a new 18,981 SF mini-mall at MAFB-Gunter Annex, Alabama. The new mini-mall would contain retail (including gasoline sales), administrative, stockroom space, restaurant, and concessions to include a laundry, dry cleaning, alterations shop, barber shop, and beauty shop.

2.2 HISTORY OF THE FORMULATION OF ALTERNATIVES

Following the programming of Building 401 for demolition by the USAF, MAFB-Gunter Annex and AAFES began evaluating options for relocation of the concessions located within the building. The need to rectify the functional inadequacies within the existing shoppette (Building 820) and the associated gas sales area (Building 835) led decision makers to evaluate opportunities to collocate the concessions and shoppette functions in one facility at MAFB-Gunter Annex.

2.3 IDENTIFICATION OF ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

Decision makers from AAFES and MAFB-Gunter Annex evaluated the feasibility of constructing the mini-mall at locations throughout MAFB-Gunter Annex. However, two reasons eliminated all but the preferred site (Figure 1-2) from further consideration in this EA. The first was a requirement of installation planners to locate the mini-mall within the Community Support Services Land Use Zone at MAFB-Gunter Annex. The preferred site is the only developable and available parcel within the Community Support Services Land Use Zone that accommodates the proposed action. Secondly, no other parcels were available outside the Community Support Services Land Use Zone that were large enough to accommodate the project or that could be easily developed to adequately support such an establishment.

2.4 DETAILED DESCRIPTION OF THE PROPOSED ACTION

The proposed action is to construct a new 18,981 SF AAFES mini-mall at MAFB-Gunter Annex, Alabama to replace the existing 5,632 SF shoppette (Building 820) and the 300 SF Auto Pride gasoline sales kiosk (Building 835), which are undersized, outdated, and no longer capable of providing adequate services to personnel and dependents associated with MAFB-Gunter Annex (Figure 2-1). The new mini-mall would also accommodate the concessions located in Building 401, which is programmed for demolition as part of a separate USAF project. Potential effects associated with that project will be evaluated separately under NEPA.

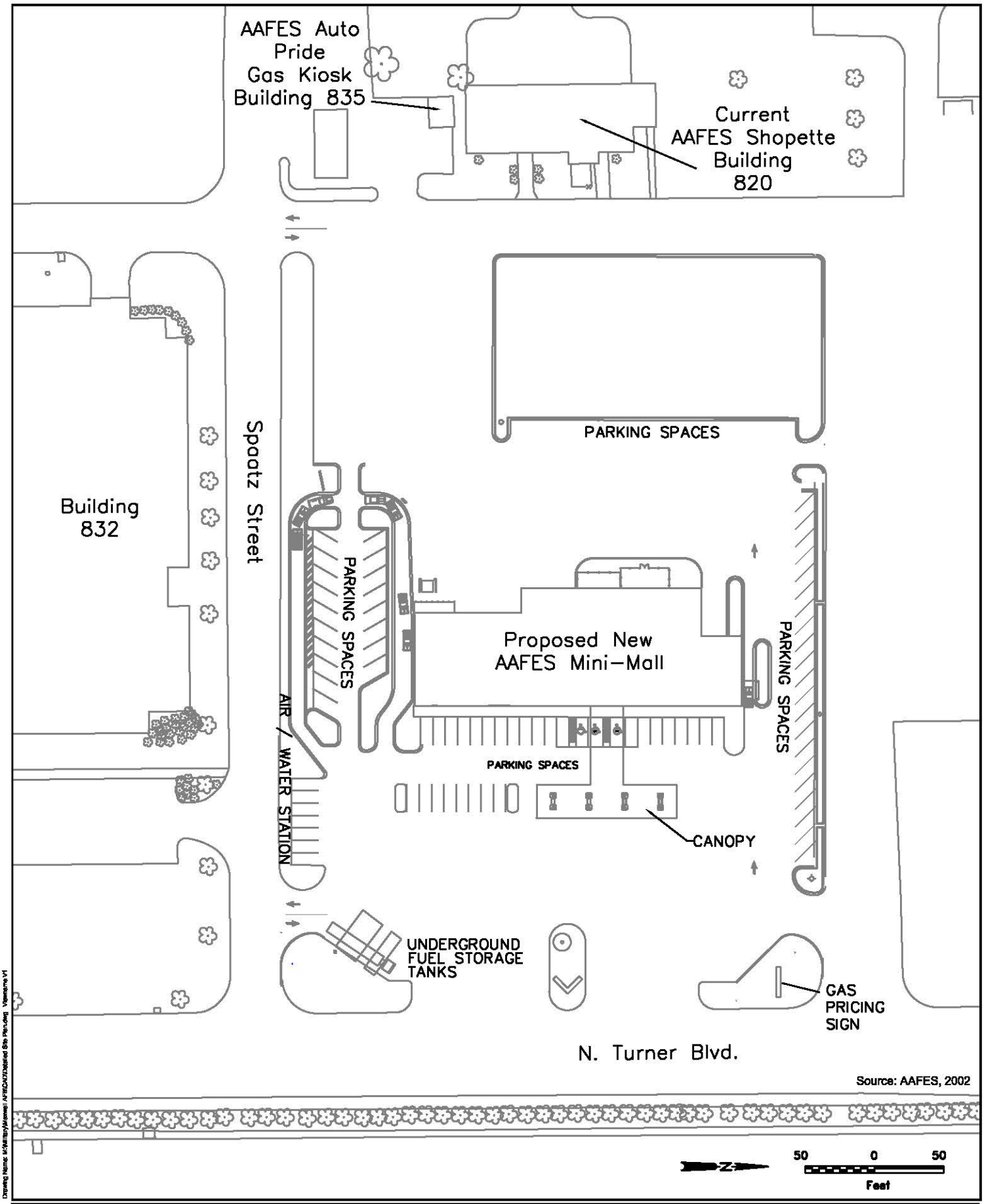


Figure 2-1 Detailed Site Plan of Proposed Action
Maxwell Air Force Base-Gunter Annex, AL

Creation Date: 06/10/2002
Rev. Date: __/__/____
Project Manager: K. Martin
Prepared By: A. Long
Project No: 2047

In addition to the shoppette, concessions, and gasoline sales, the one-story mini-mall would allocate 2,168 SF for a new restaurant. The concessions to be relocated from Building 401 would continue to provide a fee to AAFES to occupy space in the mini-mall. These businesses pay applicable state and local taxes and customers pay sales tax on goods and services purchased. The restaurant would either be operated by AAFES as a franchise or would be owned by AAFES. One 20,000-gallon and one 15,000 gallon underground storage tank (UST) both containing gasoline would serve four pump stations under a canopy on the east side of the building. A drive-through service lane for the restaurant would be constructed at the south side of the building. Approximately 130 parking spaces encompassing 120,000 SF of pavement would surround the building. The proposed action would require a total site area of 4.0 acres. The preferred site for the proposed action is a 5.4-acre site just east of the existing shoppette, bounded to the north by the commissary parking lot, to the west by Building 820, to the east by North Turner Boulevard, and to the south by Spaatz Street (Figure 2-1). Access to the new mini-mall would be primarily from Spaatz Street on the south side of the site and from a new access road to be constructed along the north side of the site. Both Spaatz Street and the new access road connect to North Turner Boulevard on the east side of the site running north-south. Upon completion of the new mini-mall, Buildings 820, 835, and 401 would be vacated by AAFES and the facilities returned to the installation.

Figure 2-2 Photograph of Proposed Site for New AAFES Mini-mall
(view northeast towards main gate, Spaatz Street in foreground)

Under the proposed action, the shoppette and concessions functions would maintain their current levels of employment (17 and 8 employees, respectively). However, with the inclusion of the new restaurant, overall employment would increase by 12 employees for a total of 37 employees at the mini-mall. Current total annual salary and benefits associated with the shoppette and concessions total $480,592. Under the proposed action, the estimated total annual salary and

benefits in FY 2003 associated with the shoppette, concessions, and restaurant function would be approximately $784,384. Average monthly sales are expected to increase once the new mini-mall is opened. The FY 1999 average monthly sales figure for the shoppette and concessions was $397,000. Average monthly sales in FY 2003, after implementation of the proposed action, are projected to be $561,000.

From an operations standpoint, the proposed action would not generate hazardous waste, but the retail operations would stock consumer and auto care items for personal use that might contain hazardous substances. Such substances, if spilled or otherwise unintentionally released, could be considered hazardous waste.

2.5 DESCRIPTION OF THE NO-ACTION ALTERNATIVE

The No-Action Alternative would maintain the status quo at MAFB-Gunter Annex. The existing shoppette and Auto Pride gasoline sales kiosk would continue to operate as they do currently. The preferred site identified on Figure 2-1 would remain unchanged. Personnel and dependents associated with the installation would continue to use the existing shoppette and Auto Pride gasoline sales kiosk, which are undersized and outdated. Over the long-term, use of these existing facilities would result in overall customer dissatisfaction and low morale, ultimately degrading the ability of AAFES to provide high quality facilities and services to military members and their dependents.

2.6 COMPARISON MATRIX OF ENVIRONMENTAL EFFECTS OF PROPOSED ACTION AND NO-ACTION ALTERNATIVES

Table 2-1 summarizes the potential environmental effects, including cumulative effects, of the proposed action and the no-action alternatives upon the resource areas analyzed in this EA. The effects are described in Section 4. The table shows that the proposed action would have no appreciable effect on these resource areas.

The no-action alternative would maintain the status quo at MAFB-Gunter Annex, resulting in no effects to resource areas.

Table 2-1 Matrix of Environmental Effects of the Proposed Action and No-Action Alternative

Area of Potential Effect	Proposed Action				No-Action Alternative			
	Positive Effect	No Effect	Minor Adverse Effect	Significant Adverse Effect	Positive Effect	No Effect	Minor Adverse Effect	Significant Adverse Effect
Air Quality		◆				◆		
Noise		◆				◆		
Land Use		◆				◆		
Geologic Resources		◆				◆		
Water Resources		◆				◆		
Biological Resources		◆				◆		
Transportation/Circulation		◆				◆		
Cultural Resources		◆				◆		
Socioeconomics		◆				◆		
Environmental Justice		◆				◆		
Hazardous Materials and Wastes		◆				◆		
Utilities		◆				◆		

3 AFFECTED ENVIRONMENT

This section describes relevant existing environmental conditions for resources potentially affected by the proposed action and alternatives described in Section 2. This description of the environment that may be affected provides a framework for understanding the potential direct, indirect, and cumulative effects of the proposed action and the no-action alternative.

As directed by guidelines contained in NEPA, CEQ regulations, and Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*, the description of the affected environment focuses only on those resource areas potentially subject to impacts and should be commensurate with the anticipated level of environmental impact.

This EA analyzes potential environmental effects for the following resource areas: air quality, noise, land use, geological resources, water resources, biological resources, transportation and circulation, cultural resources, socioeconomics, environmental justice and protection of children, hazardous materials and wastes, and utilities. The following subsections contain definitions of each resource, a description of the associated region of influence (ROI) for each resource, and existing conditions for each resource within the associated ROI.

3.1 AIR QUALITY

3.1.1 Definition of Resource

Air quality is defined as the ambient air concentrations of specific criteria pollutants determined by the USEPA to be of concern to the health and welfare of the general public. These criteria pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}), and lead (Pb). To establish limits on pollutant concentrations, the USEPA has created National Ambient Air Quality Standards (NAAQS) to identify the maximum allowable concentrations of criteria pollutants that are considered safe, with an additional adequate margin of safety, to protect human health and welfare (Table 3-1). Depending on the type of pollutant, these maximum concentrations may not be exceeded at any time, or may not be exceeded more than once per year (USEPA 2002a).

3.1.1.1 Criteria Pollutants

Criteria pollutants affecting air quality in a given region can be characterized as being either stationary or mobile sources. Stationary sources of emissions, also known as point sources, are typified by emissions from smokestacks. Mobile sources of emissions, also termed non-point sources, would include emissions from cars and airplanes. Air quality within a region is a function of the type and amount of pollutants emitted, size and topography of the air basin, and prevailing meteorological conditions.

Table 3-1 National Ambient Air Quality Standards

POLLUTANT	AVERAGING TIME	NAAQS	
		Primary	Secondary
Ozone (O_3)	8 Hour(1)	0.08 ppm (157 µg/m^3)	Same as Primary Standards
	1 Hour	0.12 ppm (235 µg/m^3)	
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m^3)	Same as Primary Standards
	1 Hour	35 ppm (40 mg/m^3)	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.053 ppm (100 µg/m^3)	Same as Primary Standards
Sulfur Dioxide (SO_2)	Annual Average	0.03 ppm (80 µg/m^3)	—
	24 Hour	0.14 ppm (365 µg/m^3)	—
	3 Hour	—	0.50 ppm (1,300 µg/m^3)
Suspended Particulate Matter Less than 10 Microns in Diameter (PM_{10})	Annual Arithmetic Mean	50 µg/m^3	Same as Primary Standards
	24 Hour	150 µg/m^3	
Suspended Particulate Matter Less than 2.5 Microns in Diameter ($PM_{2.5}$)(1)	Annual Arithmetic Mean	15 µg/m^3	Same as Primary Standards
	24 Hour	65 µg/m^3	
Lead (Pb)	Calendar Quarter	1.5 µg/m^3	Same as Primary Standards

ppm – parts per million
µg/m^3 – micrograms per cubic meter
mg/m^3 – milligrams per cubic meter

(1) The O_3 8-hour standard and the $PM_{2.5}$ standards are included for informational purposes only. In 1999, a federal court ruling blocked implementation of these standards, which USEPA proposed in 1997. The USEPA has asked the U.S. Supreme Court to reconsider that decision.

Source: USEPA 2001a.

Ozone (O_3)

The majority of ground-level O_3 (smog) is formed as a result of complex photochemical reactions in the atmosphere between volatile organic compounds (VOCs), nitrogen oxides (NO_x), and oxygen. VOCs and NO_x are considered to be precursors to the formation of O_3, which is a highly reactive gas that can damage lung tissue and affect respiratory function. While O_3 in the lower atmosphere is considered to be a damaging air pollutant, O_3 in the upper atmosphere is beneficial, as it protects the earth from harmful ultraviolet radiation. However, atmospheric processes preclude ground-level O_3 from reaching the upper atmosphere (USEPA 1999a).

Carbon Monoxide (CO)

CO is a colorless, odorless, poisonous gas produced by the incomplete combustion of fossil fuels. Elevated levels of CO can result in harmful health effects, especially for the young and elderly, and can also contribute to global warming (USEPA 1999a).

Nitrogen Dioxide (NO_2)

NO_2 is a brownish, highly reactive gas produced primarily as a result of the burning of fossil fuels. NO_2 can also lead to the formation of O_3 in the lower atmosphere. NO_2 can cause respiratory ailments, especially in the young and elderly, and can lead to degradations in the health of aquatic and terrestrial ecosystems (USEPA 1999a).

Sulfur Dioxide (SO_2)

SO_2 is produced primarily from the combustion of coal and oil by steel mills, pulp and paper mills, and from non-ferrous smelters. High concentrations of SO_2 can aggravate existing respiratory and cardiovascular diseases in asthmatics and others that suffer from emphysema or bronchitis. SO_2 also contributes to acid rain, which can in turn lead to the acidification of lakes and streams (USEPA 1999a).

Particulate Matter (PM_{10})

PM_{10} is typically composed of dust, ash, soot, smoke, or liquid droplets emitted into the air. Fires, use of unpaved roads, construction activities, and natural sources (wind and volcanic eruptions) can contribute to increased PM_{10} concentrations. PM_{10} particles can be inhaled into the respiratory system, leading to the possible aggravation of existing lung diseases (USEPA 1999a).

Lead (Pb)

Sources of lead include pipes, fuel, and paint, though the use of lead in these materials has declined dramatically in recent years. Lead can be inhaled directly or ingested indirectly by consuming lead-contaminated food, water, or dust. Fetuses and children are most susceptible to lead poisoning, which can result in heart disease and nervous system damage (USEPA 1999a).

3.1.1.2 Clean Air Act (CAA) Amendments

Through the CAA Amendments of 1990, the USEPA has required each state to prepare a State Implementation Plan (SIP), which describes how each state will achieve compliance with the NAAQS. The SIP is a compilation of goals, strategies, schedules, and enforcement actions that will help lead a state into compliance with the NAAQS. Alabama has adopted the NAAQS. Areas not in compliance with the NAAQS can be declared nonattainment areas by the USEPA, or the appropriate state or local agency. Areas in compliance with the NAAQS are defined as being in attainment. Where insufficient air quality monitoring data exist to determine attainment status for an area, the region is designated as unclassified.

The criteria for nonattainment status varies by pollutant: 1) an area is in nonattainment for O_3 if the NAAQS have been exceeded more than three discontinuous times in 3 years; and 2) an area is in nonattainment for any other pollutant if the NAAQS have been exceeded more than once per year.

The CAA established certain statutory requirements for federal agencies with proposed federal activities to demonstrate conformity of the proposed activities with the SIP for attainment of the NAAQS. Under these rules, certain actions are exempt from conformity determinations, while others are presumed to be in conformity if total project emissions are below *de minimis* levels established under 40 CFR 93.153. *De minimis* levels (in tons per year) vary from pollutant to pollutant and are also subject to the severity of the nonattainment status.

3.1.2 Existing Conditions

3.1.2.1 Climate

MAFB-Gunter Annex is situated in a humid subtropical climate regime. The average annual high temperature is approximately 75 degrees Fahrenheit (°F), ranging between an average summer high of 91 °F and an average winter high of 60 °F. Winters in the region are temperate, with subfreezing temperatures and snow rarely occurring. The MAFB-Gunter Annex area (Montgomery) averages approximately 53 inches of rain a year, with the majority of rain falling in the late winter and spring months. Winds average approximately 6 miles per hour (mph), typically from the east or west, depending upon the time of year.

3.1.2.2 Regional Setting

MAFB-Gunter Annex is located in Montgomery County, Alabama, within Air Quality Control Region (AQCR) 58 (The Columbus [GA] - Phenix City [AL] Interstate AQCR). All of Montgomery County is in attainment or unclassified for all of the NAAQS (USEPA 2002a). No Prevention of Significant Deterioration (PSD) Class I areas are located within the vicinity of MAFB-Gunter Annex (USEPA 2002b).

3.1.2.3 Air Emissions Inventory

The 2000 Air Emissions Inventory (AEI) categorizes emissions from all stationary sources at MAFB-Gunter Annex (Table 3-2). Primary stationary sources include emissions from boilers, furnaces, and small hot water heaters used for heating purposes and power production. MAFB-Gunter Annex is considered a minor source of emissions and are therefore not required to obtain a synthetic minor operating permit or a CAA Title V major source operating permit (ADEM, 2003).

Table 3-2 2001 Actual Stationary Emissions at MAFB-Gunter Annex (tons/year)

CO	VOCs	NO_x	SO_2	PM_{10}	Total HAPs
3.7	17.5	5.3	0.1	0.4	2.1

Source: MAFB 2001a.
Note: HAPs = Hazardous Air Pollutants

3.2 NOISE

3.2.1 Definition of Resource

Noise can be defined as any sound that interferes with communication, is intense enough to damage hearing, or is otherwise annoying (Federal Interagency Committee on Noise [FICON] 1992). Human response to noise varies according to the type and characteristics of the noise source, distance between the source and the receptor, sensitivity of the receptor, and time of day.

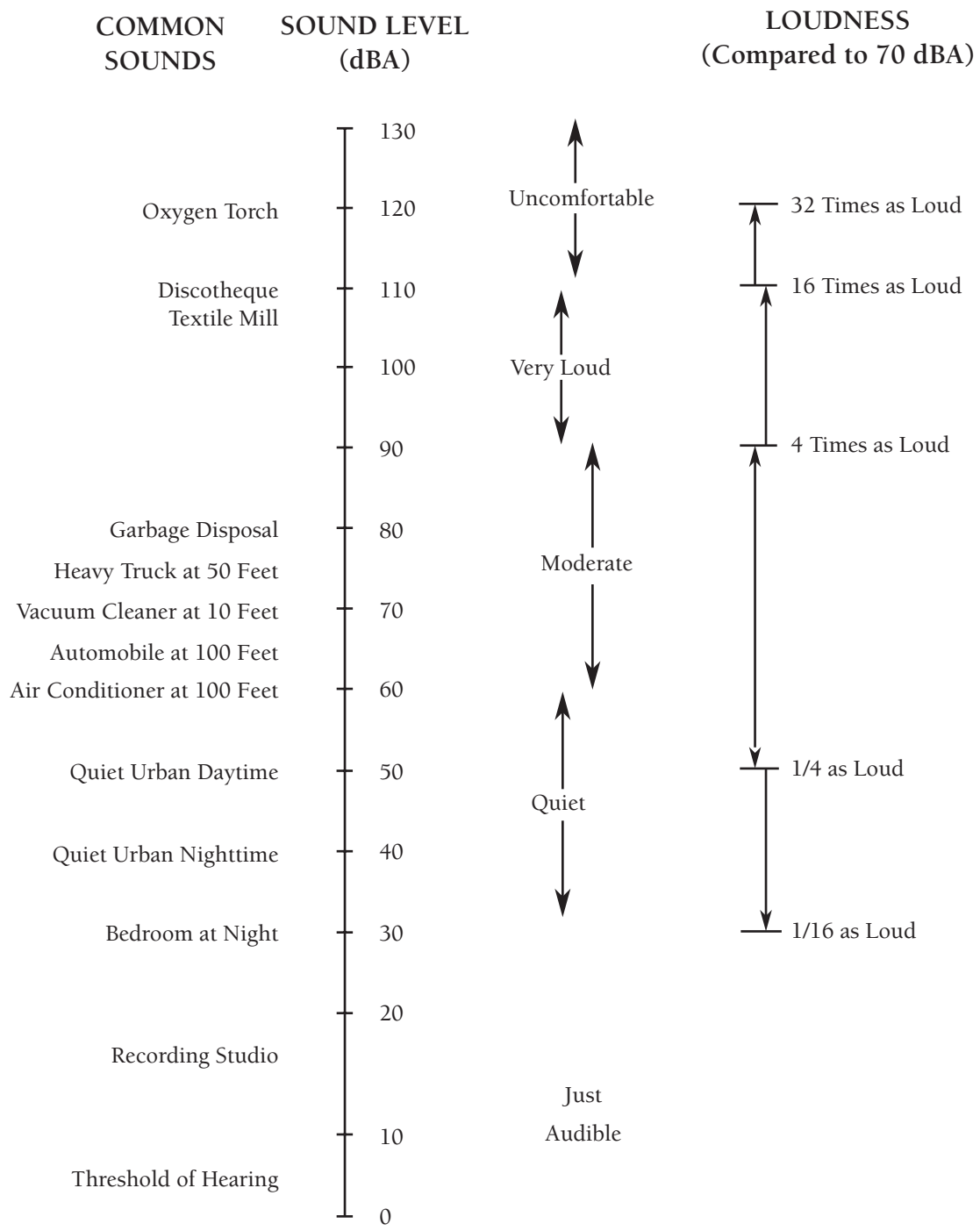
The physical characteristics of sound include its level, frequency, and duration. Sound is commonly measured with instruments that record instantaneous sound levels in decibels (dB), which are based on a logarithmic scale (e.g., a 10 dB increase corresponds to a 100 percent increase in perceived sound). Under most conditions, a change of 5 dB is required for humans to perceive a change in the noise environment (USEPA 1973).

Sound measurements are often weighted to emphasize those frequencies heard especially well by the human ear. While the range of frequencies across which humans hear extends from 20 to 20,000 Hertz, the human ear is most sensitive to sounds in range of 1,000 and 8,000 Hertz, with sensitivity diminishing at lower and higher frequencies. As a result, A-weighted sound level measurements (dBA), which de-emphasize the high and low frequencies and emphasize the middle frequencies, are used to characterize sound levels that are heard especially well by the human ear. As seen in Figure 3-1, human hearing ranges from approximately 20 dBA (the threshold of hearing) to 120 dBA (the threshold of pain*)*.

The sound exposure level (SEL) is a measure of the physical energy associated with a noise event that incorporates both the intensity and duration of the event. For example, the SEL associated with an aircraft overflight would be comprised of noise levels for the period of time when the aircraft is approaching (noise levels are increasing), the instant when the aircraft is directly overhead (noise levels are at a maximum), and the period of time when the aircraft is departing (noise levels are decreasing). As the SEL also considers the duration of a noise event, SEL values are typically higher than the maximum noise level measured for most noise events.

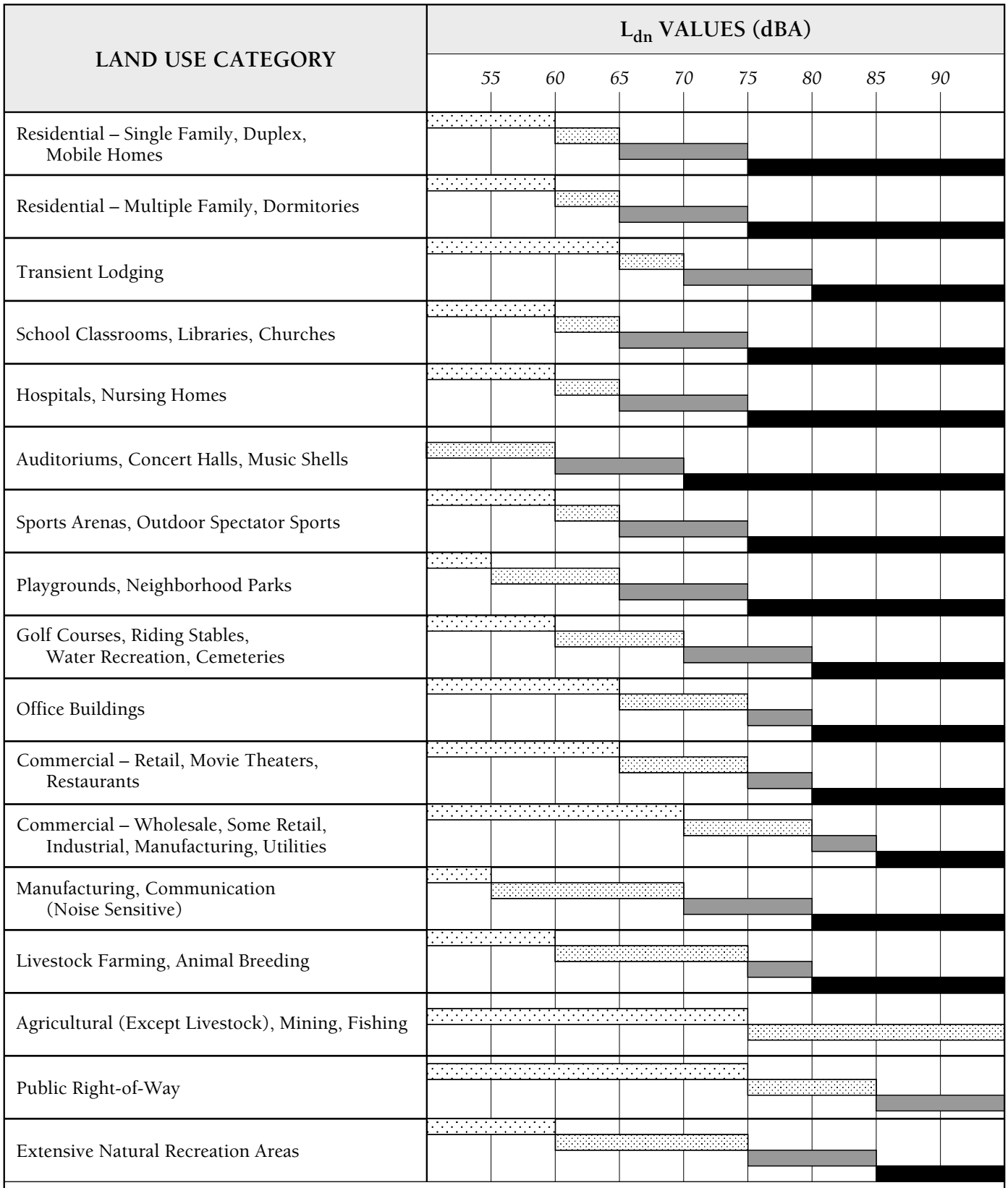
The day-night average sound level (L_{dn}) is the energy-averaged sound level of all SEL values within a 24-hour period, with a 10 dBA penalty assigned to noise events occurring between 10:00 P.M. and 7:00 A.M. to compensate for the annoyance associated with the occurrence of nighttime noise events. The L_{dn} is the preferred noise metric of the U.S. Department of Housing and Urban Development, U.S. Department of Transportation, Federal Aviation Administration, USEPA, and the Department of Defense (DoD).

Most people are exposed to sound levels of 50-55 dBA (L_{dn}) or higher on a daily basis. Studies conducted to determine noise impacts on various human activities have revealed that sound levels below 65 dBA (L_{dn}) do not significantly bother approximately 87 percent of the population (FICON 1992). Figure 3-2 provides the guidelines established by FICON that are commonly used to determine acceptable levels of noise exposure for various types of land use.



Source: Harris 1979.

Figure 3-1
Examples of Typical Sound Levels
in the Environment



Source: Federal Interagency Committee on Noise 1992.

Figure 3-2
Recommended Land Use for
L_{dn}-Based Noise Values

3.2.2 Existing Conditions

Noise sources at MAFB-Gunter Annex are primarily generated by on- and off-base vehicle operations and construction projects. Construction projects are considered short-term in their effects, and noise impacts are generally isolated to the site of the project and the immediate vicinity. There are no aircraft operations taking place at MAFB-Gunter Annex.

The nearest noise-sensitive receptor to the site of the proposed action is the accompanied housing area located approximately 500 feet east of the site across North Turner Boulevard.

3.3 LAND USE

3.3.1 Definition of Resource

Land use comprises the natural conditions and/or human-modified activities occurring at a particular location. Human-modified land use categories include residential, commercial, industrial, transportation, communications and utilities, agricultural, institutional, recreational, and other developed use areas. Management plans and zoning regulations determine the type and extent of land use allowable in specific areas and are often intended to protect specially designated or environmentally sensitive areas.

3.3.2 Existing Conditions

3.3.2.1 Regional and Local Land Use

MAFB-Gunter Annex is located in Montgomery County, Alabama, south of the foothills of the Appalachian Mountains. It is located in the northeast section of the City of Montgomery, approximately five miles from the downtown area. To the east of the installation is Gunter Industrial Park, which is zoned Light Industrial. This park was developed on the original Montgomery Municipal Airport site, which, along with the current installation property, was the site of the Army Air Corps Basic Flying Training School during World War II. To the south, single-family residences are the principal land use, with Residential zoning. This residential area extends to the Atlanta Highway, which is a major thoroughfare approximately 1.3 miles from MAFB-Gunter Annex. To the west of the installation is State of Alabama-owned property and land belonging to the Alabama National Guard. To the north, directly across U.S. Highway 231, is a mix of undeveloped land and commercial and industrial uses (MAFB 1993).

3.3.2.2 Installation Land Use

Historical and proposed land use development at MAFB-Gunter Annex is presented in the MAFB-Gunter Annex Comprehensive Plan (MAFB 1993). This plan establishes goals, policies, and criteria that drive decisions regarding timing, placement, and priority of identified development needs. A major goal of the plan is to improve operational efficiency and base functionality pursuant to the mission of Air University and tenant organizations.

Land Use Inventory

Land use at MAFB-Gunter Annex can be divided into ten categories, which are classified and defined in detail in the MAFB-Gunter Annex Comprehensive Plan (Table 3-3). Figure 3-3 outlines existing land uses at the installation using this classification system.

Table 3-3 MAFB-Gunter Annex Land Use Inventory

Land Use Category	Total Acres	Percent of Total Acres
Academic	6.0	1.8
Administrative	58.0	17.5
Community Commercial	27.7	8.4
Community Service	2.5	0.7
Accompanied Housing	74.3	22.4
Unaccompanied Housing	13.2	4.0
Industrial	34.1	10.3
Medical	0.62	0.2
Open Space	67.8	20.5
Recreation	46.7	14.1
Total	**330.9**	**100**

Source: MAFB 1993. *Note:* Acreage calculations exclude roads.

Community Commercial includes the shoppette, Main Exchange, the Commissary, clubs, dining halls, personal services such as barber shops, and many indoor recreational facilities.

Community Service includes the noncommercial activities that are important in day-to-day living, including schools, library, child care, post office, and chapel.

Accompanied Housing is housing dedicated to assigned military personnel and their families.

Unaccompanied Housing is housing dedicated only for assigned military personnel.

Industrial includes warehouses for various base activities, base maintenance and utilities functions, and base industrial services such as those belonging to transportation, communications, and civil engineering.

Medical includes various clinics and hospital facilities, including dental.

Open Space includes land that is undeveloped and occurs in one of two forms: land that is currently undeveloped but is feasible for possible future development, and land that is permanently unsuitable for building.

Recreation includes indoor and outdoor facilities dedicated to recreation and physical fitness, such as playing fields, playgrounds, running tracks, and gymnasiums.

Land Use and the Noise Environment

Land use activities most sensitive to ambient noise are residential, public services, commercial, and cultural and recreational. Noise generated from roadway traffic represents the greatest contribution to the overall noise environment at MAFB-Gunter Annex. Construction activities can also result in disruption to noise-sensitive receptors and land use areas (e.g., outdoor recreation participants or administrative personnel); however, construction activities tend to be temporary and associated noise can be reduced with special equipment and scheduling restrictions. The land immediately surrounding MAFB-Gunter Annex is not in conflict with the noise levels generated by installation activities.

Source: MAFB, 1993

Drawing Name: R:\Military\Maxwell AFB\CAD\Land_Use.dwg Viewname V1

AAFES

Figure 3-3 Land Use Map
Maxwell Air Force Base-Gunter Annex, AL

Creation Date: 6/18/2002
Rev. Date: __/__/____
Project Manager: K. Martin
Prepared By: A. Long
Project No: 2047

3.4 GEOLOGICAL RESOURCES

3.4.1 Definition of Resource

Geological resources are defined as the geology, soils, and topography of a given area. The geology of an area includes bedrock materials, mineral deposits, and fossil remains. The principal geologic factors influencing stability of structures are soil stability and seismic properties. Soil, in general, refers to unconsolidated earthen materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the ability for the ground to support structures and facilities. Relative to development, soils typically are described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use. Long-term geological, erosional, and depositional processes typically influence the topographic relief of an area. Topography incorporates the physiographic, or surface, features of an area and is usually described with respect to elevation, slope, aspect, and landforms.

3.4.2 Existing Conditions

3.4.2.1 Geological Resources

MAFB-Gunter Annex is located within the Fall Line Hills subdivision of the Gulf Coastal Plain Physiographic Province. Within the Coastal Plains Region of Montgomery County, the geologic units range in age from the Upper Cretaceous to the Holocene. The major differentiated sedimentary units present, in order of increasing geologic age, are the Holocene Alluvium; the Pleistocene Terrace Deposits; and the Upper Cretaceous Eutaw, Gordo, and Coker Formations (MAFB 1996a). This sequence of sediment formation overlies pre-Cretaceous crystalline rock in the form of a southerly dipping wedge with a line of origin along the Fall Line. The topography of the main section of MAFB-Gunter Annex is generally level with elevations averaging 215 feet above mean sea level (msl). The regional surficial geology is dominated by Quaternary Terrace/Alluvial deposits consisting of coarse sands, gravels, silts, and clays deposited by the ancestral and current Alabama River. The thickness of the deposits generally range from 30 to 50 feet, but in some areas can be as thick as 80 feet (MAFB 1996a). The thickness of the individual geologic units tends to follow a pattern that shows a gradual dip seaward at a shallow rate. Lithologic logs during drilling activities show that between the 10 and 30 foot depths, the deposits are composed of fine-to-medium grained silty sand with variable amounts of quartz pebbles and some clayey sand. At soil depths greater than 30 feet, the amount of quartz pebbles decreases and the deposits grade into mostly poorly graded sand with sand lenses (MAFB 2001b).

3.4.2.2 Soils

Two soil associations have been mapped at MAFB-Gunter Annex: Amite Series and Byars and Myatt Series. There are six soil types found within the site of the proposed action. Three of the six belong to the Amite Series which covers about 95% of MAFB-Gunter Annex (MAFB

1996a). Developed mainly from old alluvium washed from well-drained upland soils, the Amite Series is deep and consists of a reddish-brown to grayish-brown surface layer and a red to strong brown, friable, sandy clay loam subsoil. In particular, this soil has a relatively high infiltration, permeability, and capacity for holding available moisture (MAFB 2001b). The remaining three soil types are found in perimeter areas surrounding MAFB-Gunter Annex. The Byars and Myatt Series occur together in such intricate patterns that it is nearly impossible to map them separately. These particular soils cover only a small portion of the southeast area of MAFB-Gunter Annex and are characterized as being nearly level (0 to 2% slopes) and moderately deep. On average, a soil profile for this series consists of dark-gray, sandy loam topsoil 3 to 4 inches thick.

3.5 WATER RESOURCES

3.5.1 Definition of Resource

Water resources include both surface and subsurface water. Surface water includes all lakes, ponds, rivers, and streams within a defined area or watershed. Subsurface water, commonly referred to as groundwater, is typically found in certain areas known as aquifers. Aquifers are areas of mostly high porosity soil where water can be stored between soil particles and within soil pore spaces. Groundwater is typically recharged during precipitation events and is withdrawn for domestic, agricultural, and industrial purposes.

Due to dangers and damages associated with major flooding, legislation has been developed to limit construction within identified flood-prone zones. Specifically, development of areas within the identified 100-year floodplain zone (areas generally subject to major flooding once every 100 years) is typically limited to recreation and preservation activities. Flood hazards associated with the 100-year floodplain are also addressed in this section.

The Clean Water Act (CWA) of 1972 is the primary Federal law that protects the nation's waters, including lakes, rivers, aquifers, and coastal areas. The primary objective of the CWA is to restore and maintain the integrity of the nation's waters.

Water resources analyzed in this section include the surface and subsurface water resources at and surrounding MAFB-Gunter Annex. Wetlands are addressed in Section 3.6, Biological Resources.

3.5.2 Existing Conditions

3.5.2.1 Surface Water

A 2,000-foot section of the MAFB-Gunter Annex western boundary is bounded by Three Mile Branch Creek. This tributary is a perennial stream that flows north to join Galbraith Mill Creek and then eventually discharges into the Alabama River. The surface drainage patterns on MAFB-Gunter Annex are generally from northeast to southwest towards Three Mile Creek. A majority of this surface water flows into municipal underground drainage ways outside of the installation after being collected in surface drains on MAFB-Gunter Annex (MAFB 2000a). Due to the predominance of impermeable surfaces located throughout MAFB-Gunter Annex, localized ponding occurs briefly during major rain events. There are no permanent surface water bodies located within the boundaries of MAFB-Gunter Annex (MAFB 2002a).

Floodplains

No portion of MAFB-Gunter Annex is located within an identified 100-year floodplain zone (MAFB 2002a).

3.5.2.2 Groundwater

In the area of MAFB-Gunter Annex, the regional aquifers (i.e. the Eutaw, Gordo, and Coker Formations) are recharged by surface water and precipitation and are not separated from surface layers. These regional aquifers are the source for recharging the wells that supply MAFB-Gunter Annex and the City of Montgomery with their potable water. MAFB-Gunter Annex has no production wells used for human consumption and receives its water supplies from the municipal water authority (MAFB 1996a).

The groundwater resources at MAFB-Gunter Annex are highly responsive to surface water conditions, due to the fact that the soils are extremely permeable at shallow depths (3½ to 40 below ground surface [bgs]) (MAFB 2002a). Installation water level measurements indicate that groundwater flow varies across the installation, from a westerly flow in the western portion near Three Mile Branch Creek to a north and northwest flow in other sections of MAFB-Gunter Annex (MAFB 2001b). At depths ranging from 10 to 27 ft bgs, groundwater occurs at MAFB-Gunter Annex under unconfined conditions in the recent alluvium and the Pleistocene Terrace deposits. Recharge occurs by precipitation falling on any exposed portions of the surface and from the terrace deposits at higher elevations. MAFB-Gunter Annex is located in the recharge area of this surficial aquifer.

3.6 BIOLOGICAL RESOURCES

3.6.1 Definition of Resource

Biological resources include living, native, or naturalized plant and animal species and the habitats within which they occur. Plant associations are referred to as vegetation and animal species are referred to as wildlife. Habitat can be defined as the resources and conditions present in an area that produces occupancy of a plant or animal (Hall et al. 1997). Although the existence and preservation of biological resources are intrinsically valuable, these resources also provide aesthetic, recreational, and socioeconomic values to society. This analysis focuses on species or vegetation types that are important to the function of the ecosystem, of special societal importance, or are protected under Federal or state law or statute. For purposes of this EA, these resources are divided into three major categories: vegetation; wetlands and sensitive habitats; and rare, threatened, and endangered species.

Vegetation includes all existing terrestrial plant communities with the exception of wetlands or threatened, endangered, or sensitive plant species. The affected environment for vegetation includes only those areas potentially subject to ground disturbance.

Wetlands are considered sensitive habitats and are subject to Federal regulatory authority under Section 404 of the CWA and Executive Order (EO) 11990, *Protection of Wetlands*. Jurisdictional wetlands are defined by the U.S. Army Corps of Engineers (USACE) as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987). Areas meeting the Federal wetland definition are under the jurisdiction of the USACE. Wetlands generally include swamps, marshes, bogs, and similar areas. (33 CFR Part 328). Like vegetation, the affected environment for wetlands includes only those areas potentially subject to ground disturbance.

Rare, threatened, and endangered species are defined as those plant and animal species listed as rare, threatened, endangered, or proposed as such, by the U.S. Fish and Wildlife Service (USFWS). The Federal Endangered Species Act protects Federally listed threatened and endangered plant and animal species. Federal species of concern, formerly Category 2 candidate species, are not protected by law; however, these species could become listed and, therefore, protected at any time. Their consideration early in the planning process may avoid future conflicts that could otherwise occur.

3.6.2 Existing Conditions

3.6.2.1 Vegetation and Forestry

MAFB-Gunter Annex is situated within the Eutaw Belt subregion of the Central Pine Belt, or Southeastern Evergreen Forest. Vegetation in this area is bordered by the Oak-Pine Forest to the north. Due to previous agricultural uses and the urban development that has occurred at MAFB-Gunter Annex, virtually no original vegetation is present today. There are no natural wooded areas in existence at Gunter Annex (MAFB 2000a). Maintained grassy areas and improved land dominate the installation's groundcover. Urban plantings such as shrubbery and shade trees include species such as crape myrtle *(Lagerstroemia indica)*, Bradford pear *(Pyrus calleryana)*, and southern magnolia *(Magnolia grandiflora)*. Previous vegetative communities at MAFB-Gunter Annex included upland forests, bottomland forests, and short grass prairies (MAFB 2002a). The dominant tree species at MAFB-Gunter Annex are listed in Table 3-4. Loblolly pines *(Pinus taeda)* can typically be observed in upland flats while the lowland areas include hardwoods such as water oak *(Quercus nigra)* and red maple *(Acer rubrum)*.

Table 3-4 Dominant Tree Species at MAFB-Gunter Annex

Common Name	Scientific Name
Loblolly pine	*Pinus taeda*
Live oak	*Quercus virginiana*
Water oak	*Quercus nigra*
Sugarberry	*Celtis laevigata*
Pecan	*Carya illinoensis*
Laurel oak	*Quercus laurifolia*

Source: MAFB 2002a

3.6.2.2 Rare, Threatened, and Endangered Species

During previous field surveys, no herptiles (amphibians and reptiles) were noted at MAFB-Gunter Annex (MAFB 2000a). The only mammals recorded in previous field surveys included the eastern gray squirrel *(Sciurus carolinensis)* and the cottontail *(Sylvilagus floridanus)*. As there are no wetlands or water bodies located at MAFB-Gunter Annex, there are no fish populations on the installation. A 1994 survey recorded 16 species of birds at MAFB-Gunter Annex but, to date, only the killdeer *(Charadrius vociferous)* is a confirmed breeding species.

According to USFWS, no Federally-listed endangered, threatened, or proposed species, or their designated Critical Habitats occur at or in the vicinity of the proposed action (USFWS 2002). With respect to state-listed sensitive species, the State of Alabama Department of Conservation and Natural Resources concludes that the closest sensitive species to the proposed action occur in the Alabama River, approximately four miles from the site of the proposed action (ADCNR 2002).

3.6.2.3 Wetlands

In accordance with Air Force policy, installations are required to develop and maintain a current inventory of natural habitats as part of the Integrated Natural Resources Management Plan (INRMP). Wetlands are a significant natural habitat which should be included in this inventory. Alteration of wetlands is limited at military installations by E.O. 11990 and by the CWA.

MAFB-Gunter Annex is situated approximately 200 to 220 feet above msl on primarily level terrain. The installation does not lie within a 100-Year Floodplain and does not typically experience flooding problems (U.S. Air Force, 2002). There are no delineated wetlands at MAFB-Gunter Annex (MAFB 2002b).

3.7 TRANSPORTATION AND CIRCULATION

3.7.1 Definition of Resource

Transportation refers to the movement of vehicles on roadway networks. Primary roads, such as major interstates, are designed to move traffic and do not necessarily provide access to all adjacent areas. Secondary roads, commonly referred to as surface streets, are used to gain access to residential and commercial areas, hospitals, and schools. Roadway operating conditions are typically described in terms of average daily traffic (ADT) volumes.

3.7.2 Existing Conditions

3.7.2.1 Installation Circulation

MAFB-Gunter Annex is located approximately five miles northeast of downtown Montgomery, Alabama. Access to the installation is from State Road 152 (the Northern By-Pass), Congressman William Dickinson Drive (Rt. 231, which runs north of the installation and connects to the 152 By-Pass), and Atlanta Highway, which connects to I-85. MAFB-Gunter Annex is approximately four miles from the closest interchange (State Road 152/I-85) on the interstate system. Direct access to the installation is possible through two gates. The Main Gate is a 24-hour post located on Turner Boulevard at Congressman William Dickinson Drive. The South Gate is manned approximately 18 hours per day and is located south of South Drive at Dalraida Road. Traffic counts from November 2001 show that daily traffic counts at the Main Gate are approximately 3,455 per day while counts for the South Gate are approximately 2,390 per day (MAFB 2001c).

The roadway system at MAFB-Gunter Annex has evolved as a result of changing mission requirements over time. The road network is primarily in a grid form, composed mainly of two-lane undivided roads with curbside parallel parking. Most of the former airfield, taxiways, and aprons have been converted into roadways and parking areas. An analysis of parking facilities (MAFB 1993) indicated that parking is generally adequate with the exception of the area around Buildings 402 and 403 and the area around Buildings 1014, 1025, and 1016. At these locations, parking occupancies are greater than 90 percent of available supply. According to the study, travel speeds noted during morning and evening peak demand periods were generally within 75 percent of posted speeds and reflect good operating conditions.

3.8 CULTURAL RESOURCES

3.8.1 Definition of Resource

Cultural resources consist of prehistoric and historic districts, sites, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources can be divided into three major categories: archaeological resources (prehistoric and historic), architectural resources, and traditional cultural resources.

Archaeological resources are locations where human activity measurably altered the earth or left deposits of physical remains (e.g., tools, arrowheads, or bottles). "Prehistoric" refers to resources that predate the advent of written records in a region. These resources can range from a scatter composed of a few artifacts to village sites and rock art. "Historic" refers to resources that postdate the advent of written records in a region. Archaeological resources can include campsites, roads, fences, trails, dumps, battlegrounds, mines, and a variety of other features.

Architectural resources include standing buildings, dams, canals, bridges, and other structures of historic or aesthetic significance. Architectural resources generally must be more than 50 years old to be considered for protection under existing cultural resource laws. However, more recent structures, such as Cold War era military buildings, may warrant protection if they have exceptional characteristics and the potential to be historically significant structures. Architectural resources must also possess integrity (i.e., its important historic features must be present and recognizable).

Traditional cultural resources can include archaeological resources, buildings, neighborhoods, prominent topographic features, habitats, plants, animals, and minerals that Native Americans or other groups consider essential for the continuance of traditional cultures.

Only significant cultural resources, known or unknown, warrant consideration with regard to adverse impacts resulting from a proposed action. To be considered significant, archaeological or architectural resources must meet one or more criteria as defined in 36 CFR 60.4 for inclusion in the National Register of Historic Places (NRHP).

Several Federal laws and regulations have been established to manage cultural resources, including the National Historic Preservation Act (1966), the Archaeological and Historic Preservation Act (1974), the American Indian Religious Freedom Act (1978), the Archaeological Resource Protection Act (1979), and the Native American Graves Protection and Repatriation Act (1990). In addition, coordination with Federally recognized Native American tribes must occur in accordance with EO 13084, *Consultation and Coordination with Indian Tribal Governments*.

On November 27, 1999, the DoD promulgated its Annotated American Indian and Alaska Native Policy, which emphasizes the importance of respecting and consulting with tribal governments

on a government-to-government basis. This Policy requires an assessment, through consultation, of the effect of proposed DoD actions that may have the potential to significantly affect protected tribal resource, tribal rights, and Indian lands before decisions are made by the respective services.

3.8.2 Existing Conditions

As of August 1999, nine historic properties investigations had been conducted at MAFB and its properties, including Gunter Annex. A comprehensive Cultural Resources Management Plan (CRMP) has been prepared and provides focused guidance to land managers for compliance with the requisite cultural resource laws and regulations (MAFB 1999a). The CRMP recognizes that activities associated with the ongoing mission of MAFB and MAFB-Gunter Annex have the potential to be destructive to historic properties. Therefore, the following activities require prior consultation with the Alabama State Historic Preservation Officer (SHPO) to ensure compliance with the CRMP and cultural resource protection laws and regulations:

- all new construction;
- ground-disturbing activities such as excavations or earthmoving for training facilities, roads, trails, landing strips, etc;
- any activities that affect properties that are eligible or potentially eligible for the NRHP; and
- the disposal of Federally owned lands.

According to the CRMP, eight archaeological sites have been recorded at MAFB proper, but none have been identified at MAFB-Gunter Annex (MAFB 1999a). All of MAFB and Gunter Annex were surveyed for historic properties that predate 1950. The purpose of the survey was to record and photograph the resources on the two bases, and to make recommendations for NRHP eligibility. The survey identified 89 historic buildings, structures, and objects at MAFB-Gunter Annex. None were recommended eligible for the NRHP. Building 205 at MAFB-Gunter Annex was identified as potentially eligible for the NRHP; however, further consultation with the SHPO will be required to make a final determination of eligibility (MAFB 1999a). Building 205, a logistics building, is not located in the vicinity of the proposed action and would not be impacted by its construction or operation (MAFB 2002c).

3.9 SOCIOECONOMICS

3.9.1 Definition of Resource

Socioeconomics comprise the basic attributes of population and economic activity within a particular area or ROI and typically encompass population, employment and income, and industrial/commercial growth. Impacts on these fundamental socioeconomic resources can also influence other components such as housing availability and public services provision.

Socioeconomic data are presented for the City of Montgomery, Montgomery County, the State of Alabama, and the U.S. to analyze baseline socioeconomic conditions in the context of regional, state, and national trends.

3.9.2 Existing Conditions

3.9.2.1 Population

Regional

The Montgomery Metropolitan Statistical Area (MSA) (composed of Montgomery, Autauga, and Elmore Counties) population increased over 40,000 from 1990 to 2000. This 13.9 percent gain was the third highest among the state's MSAs. Growth was strongest in the two suburban counties: Autuaga's population increased 27.6 percent and Elmore's grew 33.9 percent. The population of Montgomery County gained 6.9 percent and the City of Montgomery experienced population growth of 7.7 percent. Both the city and county lagged behind the State of Alabama and the United States percent change over the last decade. The Montgomery MSA population is expected to increase over 100,000 to 433,292 between 2000 and 2025 (University of Alabama 2002).

Table 3-5 Population for the United States, State of Alabama, Montgomery County, and City of Montgomery, 1990-2000

Year	United States Population	Alabama Population	Montgomery County Population	City of Montgomery Population
1990	248,709,873	4,040,587	209,085	187,106
2000	281,421,906	4,447,100	223,510	201,568
% Change '90-'00	13.2	10.1	6.9	7.7

Source: USBC 2002a, 2002b, 2002c, 2002d

MAFB-Gunter Annex

The current personnel levels associated with MAFB-Gunter Annex total 4,083. This total is composed of 1,045 active duty personnel, 714 guard and reserve personnel, 680 dependents, and 537 students (MAFB 2002b).

3.9.2.2 Regional Job Growth and Unemployment

The service-producing sectors accounted for more than 83 percent of jobs in the Montgomery area in 2001, the highest rate among the state's MSAs. The City of Montgomery maintains a diverse manufacturing base, including: food/kindred products; transportation equipment; textile/apparel; machinery/equipment; printing/publishing; furniture/fixtures; software engineering; and plastics. The Montgomery area is a major distribution center for the southeast, supporting large companies such as Russell Corporation, and Consolidated Stores. The Information Technology industry is a growing part of the Montgomery area economy, with 125 companies located in the capital city. Five local universities and colleges and MAFB and its auxiliary location, the Gunter Annex provide opportunities for employment and supply a well-educated workforce. The Montgomery MSA as well as the State of Alabama has experienced a steady decline in the manufacturing sector since 1995. For example, from July 1998 to July 1999, Alabama manufacturing firms lost 9,300 jobs. Sixty percent of the jobs were in the textile and apparel industries. However, manufacturing jobs were up an average of 100 for the first eight months of 2001 compared to 2000.

The largest single contributor to the economy of the Montgomery region is the government sector. The U.S. military's presence in the region includes MAFB and its auxiliary location, the Gunter Annex that provide a broad spectrum of educational, training, command, and personnel support. The Public Affairs Office at MAFB estimates that the total economic impact of the military and civilian employment associated with the U.S. military in the region (including contracted dollars) in FY 2001 was $1.101 billion (MAFB 2001d).

Job Composition

The 2000 labor force level for the City of Montgomery was 95,961 in 2000 (USBC 2002g). The 2000 labor force for Montgomery County during the same year was 105,108. Sixty percent of these jobs were concentrated in retail and services industries (Table 3-6).

Table 3-6 Distribution of Employment by Industrial Sector, City of Montgomery, 2000

Industrial Sector	Number of Jobs	Percent
Agriculture	397	0.5
Construction	4,270	4.9
Manufacturing	6,957	8.0
Wholesale Trade	2,790	3.2
Retail Trade	10,225	11.8
Transportation and Utilities	5,839	6.7
Finance, Insurance, and Real Estate	7,018	8.1
Services	38,790	44.7
Government	10,455	12.1

Source: USBC 2002g

According to the Montgomery Chamber of Commerce, there are approximately 12,000 businesses located in the Montgomery MSA. Table 3-7 lists the region's ten largest employers, excluding MAFB, which is the largest area employer.

Table 3-7 Top Ten Major Employers in the Montgomery Region

Employer (Overall Rank)	Number of Employees
1. Baptist Health	4,800
2. Montgomery County Board of Education	3,500
3. Jackson Hospital and Clinic, Inc.	1,300
4. Rheem Manufacturing Company	1,150
5. Regions Mortgage, Inc.	1,100
6. U.S. Postal Service	900
7. Alfa Insurance Companies	840
8. Auburn University Montgomery	800
9. Alabama State University	792
10. Regions Bank	775

Source: AAFES 2000.

Earnings

Average annual wages vary in Alabama due to factors such as the type of jobs available, the different industrial composition of the counties, the mix between seasonal and year-round work, and the extent of union activity. Many of the jobs in Montgomery County provide relatively high wages, resulting in an annual average wage of $29,127 in 2000—ranked tenth highest among the 67 counties in the state. Alabama's average annual wage was $28,280 in 2000. The annual average wage for the Montgomery MSA was $28,245 (BEA 2001).

Per capita income is a broader measure of financial strength for the residents of a county, including resources such as dividends, rents, and government transfer payments, as well as wages. Montgomery County was ranked 4th out of 67 counties in Alabama with a per capita income level of $27,313.

Unemployment

Review of unemployment rates for 2000 reveal that both the City of Montgomery and Montgomery County had unemployment rates above those of the State of Alabama (Table 3-8). In 2000, the annual average unemployment rate for Montgomery County was among the lowest of all counties in Alabama.

Table 3-8 Unemployment Rates for City of Montgomery, Montgomery County, and State of Alabama: 2000

Year	City of Montgomery	Montgomery County	State of Alabama
2000	4.2 %	4.0 %	3.7 %

Source: USBC 2002g

3.9.2.3 AAFES Employment and Expenditures

The AAFES shoppette at MAFB-Gunter Annex employs 17 personnel with combined annual salary and benefits totaling $381,472. The concessions located in Building 401 together employ 8 employees with combined annual salary and benefits totaling $99,120. The FY 1999 average monthly sales figure for the shoppette and concessions was $397,000 (AAFES 2002).

3.10 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

3.10.1 Definition of Resource

In 1994, EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued to focus attention of Federal agencies on human health and environmental conditions in minority and low-income communities. In addition, EO 12898 aims to ensure that disproportionately high and adverse human health or environmental effects on these communities are identified and addressed.

In order to provide a thorough environmental justice evaluation, this section gives particular attention to the distribution of race and poverty status in areas potentially affected by implementation of the proposed action. For purposes of this analysis, minority and low-income populations are defined as follows:

- *Minority Populations*: Persons of Hispanic origin, Blacks, American Indians and Alaska Natives, Asians, Native Hawaiian and Other Pacific Islanders, as well as those individuals who categorized themselves as "two or more races" or "some other race" on the Census 2000 questionnaire.

- *Low-Income Populations*: Persons living below the poverty level, based on U.S. Census Bureau intercensal data reported in the March 1999 Current Population Survey for individual counties.

Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, was issued in 1997. EO 13045 helps to ensure that Federal agencies' policies, programs, activities, and standards address environmental risks and safety risks to children. This section identifies the locations where numbers of children may be disproportionately high (e.g., schools, childcare center, family housing) in areas potentially affected by implementation of the proposed action.

3.10.2 Existing Conditions

3.10.2.1 Race and Poverty Status

Population distribution data for Montgomery County, the City of Montgomery, and the State of Alabama are summarized in Table 3-9. The City of Montgomery has the highest percent minority population (52.9 percent), followed closely by Montgomery County at 51.7 percent and Alabama at 30.8 percent.

Table 3-9 Population Distribution: Montgomery County, City of Montgomery, and State of Alabama, 2000

Race Category	Montgomery County	% Total Pop	City of Montgomery	% Total Pop	Alabama	% Total Pop
White	107,858	48.3	94,868	47.1	3,125,819	70.3
Black	108,146	48.4	99,631	49.4	1,150,076	25.9
American Indian and Alaska Native	530	0.2	468	0.2	21,618	0.5
Asian	2,189	1.0	2,120	1.1	30,989	0.7
Native Hawaiian and Other Pacific Islander	67	0.0	66	0.0	1,059	0.0
Hispanic	2,665	1.2	2,484	1.2	75,830	1.7
Other[1]	2,055	0.9	1,931	1.0	41,709	2.0
TOTAL	223,510	100	201,568	100	4,447,100	100

Source: USBC 2002e

[1]Census 2000 allowed respondents to define their race as either White, Black, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, or Hispanic. In addition, respondents were allowed to report "Some other race" and were given the option of selecting two or more races (57 possible combinations). The "Other" category combines numbers for "Some other race" and all combinations of two or more races.

Table 3-10 compares populations of Montgomery County, the State of Alabama, and the United States that were below the poverty level in 1998, based on U.S. Census Bureau estimates. Data reveals that the percent of the population below the poverty level in Montgomery County (17.0 percent) was higher than the population below the poverty level statewide (15.7 percent). Both Montgomery County and the State of Alabama had higher levels than the general U.S. percentage of 13.3 percent.

Table 3-10 Poverty Status: Montgomery County, State of Alabama, and United States, 1998

Montgomery County	% Total Pop	Alabama	% Total Pop	United States	% Total Pop
35,840	17.0	681,788	15.7	35,573,858	13.3

Source: USBC 2002f

3.10.2.2 Protection of Children

As required by EO 13045, this analysis includes an assessment of the potential for children to be disproportionately exposed to environmental health risks and safety risks. According to the MAFB-Gunter Annex Comprehensive Plan, as well as a field survey, there are no facilities adjacent to, or in the immediate area of, the proposed action that would contain disproportionate populations of children.

3.11 HAZARDOUS MATERIALS AND WASTES

3.11.1 Definition of Resource

Hazardous materials and hazardous waste are defined and categorized by numerous environmental statutes as substances with physical properties of ignitability, corrosivity, reactivity, concentration, or toxicity that may cause or contribute significantly to an increase in mortality, serious irreversible illness, or incapacitating reversible illness, or pose a substantial threat to human health or the environment. To protect people and the environment from potentially harmful releases of hazardous substances, and pursuant to Federal and state laws, The Executive Branch (Executive Order 12088) and the Department of Defense (DoD Instruction 4150.7) have directed that all military departments develop and implement hazardous materials and hazardous waste management procedures to safeguard the environment.

The U.S. Air Force, through AFPD 32-70, *Environmental Quality*, establishes the policy that the Air Force is committed to environmentally sound practices including: cleaning up environmental damage from past activities; meeting all environmental standards applicable to present operations; planning future activities to minimize environmental impacts; managing responsibly any natural and cultural resources it holds in public trust; and eliminating pollution from its activities wherever possible. AFPD 32-70 and the Air Force Instructions (AFI) series 32-7000 incorporate the requirements of all Federal regulations, DoD Directives, and other AFIs for the management of hazardous materials and hazardous wastes.

3.11.2 Existing Conditions

The Maxwell Support Division/Civil Engineering Environmental Section (MSD/CEV), formerly the Environmental Flight at MAFB (42 CES/CEV) is responsible for the management of hazardous material and waste for the entire installation, including MAFB-Gunter Annex. A Hazardous Materials Pharmacy has been instituted to oversee, and to the maximum extent possible minimize, the procurement, use, and disposal of hazardous materials. MAFB, including MAFB-Gunter Annex, qualifies as a large quantity generator of hazardous waste under the Resource Conservation and Recovery Act (RCRA). There is one Hazardous Waste Manager assigned to the Environmental Flight at MAFB, and all matters concerning hazardous waste are managed through his office. Disposal of hazardous waste is arranged through a Defense Reutilization Marketing Office (DRMO) service contract wherein licensed hazardous waste contractors remove and dispose of the waste, and DRMO maintains all hazardous waste documentation in accordance with pertinent regulations. The Environmental Flight has developed the following specific plans to manage both hazardous material and hazardous waste at MAFB-Gunter Annex.

Hazardous Materials. A user-friendly, simple-to-follow guide for ordering, using, and disposing of hazardous materials at MAFB-Gunter Annex was developed by the Environmental Flight. This guide, entitled *Hazmats Made Easy (as possible), (Maxwell AFB Hazardous Materials Management Guide)* (MAFB 2000b), incorporates the procedures and standards contained in

AFI 32-7086 that govern management of hazardous materials throughout the U.S. Air Force. It applies to all Air Force personnel who authorize, procure, use or dispose of hazardous materials and to those who manage, monitor, or track any of those activities.

Hazardous Waste. The Environmental Flight, pursuant to AFI 32-7042, developed a *Hazardous Waste Management Plan, 42 ABW Plan 32-10* (MAFB 2000c). This plan provides guidance to MAFB-Gunter Annex personnel on the proper handling, storage, and disposal of hazardous waste and implements the USEPA "cradle-to-grave" management controls for hazardous waste.

Asbestos. AFI 32-1052 mandates that installations develop an asbestos management plan to reduce the potential of personal exposure to potentially hazardous levels of airborne asbestos fibers and to maintain compliance with pertinent asbestos regulations. The Environmental Flight developed an *Asbestos Management and Operations Plan, 42 ABW 32-13* (MAFB 2000d) to meet these requirements.

Lead-Based Paint. Pursuant to U. S. Air Force requirements, the Environmental Flight developed a *Lead-Based Paint Management Plan, 42 ABW 32-14* that provides guidance for identifying, evaluating, managing, and abating lead-based paint hazards (MAFB 2000e).

Pollution Prevention. AFI 32-7080 implements the regulatory requirements of several federal statutes for the reduction or prevention of pollution by mandating the development of installation Pollution Prevention Management Plans. In furtherance of this requirement, the Environmental Flight has developed the *Pollution Prevention Management Action Plan, 42 ABW Plan 32-12* (MAFB 2001e) and the *Oil and Hazardous Materials Spill/Prevention and Response, 42 ABW Plan 32-11* (MAFB 1999b).

Solid Waste Management. MAFB and MAFB-Gunter Annex have implemented a Solid Waste Management Plan for the proper disposal of non-hazardous solid waste generation on the installation. There are no solid waste landfills in use at MAFB or MAFB-Gunter Annex, so all non-hazardous solid waste is collected and disposed of by licensed private contractors at either the North Montgomery Municipal Landfill or a permitted private landfill. Yard waste is collected and transported to a compost facility on the installation. Recyclable materials are collected and transported by private contractor to a commercial recycling center (MAFB 2000f).

The primary types of hazardous waste generated at MAFB-Gunter Annex include medical supplies, adhesives, paint-related wastes, solvents, batteries, contaminated absorbents from spill cleanup, oil filters, and corrosive liquids. The existing AAFES shoppette does not routinely generate hazardous waste; however, it stocks a variety of consumer items (e.g., aerosol cans containing paints or pesticides, auto care products, household cleaning products, solvents) that are or may contain hazardous substances. Such products, if spilled or otherwise unintentionally released, could be categorized as hazardous waste. Additionally, containers of hazardous materials that remain in storage beyond their intended shelf life, or that become damaged and cannot be sold, must be managed and disposed of as hazardous waste.

3.11.2.1 Installation Restoration Program

This section describes activities in the vicinity of the proposed action that are part of the MAFB-Gunter Annex Installation Restoration Program (IRP). The status of environmental restoration and associated compliance programs at Maxwell/Gunter is documented in the *Installation Restoration Program Management Action Plan*, or IRP MAP (MAFB 2001b). The IRP is managed by a Project Team led by the IRP Remedial Project Manager (RPM) from the Environmental Flight. The team includes representatives from EPA Region 4 and the Alabama Department of Environmental Management (ADEM), and the various parties strive to work together to address contamination generated from both on-Base and off-Base sources. The Project Team meets quarterly or on an as-needed basis.

The IRP requires each DoD installation to identify, investigate, and clean up hazardous waste disposal or release sites. According to the MAFB IRP MAP (MAFB 2001b), MAFB-Gunter Annex has twelve IRP sites and five in-use underground storage tanks (USTs). The majority of IRP sites at MAFB-Gunter Annex have been identified during military construction activities. Specifically, either areas of contamination were encountered during excavation operations or abandoned fuel pipelines were encountered and damaged during excavations, resulting in a release. Table 3-11 lists the MAFB-Gunter Annex IRP sites and their current status.

Table 3-11 Status of IRP Sites on MAFB-Gunter Annex

Site ID Number	Description	Status
LF-001	Landfill No. 1	RI/FS[1]
SD-001	Basewide Surface Drainage	RI/FS
SS-001	Playground Spill Site	RI/FS
SS-002	New CE[1] Complex Spill Site	NFRAP[3]
SS-004	Base Housing/Industrial Area Contaminated Groundwater	RI/FS
SS-005	Site of Former Bldg. 847 and Bldg. 848, Print Plant	RI/FS
SS-006	Site of Former Bldg. 503, Contaminated Groundwater	RI/FS
ST-001	Site of Former Bldg. 408 LUST[4]	NFRAP
ST-002	Site of Former Bldg. 701 LUST	NFRAP
ST-003	Site of Former Bldg. 813 LUST	RA[5]
ST-004	AVGAS[6] Distribution System	NFRAP

Source: MAFB 2001b
Notes: [1]RI/FS—Remedial Investigation/Feasibility Study
[2]CE—Civil Engineering
[3]NFRAP—No Further Remedial Action Planned
[4]Leaking Underground Storage Tank
[5]RA—Remedial Action
[6]AVGAS—Aviation Grade Gasoline

Three of the IRP sites at MAFB-Gunter Annex are of interest in assessing potential impacts associated with the proposed action because of their proximity to the preferred construction site. They are: ST-004, the AVGAS Distribution System; SS-001, the Playground Spill Site; and ST-003, the LUST Site at former Building 813. (Figure 3-4).

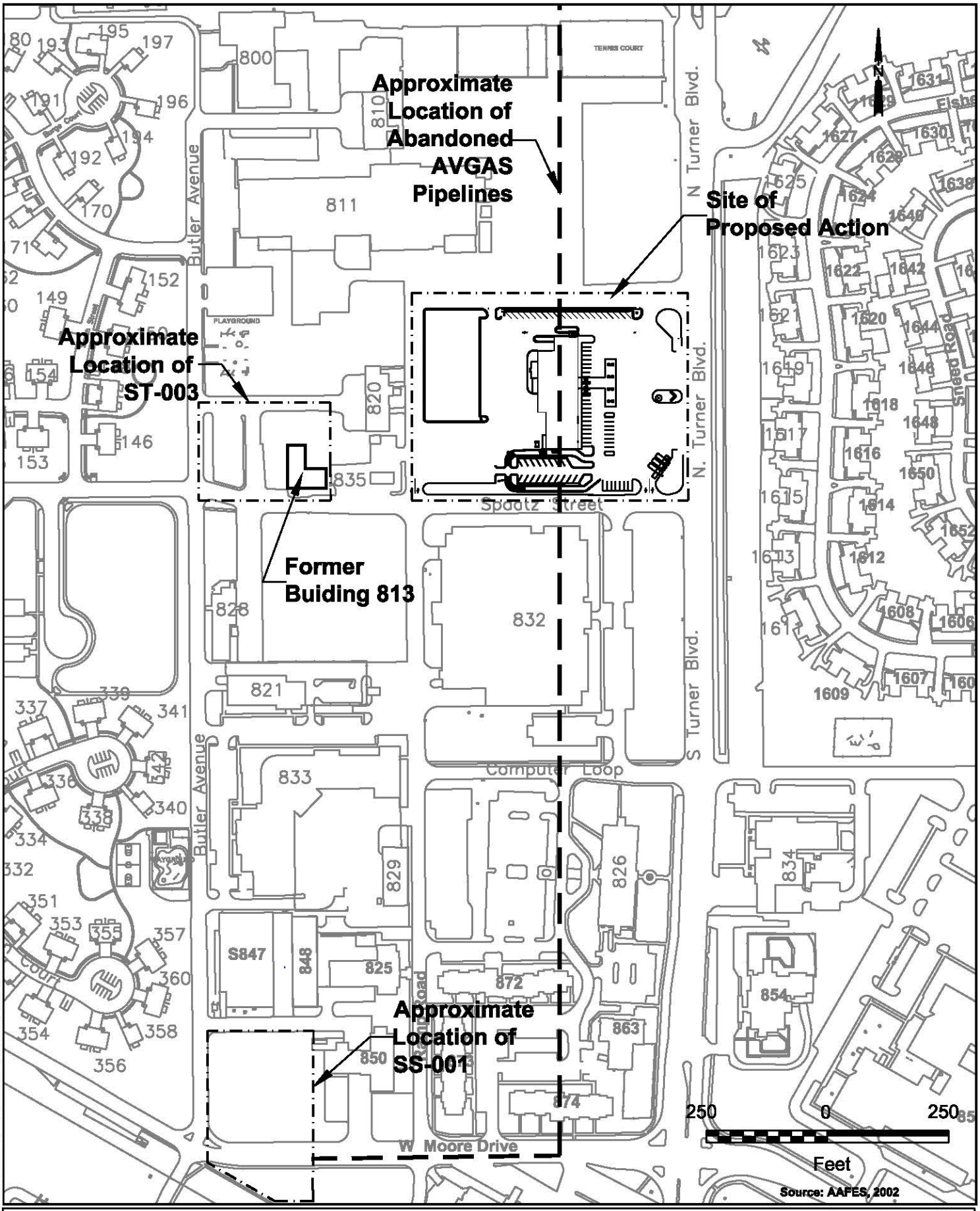


Figure 3-4 IRP Sites in Vicinity of Proposed Action
Maxwell Air Force Base-Gunter Annex, AL

Creation Date: 06/10/2002
Rev. Date: __/__/____
Project Manager: K. Martin
Prepared By: A. Long
Project No: 2047

ST-004 and SS-001, AVGAS Distribution System and Playground Spill Site

In 1943, an extensive underground aircraft fuel system was installed at MAFB-Gunter Annex to support around-the-clock flight operations for more than 300 aircraft. The original Aviation Grade Gasoline (AVGAS) distribution system consisted of at least six 25,000-gallon USTs, 2,000 feet of 6-inch waterline, 2,000 feet of 3-inch fuel line, and numerous associated valves, hydrants, and components located in the central portion of MAFB-Gunter Annex. The system originated in a grassy field, which is now in the area where West Moore Drive and Butler Avenue intersect. The pipelines ran east for approximately 300 feet, then turned north and ran approximately 1,700 feet, ending east of Building 811 (Figure 3-4). For IRP management purposes, the Air Force divided the AVGAS System into two separate sites: ST-004 (referring to the pipeline system) and SS-001 (sometimes identified as the 'Playground Spill Site' and referring to the site of six 25,000-gallon fuel USTs.) (MAFB 1996b).

In 1991, environmental investigation was begun to determine the location of the AVGAS System. Several site investigations were conducted, and it was determined that portions of the system have been removed, including the six 25,000-gallon USTs, but that most of the distribution system remains, including the pipelines and other distribution components.

In 1995, a secondary investigation on ST-004 was conducted. The investigation used the techniques of soil gas sampling, lithologic data logging, and groundwater sampling to determine the nature and extent of soil and groundwater contamination associated with the AVGAS distribution system. Trace amounts of VOCs, TRPH, and lead were detected in both the soil and groundwater samples, but none of these compounds was detected above the respective maximum concentration levels (MCLs) for water, or above the ADEM action level of 100 parts per million (ppm) for TRPH in soil. Samples collected from the 6-inch pipeline, however, suggested the presence of residual fuel in the pipeline (MAFB 1996b).

In 1996, USACE contracted to have approximately 1,500 feet of the 6-inch and 3-inch pipelines drained and cleaned. During the course of this project, it was determined that approximately 1,000 feet of the 6-inch pipeline in the "northern section" had formerly been used as a fuel line, and what was thought to be the 3-inch fuel line was actually a 2-inch galvanized steel pipe formerly used as an electrical conduit (electrical wire was present inside the pipe). Both lines were tapped at each of three man ways/access boxes to drain the lines of accumulated fluids. Approximately 5 gallons of water drained from the southern end of the 2-inch line, and the remainder of the line was essentially void of water. Approximately 1,000 gallons of water drained from the 6-inch line, and the water was pumped and discharged to the sanitary sewer system. The lines were allowed to dry for approximately 3 weeks and subsequently filled with cement grout. The access boxes were also filled with cement grout and the lids secured. The ST-004 site was closed under the IRP in September 1998, and it has also been closed under the Alabama UST Program (MAFB 2002d).

Additional soil sampling was conducted in the vicinity of the proposed action in December 2002 and April 2003 (Allied Environmental Solutions, 2002; Ringneck Consulting Services, 2003).

Shallow soil samples were collected and analyzed for Total Petroleum Hydrocarbons in the gasoline and diesel range, and eight RCRA metals. Laboratory analytical results for the soil samples collected were below action levels for the petroleum compounds; several samples indicated elevated concentrations of selenium. The concentrations of selenium were compared to EPA Region 9 Preliminary Remediation Goals applicable to industrial land uses to determine potential human health risks. All of the concentrations were below the Preliminary Remediation Goal for selenium, indicating no further action or study is warranted (USEPA 2003).

The Playground Spill Site (SS-001) is located in the south central portion of MAFB-Gunter Annex at the intersection of Butler Avenue and West Moore Drive (Figure 3-4). This area contained the six 25,000 gallon USTs associated with the AVGAS System. These USTs were removed in the early 1970s.

Site investigations at SS-001 included soil gas and Hydropunch™ surveys, and soil boring/monitoring well installation and sampling. Based on the soil gas results, hot spots were identified across the site. BTEX and TRPH were identified in the soil, but the soil analytical results indicated that the contamination concentrations were all below applicable action levels in the unsaturated zone beneath the playground area. Groundwater sampling results (Direct-push method) showed BTEX and TRPH contamination in the groundwater. Soil borings confirmed the presence of a perched aquifer beneath the site. The perched aquifer was encountered at depths ranging from 8 to 10 feet bgs (MAFB 2002d).

In 1998, four monitoring wells were installed at SS-001. No VOC contamination above the EPA Region III risk-based cleanup levels for residential areas was detected in the site soils. All chemicals of potential concern detected in soils were below human health and ecological risk-based screening levels and were not evaluated further. No VOCs were detected above MCLs in groundwater at this site; however, because SS-001 overlies a perched aquifer, a land use restriction was imposed that prohibits the installation of potable or irrigation wells into the perched aquifer at the site. A Feasibility Study is ongoing at this site (MAFB 2002d).

ST-003: Building 813 USTs (Former Base Service Station)

Building 813, the former Base Service Station, was located on Spaatz Street between Ramp Road and North Butler Avenue. To support the service station, this site contained one 500-gallon waste oil UST and five 3,000-gallon USTs and associated piping. The 500-gallon waste oil UST was removed in 1991 and the three larger USTs were removed in 1994. The site is now vacant.

Soil and groundwater investigations were conducted in association with the UST removals, and further remedial investigation and remedial action activities were found to be required. From 1992 through 1994, soil gas and hydrocone surveys were conducted and the results indicated the presence of BTEX and purgeable aromatics. Four groundwater monitoring wells were installed and soil borings were performed. While the results of the soil analysis showed measurable concentrations of TRPH, none of the concentrations was above ADEM's action levels of 100 ppm. The study concluded that soils in this area did not warrant further investigation.

Groundwater concentrations of benzene from two monitoring wells exceeded the 5 parts per billion (ppb) ADEM action level, and while toluene, ethylbenzene, and xylene were detected, the concentrations were below ADEM action levels. Lead concentrations in soil and groundwater were below ADEM action levels (MAFB 2001b; MAFB 2002d).

Soil Vapor Extraction (SVE) was initiated at the site in 1998, and remains active as part of the ongoing Remedial Action at ST-003. Recovered vapor concentrations indicate moderate declines in VOCs. Also, groundwater contaminant concentration curves indicate a decrease in loading into the groundwater from the soil. ST-003 has been classified as "I.1" under the UST Site Classification System. This is the lowest priority ranking within the system. There are no known private water wells within 1,000 feet of the site and no known public water supply wells within one mile of the site. This classification means that the site has contaminated soils and/or groundwater, but does not meet any of the other site classification criteria (MAFB 2000g).

3.12 UTILITIES

3.12.1 Definition of Resource

Utilities resources consist of land, facilities, structures, energy, and services necessary to perform required operations. This assessment presents baseline conditions, including current consumption levels, for electricity and natural gas, potable water, wastewater, and solid waste management associated with relevant AAFES functions at MAFB-Gunter Annex.

3.12.2 Existing Conditions

3.12.2.1 Electricity and Natural Gas

MAFB-Gunter Annex receives electricity from an Alabama Power Company substation located near the installation. MAFB-Gunter Annex is a "Priority 1" customer for the Alabama Power Company, which ensures that the installation would receive electrical service in the event that peak demands limit the ability of Alabama Power to supply service to all its customers. There are no daily limits imposed on MAFB-Gunter Annex for electrical consumption (MAFB 2002e). The existing shoppette consumed 345,552 kilowatt hours (kwh) of electricity in FY 2001. This represents .71 percent of the annual electrical consumption for MAFB-Gunter Annex (48,809,068 kwh).

Natural gas is provided to MAFB-Gunter Annex by the Alabama Gas Corporation (ALAGASCO). There are no daily limits imposed on MAFB-Gunter Annex for natural gas consumption (MAFB 2002e). The existing shoppette consumed 1,464,000 cubic feet of natural gas in FY 2001. This represents 1.4 percent of the annual natural gas consumption for MAFB-Gunter Annex (102,007,000 cubic feet).

3.12.2.2 Water

MAFB-Gunter Annex obtains its potable water from the City of Montgomery, which obtains water from both groundwater and surface water sources. Three aquifers are accessed via well fields located in various locations in the city. The Tallapoosa River is the sole source of surface water used by the City of Montgomery for potable water. There are no daily limits imposed on MAFB-Gunter Annex for water consumption (MAFB 2002e). The existing shoppette consumed 528,000 gallons of water in FY 2001. This represents 0.4 percent of the annual water consumption for MAFB-Gunter Annex (130,918,000 gallons).

3.12.2.3 Wastewater

The Catoma Wastewater Treatment Plant provides tertiary treatment to MAFB-Gunter Annex. The treatment plant is operated and maintained by the City of Montgomery. The plant has a capacity of 21 million gallons per day (MGD) and records an annual average of 10 MGD (City of Montgomery 2002b). The existing shoppette contributed approximately 1,447 gallons per day

of wastewater to the treatment plant in FY 2001. This represents 0.4 percent of the daily wastewater contributed by MAFB-Gunter Annex (358,679 gallons per day).

3.12.2.4 Solid Waste Management

Solid waste generated at MAFB-Gunter Annex is either recycled or disposed of in the North Montgomery City Landfill located west of MAFB-Gunter Annex. This 400-acre landfill began operation in 1980 and incorporates lined cells for garbage refuse and unlined cells for construction debris and other "dry" refuse. As of 2002, the landfill had an estimated 21 years of remaining operating life (City of Montgomery 2002a).

Approximately 75 percent of the solid waste generated by the existing AAFES shoppette consists of recyclable materials such as corrugated cardboard and other packing materials and plastic bottles, aluminum, and glass. AAFES has significantly reduced the quantity of material sent to the landfill by implementing a comprehensive recycling program in conjunction with MAFB-Gunter Annex.

4 ENVIRONMENTAL CONSEQUENCES

Resource analysis presented in this section is based on an examination of the potential effects of the proposed action and the No-Action Alternative (described in Section 2) on existing environmental conditions (described in Section 3). The discussion of potential environmental consequences follows the sequence of existing environmental conditions, as presented in Section 3.

4.1 AIR QUALITY

4.1.1 Approach to Analysis

Criteria pollutant emissions resulting from proposed construction activities at the MAFB-Gunter Annex have been evaluated for the proposed action and No-Action Alternative. Air quality impacts would be significant if emissions associated with the proposed action or alternatives would: 1) increase ambient air pollution concentrations above the NAAQS; 2) contribute to an existing violation of the NAAQS; 3) interfere with, or delay timely attainment of the NAAQS; or 4) impair visibility within Federally mandated PSD Class I areas. Additionally, a conformity analysis would be required before initiating any action that might lead to nonconformance of a SIP or an exceedance of *de minimis* criteria pollutant thresholds, or that might contribute to a violation of the NAAQS.

4.1.2 Impacts

4.1.2.1 Proposed Action

Construction Emissions

Construction activities associated with the proposed action at MAFB-Gunter Annex would result in minor, temporary increases in criteria pollutant emissions. Specifically, emissions from construction and construction-related vehicles used during facility construction activities would increase. In addition, fugitive dust (i.e., particulate matter less than 10 microns in diameter [PM_{10}]) would increase as a result of surface disturbances (e.g., grading and vegetation removal) associated with construction activities. However, there would be no long-term increase in mobile or stationary source emissions at the installation due to the proposed action. Neither the duration or frequency of mission activities would change.

Total emissions resulting from proposed construction activities have been estimated, using the Air Force's Air Conformity Applicability Model (ACAM) (USAF 2002) and accounting for fugitive dust and vehicle exhaust emissions from construction vehicles and equipment (Table 4-1). Emissions were estimated based upon the total square footage associated with the proposed action, over an assumed construction period of eight months. Construction vehicles involved in construction of the proposed action would consist of a mixture of loaders, trucks, backhoes, water trucks, and other vehicles and equipment typically associated with construction activities.

Table 4-1 Estimated Emissions as a Result of Construction of the Proposed Action (tons/year)

	CO	VOCs	NO_X	SO_2	PM_{10}	HAPs
Construction Emissions	1.0	3.0	11.0	0.1	1.0	0.0
Gas Station Emissions[1]	N/A	21.0	N/A	N/A	N/A	1.7
Total Emissions	**1.0**	**24.0**	**11.0**	**0.1**	**1.0**	**1.7**
Representative *de minimis* levels[2]	100	100	100	100	100	N/A
Exceeds de minimis Threshold	N/A	N/A	N/A	N/A	N/A	N/A

Notes: [1] Gas station emissions would occur on an annual basis; construction emissions would not.
[2] *de minimis* levels are presented for comparison purposes only; the region is in attainment of the NAAQS.
CO - Carbon Monoxide; VOCs - Volatile Organic Compounds; NO_x - Nitrogen Oxides; SO_2 - Sulfur Dioxide; HAP - Hazardous Air Pollutant
PM_{10} - particulate matter less than 10 microns in diameter; N/A = not applicable.

Gas Station Emissions

Under the proposed action, one 20,000-gallon and one 15,000-gallon UST with associated pumps and piping would be installed at the gas station. Direct emissions from gas stations are generated as a result of vapor releases during re-fueling activities and are limited to VOCs and HAPs. Emissions resulting from the use of the proposed gas station have been estimated based on an annual throughput of 2,100,000 gallons and include emissions from refueling the USTs, emptying losses from the USTs, gas tank vapor displacement, and spillage. Proposed gas station activities would produce an estimated annual total of 21.0 tons of VOCs and 1.7 tons of total HAPs (see Table 4-1).

Total Emissions

Data presented in Table 4-1 shows that estimated air emissions resulting from proposed construction and projected vehicle refueling activities, although not occurring within a nonattainment or maintenance area, would be below *de minimis* levels; a conformity analysis would not be necessary even if the proposed action occurred in a nonattainment or maintenance area. In addition, estimated emissions as a result of implementation of the proposed action would not violate the NAAQS (Table 4-2).

Table 4-2 Estimated Annual Criteria Pollutant Concentrations as a Result of Implementation of the Proposed Action

Criteria Pollutant	Averaging Period	NAAQS	Emissions from Proposed Action as a Percentage of the NAAQS
CO	1-hour	35 ppm	<< 0.01
	8-hour	9 ppm	<< 0.01
NO_X	Annual	0.053 ppm	<< 0.01
SO_X	3-hour	0.50 ppm	<< 0.01
	24-hour	0.14 ppm	<< 0.01
	Annual	0.03 ppm	<< 0.01
PM_{10}	24-hour	150 $\mu g/m^3$	<< 0.01
	Annual	50 $\mu g/m^3$	<< 0.01

Notes: ppm - parts per million; $\mu g/m^3$ - micrograms per cubic meter.

Construction-related emissions as a result of implementation of the proposed action would temporarily impact local air quality. However, vehicle emissions generated by proposed construction activities would be temporary and short-term; no long-term increases in vehicle emissions would occur. Emissions associated with construction-related vehicles and equipment would be negligible, as most vehicles would be driven to and kept at the affected site until construction was complete.

Fugitive dust generated from proposed construction activities would temporarily impact local air quality. However, fugitive dust generated by proposed construction activities would be temporary and short-term; no long-term increases in fugitive dust would occur. Additionally, increases in PM_{10} would be moderated through Best Management Practices (BMPs), including watering of exposed soils, soil stockpiling, and soil stabilization, thereby limiting the total quantity of fugitive dust emitted during the construction period.

The proposed action would be subject to Stage 1 requirements for gasoline dispensing in the State of Alabama. Therefore, AAFES would submit a Stage 1 Gasoline Dispensing Permit Application (Form 197) to ADEM for review prior to construction.

Implementation of the proposed action would not lead to an exceedance of *de minimis* thresholds and estimated criteria pollutant emissions would not violate the NAAQS; determination of conformity to the Alabama SIP is not required. In addition, implementation of the proposed action would not impair visibility within a PSD Class I area as no PSD Class I areas are located within the vicinity of the proposed action. Therefore, no significant impacts to air quality would occur as a result of implementation of the proposed action.

4.1.2.2 No-Action Alternative

Under the No-Action Alternative, proposed short-term construction activities at the installation would not occur. Baseline air quality, as described in Section 3.1, would remain unchanged. Therefore, no significant impacts to air quality would occur as a result of implementation of the No-Action Alternative.

4.2 NOISE

4.2.1 Approach to Analysis

Noise impacts as a result of implementation of the proposed action at MAFB-Gunter Annex have been evaluated to the degree to which they would affect the baseline noise environment, as described in Section 3.2. Potential changes in the noise environment can be beneficial (i.e., if the number of sensitive noise receptors exposed to unacceptable noise levels is reduced); negligible (i.e., if the total area exposed to unacceptable noise levels is essentially unchanged); or adverse, (i.e., if they result in increased exposure to unacceptable noise levels).

4.2.2 Impacts

4.2.2.1 Proposed Action

Under the proposed action, minor, temporary impacts to the noise environment in the vicinity of the proposed construction site would occur. The use of heavy equipment for site preparation and development (e.g., vegetation removal, grading, and back fill) could potentially generate noise levels above average ambient noise levels. However, noise levels would be typical of standard construction activities; would cease with the completion of proposed construction activities; and would only occur during normal working hours (i.e., between 7:00 A.M. and 5:00 P.M., Monday through Friday). Furthermore, sound levels could be reduced through the use of equipment sound mufflers.

Generally, the average sound level produced by construction activities would be approximately 85 A-weighted decibels (dBA) at a distance of 50 feet (USEPA 1971). However, as the nearest noise-sensitive receptor (a residential area) is located approximately 500 feet from the site of the proposed action, no appreciable noise impacts to residential areas would occur. In addition, the operation and use of the proposed facility would not generate significant noise levels and the noise environment at the installation would continue to be dominated by vehicular traffic. Therefore, no significant impacts to the noise environment as a result of implementation of the proposed action would occur.

4.2.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction of the new mini-mall at MAFB-Gunter Annex would not occur. The baseline noise environment, as described in Section 3.2, would remain unchanged. Therefore, no significant impacts to noise would occur as a result of implementation of the No-Action Alternative.

4.3 LAND USE

4.3.1 Approach to Analysis

Significance of potential land use impacts is based on the level of land use sensitivity in areas affected by a proposed action. In general, land use impacts would be significant if they would: 1) be inconsistent or in non-compliance with applicable land use plans or policies; 2) preclude the viability of an existing land use activity; 3) preclude continued use or occupation of an area; or 4) be incompatible with adjacent or vicinity land use to the extent that public health or safety is threatened.

4.3.2 Impacts

4.3.2.1 Proposed Action

Implementation of the proposed action would result in beneficial impacts to land use at MAFB-Gunter Annex. Use of the site selected for the proposed action is in accordance with the adopted Comprehensive Plan for MAFB-Gunter Annex and all project components will be designed and sited to be compatible with existing base land use. The proposed action would be centrally located within the Community Commercial and Community Services land use zones, thereby maintaining the functional relationship among community facilities. Furthermore, the site would be easily accessible to all family housing areas and within walking distance of the majority of the troop housing and community support areas. The site is also accessible to military personnel residing in the civilian community. As described in Section 4.2.2.1, Noise, construction noise levels would be similar to typical construction noise, would last only the duration of construction activities, and could be reduced through the use of equipment sound mufflers and restricted hours of construction. Therefore, impacts to land use would not be significant.

4.3.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction of a new mini-mall at the installation would not occur. Baseline land use, as described in Section 3.3, would remain unchanged. Therefore, no significant impacts to land use would occur as a result of implementation of the No-Action Alternative.

4.4 GEOLOGICAL RESOURCES

4.4.1 Approach to Analysis

The protection of unique geologic features, minimization of soil erosion, and the location of facilities in relation to potential geologic hazards are considered when evaluating impacts of a proposed action. Generally, impacts on geological resources are not significant if proper construction techniques and erosion control measures are implemented to minimize or mitigate short and long-term disturbance to soils and to overcome limitations imposed by earth resources.

4.4.2 Impacts

4.4.2.1 Proposed Action

Geological Resources

Construction activities associated with the proposed action would not significantly affect the geologic units underlying the installation as no unique geologic features or geologic hazards are present. Although ground disturbance would occur at the installation during construction, the construction would occur over previously disturbed surfaces. In addition, while proposed construction activities would require some minimal grading, no significant topographic features would be affected as a result of development associated with the proposed action. Therefore, no significant impacts to geological resources would occur as a result of implementation of the proposed action.

Soils

Soils would be disturbed during grading activities associated with proposed construction. However, implementation of BMPs during construction would reduce impacts to soils associated with grading and clearing activities. In addition, standard erosion control measures (e.g., silt fencing, sediment traps, application of water sprays, and revegetation of disturbed soils) would be implemented to reduce potential impacts related to these characteristics. Therefore, no significant impacts to soils would occur as a result of implementation of the proposed action.

4.4.2.2 No-Action Alternative

Geological Resources

Under the no-action alternative, proposed short-term construction activities at MAFB-Gunter Annex would not occur. There would be no construction or ground-disturbing activities. As a result, the baseline geological resources would remain unchanged and no significant impacts would occur.

Soils

Under the No-Action Alternative, proposed short-term construction activities at MAFB-Gunter would not occur. Baseline conditions for soils would remain unchanged. Therefore, no significant impacts to soils would occur as a result of implementation of the No-Action Alternative.

4.5 WATER RESOURCES

4.5.1 Approach to Analysis

The analysis of water resources includes all surface and groundwater resources at the installation as well as watershed areas affected by existing and potential runoff. Significant impacts to water resources could potentially occur if the proposed action resulted in changes to water quality or supply; threatened or damaged unique hydrologic characteristics; endangered public health by creating or worsening health hazards; or violated established laws or regulations. Impacts of flood hazards on proposed actions would be significant if such actions are proposed in areas with high probabilities of flooding. Potential impacts to wetlands are discussed in Section 4.6, Biological Resources.

4.5.2 Impacts

4.5.2.1 Proposed Action

Surface Water

Under the proposed action, proposed construction activities would result in a temporary increase in total suspended particulate matter (i.e. sedimentation) to nearby surface water. To minimize potential impacts, BMPs (see Section 4.4.2.1, Soils, above) would be implemented during the construction period.

The proposed action would disturb more than one acre of land at MAFB-Gunter Annex. Therefore, AAFES would contact the ADEM Water Division and file a Notice of Registration for NPDES General Permit coverage. In addition, a Construction Best Management Practices Plan would be developed and implemented on-site for the duration of the construction period. Construction would have minor localized (i.e., site-specific) effects on surface water hydrology; however, BMPs would be incorporated during construction to minimize potential erosion, runoff, and sedimentation. Proposed construction activities would not occur within a 100-year floodplain zone.

Because the site of the proposed action is already nearly impervious, no appreciable net increase in stormwater discharge volumes and intensities are anticipated following completion of the proposed action. Any increase in stormwater volume would be minor and would be accommodated by the existing stormwater discharge infrastructure (MAFB 2002f). Therefore, no significant impacts would occur to surface water resources as a result of implementation of the proposed action.

Groundwater

Site disturbance and construction associated with the proposed action are not anticipated to affect groundwater resources. Construction operations would not reach depths that could affect groundwater resources. Furthermore, because no appreciable increase in impervious surface is

anticipated, the impact to the recharge area of the surficial aquifer upon which the project site is located would be minimal (GSA 2002). Therefore, no significant impacts would occur to groundwater resources as a result of implementation of the proposed action.

4.5.2.2 No-Action Alternative

Surface Water

Under the No-Action Alternative, proposed short-term construction activities at the installation would not occur. Baseline surface water conditions would remain unchanged. Therefore, no significant impacts to surface water would occur as a result of implementation of the No-Action Alternative.

Groundwater

Under the No-Action Alternative, proposed short-term construction activities at the installation would not occur. Baseline groundwater conditions would remain unchanged. Therefore, no significant impacts to groundwater would occur as a result of implementation of the No-Action Alternative.

4.6 BIOLOGICAL RESOURCES

4.6.1 Approach to Analysis

Determination of the significance of potential impacts to biological resources is based on: 1) the importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource; 2) the proportion of the resource that would be affected relative to its occurrence in the region; 3) the sensitivity of the resource to proposed activities; and 4) the duration of ecological ramifications. Impacts to biological resources are significant if species or habitats of concern are adversely affected over relatively large areas or disturbances cause reductions in population size or distribution of a species of concern.

This section analyzes the potential for impacts to biological resources, such as habitat loss, from implementation of the proposed action or alternative. Analysis of on-base impacts focuses on whether and how ground-disturbing activities may affect biological resources.

4.6.2 Impacts

4.6.2.1 Proposed Action

Vegetation and Forestry

Construction associated with the proposed action would require vegetation removal (i.e. grass) in landscaped and previously disturbed areas. However, due to the lack of sensitive vegetation at the proposed site, proposed construction would not have significant impacts on vegetation.

Rare, Threatened, and Endangered Species

No Federally-listed endangered, threatened, or proposed species, or their designated critical habitat under the jurisdiction of the USFWS, occur at or in the vicinity of the proposed action (USFWS 2002). Furthermore, the Alabama Department of Conservation and Natural Resources concludes that the closest sensitive species to the proposed action is recorded as occurring in the Alabama River approximately four miles from the site of the proposed action (ADCNR 2002). Therefore, there would be no impacts to threatened or endangered species with implementation of the proposed action.

Wetlands

There are no delineated wetlands at MAFB-Gunter Annex (MAFB 2002b). Therefore, no significant impacts would occur to wetlands as a result of implementation of the proposed action.

4.6.2.2 No-Action Alternative

Vegetation and Forestry

Under the No-Action Alternative, construction activities associated with the proposed action at the installation would not occur. Baseline vegetation and forestry resources would remain unchanged. Therefore, no significant impacts to vegetation and forestry resources would occur as a result of implementation of the No-Action Alternative.

Rare, Threatened, and Endangered Species

Under the No-Action Alternative, construction activities associated with the proposed action at the installation would not occur. Because no Federally-listed endangered, threatened, or proposed species, or their designated critical habitat under the jurisdiction of the USFWS, or state-designated sensitive species, occur at or in the vicinity of the proposed action, no significant impacts to these resources would occur as a result of implementation of the No-Action Alternative.

Wetlands

No wetlands have been delineated at MAFB-Gunter Annex. Therefore, no significant impacts to wetlands would occur as a result of implementation of the No-Action Alternative.

4.7 TRANSPORTATION AND CIRCULATION

4.7.1 Approach to Analysis

Impacts on transportation and circulation would be considered significant if the proposed action affected the safety and/or the capacity of roads at the installation and within the region. In addition, impacts would be considered significant if the proposed action increased the potential for traffic disruption or congestion along regional and local transportation corridors.

4.7.2 Impacts

4.7.2.1 Proposed Action

Construction Impacts

Proposed construction activities would require the removal of demolition-related debris and the delivery of construction equipment and materials to the installation. However, construction traffic would constitute a small portion of the total existing traffic volume in the region and at the installation. The majority of vehicles used for construction activities would be driven to the construction site and kept onsite for the duration of construction, resulting in only a small increase in vehicle trips. In addition, increases in traffic volumes associated with construction activity would be temporary. Upon completion of construction, no long-term impacts to off-base transportation systems would occur.

Implementation of proposed construction at the installation would result in minor, temporary impacts to on-base traffic circulation as a result of increased traffic associated with construction vehicles. However, these impacts would be short-term and would not have a significant impact on the installation's transportation network.

Operational Impacts

From an operational standpoint, the proposed action would result in beneficial impacts to vehicle circulation. The proposed action would consolidate related uses that are currently located in buildings throughout the installation (i.e. concessions and shoppette), thereby reducing vehicle trips and overall congestion at the installation. In addition, the site of the proposed action is located in an ideal location for a retail establishment, facilitating efficient vehicular movement within and around the site from several streets. An increase in vehicle trips on adjacent roads may be realized as a result of the new mini-mall. However, the increase in traffic levels would not significantly affect safety and/or the capacity of roads at the installation and within the region (MAFB 2002g). There would be no impacts to existing installation parking as adequate parking would be accommodated on-site.

4.7.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction activities at the installation would not occur. Baseline transportation and circulation conditions, as described in Section 3.7, would remain unchanged. Therefore, no significant impacts to transportation and circulation would occur as a result of implementation of the No-Action Alternative.

4.8 CULTURAL RESOURCES

4.8.1 Approach to Analysis

Cultural resources are subject to review under both Federal and state laws and regulations. Section 106 of the National Historic Preservation Act of 1966 empowers the Advisory Council on Historic Preservation to comment on Federally initiated, licensed, or permitted projects affecting cultural sites listed or eligible for inclusion on the NRHP. Once cultural resources have been identified, significance evaluation is the process by which resources are assessed relative to significance criteria for scientific or historic research, for the general public, and for traditional cultural groups. Only cultural resources determined to be significant (i.e., eligible for the NRHP) are protected under the National Historic Preservation Act.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Direct impacts may occur by: 1) physically altering, damaging, or destroying all or part of a resource; 2) altering characteristics of the surrounding environment that contribute to resource significance; 3) introducing visual, audible, or atmospheric elements that are out of character with the property or alter its setting; or 4) neglecting the resource to the extent that it deteriorates or is destroyed. Direct impacts can be assessed by identifying the type and location of the proposed action and by determining the exact locations of cultural resources that could be affected. Indirect impacts primarily result from the effects of project-induced population increases and the resultant need to develop new housing areas, utilities services, and other support functions necessary to accommodate population growth. These activities and facilities' subsequent use can disturb or destroy cultural resources.

4.8.2 Impacts

4.8.2.1 Proposed Action

The proposed construction would take place in an area previously disturbed by urban development. No archaeological sites or architectural resources are known to exist at, or in the vicinity of, the proposed action. In addition, the Alabama State Historic Preservation Office concurs that the proposed action would have no effect on any known cultural resources listed or eligible for the NRHP (see Appendix A). Therefore, no significant impacts to cultural resources would occur as a result of implementation of the proposed action.

The installation's CRMP notes that, due to the nature of historic properties and the current methodological limitations of cultural resources surveys, all archaeological sites at MAFB and its associated lands may not have been discovered during prior surveys. Some properties may be discovered during the construction or implementation of an activity that has been approved. The CRMP mandates that if archaeological sites are discovered during the construction or implementation of an activity, all work in the area of the suspected site must cease and the MAFB Historic Preservation Officer must be notified immediately by telephone for consultation

and appropriate action (MAFB 1999a). All regulations and policies relevant to the protection of cultural resources would be adhered to by AAFES during the construction process.

4.8.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction activities at the installation would not occur. Baseline cultural resource conditions would remain unchanged. Therefore, no significant impacts on cultural resources would occur as a result of implementation of the No-Action Alternative.

4.9 SOCIOECONOMICS

4.9.1 Approach to Analysis

Significance of population and expenditure impacts are assessed in terms of their direct effects on the local economy and related effects on other socioeconomic resources within the region. Socioeconomic impacts would be considered significant if the proposed action resulted in a substantial shift in population trends, or notably affected regional employment, spending and earning patterns, or community resources.

4.9.2 Impacts

4.9.2.1 Proposed Action

The shoppette and concessions functions would maintain their current levels of employment (17 and 8 employees, respectively). However, with the inclusion of the new restaurant (to be either a franchise or AAFES-owned), overall employment would increase by 12 employees for a total of 37 employees at the mini-mall. Current total annual salary and benefits associated with the shoppette and concessions total $480,592. Under the proposed action, the estimated total annual salary and benefits in FY 2003 associated with the shoppette, concessions, and restaurant function would be approximately $784,384. Average monthly sales are expected to increase once the new mini-mall is opened. The FY 1999 average monthly sales figure for the shoppette and concessions was $397,000. Average monthly sales in FY 2003 upon implementation of the proposed action are projected to be $561,000.

That portion of the anticipated sales increase attributable to businesses owned and operated by AAFES (e.g., the shoppette and restaurant owned by AAFES) would result in a loss in sales tax revenues to the surrounding area, as well as a minor loss in revenue to local and regional merchants that might receive that business if the mini-mall were not constructed. The portion of the sales increase attributable to privately-owned and operated businesses located within the mini-mall (i.e. concessions and franchised restaurant) represents a statistically insignificant impact to the local economy. Because these businesses pay state and local taxes, this sales increase could result in a positive impact in the form of additional state and local tax revenues. The increase in employment opportunities associated with the new restaurant function would be beneficial to the local and regional economy. In addition, construction services procured through the local economy to construct the new mini-mall would be considered a positive impact.

Increases in revenues to privately-owned businesses located in the mini-mall and the salaries associated with the 12 new jobs created would further benefit the local economy through a multiplier effect, whereby increased local spending results in the purchase of goods and services and in additional growth through reinvestment in the region.

Thus, while there would likely be a loss in sales tax revenues to the surrounding areas, as well as a minor loss in revenue to local and regional merchants from AAFES-owned and operated business sales, there would also be an offsetting benefit to the economy through increased state

and local tax revenue from privately-owned and operated businesses within the mini-mall, the creation of 12 new jobs, and procurements for construction of the mini-mall. The multiplier effect would amplify these benefits, resulting in additional growth through reinvestment in the region. As a result of this offsetting activity, no significant adverse impacts to socioeconomic resources are anticipated.

4.9.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction activities at the installation would not occur. Baseline socioeconomic conditions would remain unchanged. Therefore, no significant impacts to socioeconomic conditions would occur as a result of implementation of the No-Action Alternative.

4.10 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

4.10.1 Approach to Analysis

In order to comply with EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, ethnicity and poverty status in the vicinity of the proposed actions have been examined and compared to city, county, and state data to determine if any minority or low-income communities could potentially be disproportionately affected by implementation of the proposed action or alternatives. Similarly, to comply with EO 13045, *Protection of Children From Environmental Health Risks and Safety Risks*, the locations where numbers of children may be proportionally high on and in the vicinity of the proposed actions was determined to ensure that environmental risks and safety risks to children are addressed.

Three criteria must be met for impacts to minority and low income communities or children to be considered significant. 1)There must be one or more populations within the ROI. 2)There must be adverse (or significant) impacts from the proposed action. 3)The environmental justice populations within the ROI must bear a disproportionate burden of those adverse impacts. If any of these criteria are not met, then impacts with respect to environmental justice or protection of children would not be significant.

4.10.2 Impacts

4.10.2.1 Proposed Action

Under the proposed action, construction activities would be limited to the 5.4 acre site as shown in Figure 2-1. Analyses of resource areas conclude that populations (including minority and low-income populations) within and outside the installation would not be significantly impacted. Therefore, implementation of the proposed action would not disproportionately impact minority or low-income populations.

Implementation of the proposed action would not result in environmental health risks or safety risks to children, as no housing or facilities for children exist adjacent to, or in the immediate vicinity of, the site of the proposed action. During proposed construction of the mini-mall, standard construction site safety precautions (e.g., fencing and patrolling) would be implemented. In addition, the existing high-security environment at the installation prohibits access by unauthorized personnel. For these reasons, potential health or safety impacts to children living or playing in the vicinity would be minimized. Therefore, no significant impacts to children from health risks or safety risks would occur as a result of implementing the proposed action.

4.10.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction of the mini-mall would not occur. Baseline conditions would remain unchanged. Therefore, no significant impacts to

environmental justice conditions would occur, nor would children be disproportionately exposed to increased health or safety risks as a result of implementation of the No-Action Alternative.

4.11 HAZARDOUS MATERIALS AND WASTES

4.11.1 Approach to Analysis

Federal, state, and local laws regulate the storage, disposal, and transportation of hazardous materials and wastes. These laws have been established to protect human health and the environment from potential impacts. The significance of impacts associated with hazardous wastes and materials is based on the toxicity of the substance, transportation and storage risk, and the method of waste disposal. Impacts are considered significant if the storage, use, transportation, or disposal of these substances increases human health risks or environmental exposure.

4.11.2 Impacts

4.11.2.1 Proposed Action

The proposed action is not expected to have an impact on the management of hazardous materials at MAFB-Gunter Annex and the proposed mini-mall operation is not considered a generator of hazardous materials or hazardous waste. During the construction period, the construction contractor would be responsible for notifying the installation in advance of bringing any hazardous materials on the installation. Furthermore, the construction contractor would be responsible for disposing of any hazardous materials used on the site during construction activities.

The new mini-mall would maintain a stock of consumer products; some of these, such as aerosol cans containing paint or pesticides, auto care products, or household cleaning supplies, contain hazardous substances. The mini-mall operation would maintain Material Safety Data Sheets (MSDSs) for these products and conduct necessary employee awareness training (e.g., hazard communication). The mini-mall operation would be expected to follow all mandates outlined in the various management plans that have been developed for the tenants of MAFB and MAFB-Gunter Annex such as the *Hazardous Materials Management Guide* (MAFB 2000b), the *Hazardous Waste Management Plan* (MAFB 2000c), and the *Oil and Hazardous Materials Spill/Prevention and Response Plan* (MAFB 1999b).

Solid waste would be managed in accordance with the MAFB Solid Waste Management Plan (MAFB 2000f). All non-hazardous waste would be collected and disposed of by licensed private contractors at the North Montgomery Municipal landfill.

The IRP sites (ST-004, SS-001, ST-003) located on and in proximity to the proposed action site (refer to Figure 3-4) have been investigated extensively in accordance with state and federal regulations and guidelines. While remediation and long-term monitoring continue at SS-001 and ST-003, the existing contamination (soil and/or groundwater) at these sites is not expected to have a measurable impact on the proposed action site.

Review of documents describing the investigations and actions completed to date for the nearby former ST-004 IRP site indicates that the underground pipelines associated with the out-of-use AVGAS Distribution System remain in the area of the proposed action. Specifically, the pipelines, which are located approximately 3 feet bgs, run in a north-south direction through the area proposed for the construction of the building that would house the new mini-mall. Despite the ST-004 site being closed under the IRP and the Alabama UST Program, it is possible that the surrounding soils may have been contaminated prior to the draining and filling of the lines, and this contamination may still exist in the proposed construction site. As described in Section 3.11.2.1, additional soil sampling was conducted in the vicinity of the proposed action in December 2002 and April 2003 (Allied Environmental Solutions, 2002; Ringneck Consulting Services, 2003). Laboratory analytical results for the soil samples collected were below action levels for petroleum compounds, however, several samples indicated elevated concentrations of selenium. The concentrations of selenium were compared to EPA Region 9 Preliminary Remediation Goals applicable to industrial land uses to determine potential human health risks. All of the concentrations were below the Preliminary Remediation Goal for selenium, indicating no further action or study is warranted (USEPA 2003).

In order to minimize the threat of exposure to potentially contaminated soils at the site, any soils excavated as part of the proposed action would be properly segregated by the construction contractor and then sampled by representatives of the Environmental Section at MAFB. Sample results would determine whether soils can be reused on the site or require proper disposal off-site at a facility permitted to receive the soils pursuant to appropriate State of Alabama regulations. Furthermore, procedures to minimize dust during excavation and construction will be implemented on-site. Therefore, no significant impacts would occur as a result of implementing the proposed action.

4.11.2.2 No-Action Alternative

Under the No-Action Alternative, no construction would occur at the site. The standards described above for management of potentially hazardous packaged consumer products would continue to apply during ongoing operation of the existing AAFES facilities. Baseline hazardous material and waste conditions would remain unchanged and any contamination on or near the project site would continue to be studied and remediated as appropriate under the IRP. Therefore, there would be no significant impacts from hazardous materials and wastes with implementation of the No-Action Alternative.

4.12 UTILITIES

4.12.1 Approach to Analysis

The assessment of impacts to utilities is based on comparing existing use and condition to proposed changes in these resources. The analysis compares current utility usage for applicable functions with anticipated future demands to determine potential impacts. Potential impacts to utilities may occur if a change in demand resulting from the proposed action significantly affects the ability of a utility provider to service existing customers. Facilities, such as landfills, may be impacted if they are unable to effectively accommodate additional demands resulting from a proposed activity.

4.12.2 Impacts

4.12.2.1 Proposed Action

Electricity and Natural Gas

There are no daily limits imposed on MAFB-Gunter Annex for electrical consumption (MAFB 2002e). Furthermore, MAFB-Gunter Annex is a "Priority 1" customer for the Alabama Power Company, which ensures that the installation would receive electrical service in the event that peak demands limit the ability of Alabama Power to supply service to all its customers.

The existing shoppette consumed 345,552 kwh or .71 percent of the annual electrical consumption for MAFB-Gunter Annex. Under the proposed action, a new fast food style restaurant would be accommodated in the mini-mall. Data on electrical consumption for the Burger King restaurant at MAFB (Building 1087) in FY 2001 reveals that this facility consumed 173,520 kwh, equivalent to approximately .35 percent of the annual electrical consumption for MAFB-Gunter Annex. Assuming the new restaurant in the mini-mall consumes approximately the same quantity of electricity annually as the Burger King at MAFB, the total electricity consumed annually by the new mini-mall (shoppette and restaurant) could be estimated at approximately 519,072 kwh, a 50 percent increase over the existing shoppette's demand and equivalent to 1.0 percent of the annual electrical consumption for MAFB-Gunter Annex. This does not take into account the concessions located in Building 401. Data on electrical consumption for Building 401 was not available. However, because operations at the concessions will not change under the proposed action, the concessions would not influence the evaluation of potential impacts. Even if electrical demand for the shoppette portion of the new mini-mall doubled under the proposed action, this would equate to approximately 1.7 percent of the annual electrical consumption for MAFB-Gunter Annex. However, because there are no daily limits imposed on MAFB-Gunter Annex for electricity, the minor increase in electricity demand under the proposed action would have no adverse impact on the ability of the Alabama Electrical Company to effectively serve customers.

There are no daily limits imposed on MAFB-Gunter Annex for natural gas consumption (MAFB 2002e).

The existing shoppette consumed 1,464,000 cubic feet of natural gas in FY 2001 or 1.4 percent of the annual natural gas consumption for MAFB-Gunter Annex. Under the proposed action, a new fast food restaurant would be accommodated in the mini-mall. Data on natural gas consumption for the Burger King restaurant at MAFB (Building 1087) in FY 2001 reveals that this facility consumed 8,400,000 cubic feet, equivalent to approximately 8.2 percent of the annual natural gas consumption for MAFB-Gunter Annex. Assuming the new restaurant in the mini-mall consumes approximately the same quantity of natural gas as the Burger King at MAFB, the total natural gas consumed annually by the new mini-mall (shoppette and restaurant) could be estimated at approximately 9,864,000 cubic feet, a more than 500 percent increase over the existing shoppette's demand and equivalent to 8.9 percent of the annual natural gas consumption for MAFB-Gunter Annex. This does not take into account the concessions located in Building 401. Data on natural gas consumption for Building 401 was not available; however, operations at the concessions will not change under the proposed action and will not influence the evaluation of potential impacts. Because there are no daily limits imposed on MAFB-Gunter Annex for natural gas, the increase in natural gas demand under the proposed action would have no adverse impact on the ability of ALAGASCO to effectively serve customers.

Water

There are no daily limits imposed on MAFB-Gunter Annex for potable water consumption (MAFB 2002e).

The existing shoppette consumed 528,000 gallons of water in FY 2001 or 0.4 percent of the annual water consumption for MAFB-Gunter Annex. Under the proposed action, a new fast food restaurant would be accommodated in the mini-mall. Data on water consumption for the Burger King restaurant at MAFB (Building 1087) in FY 2001 reveals that this facility consumed 408,000 gallons, equivalent to approximately 0.3 percent of the annual water consumption for MAFB-Gunter Annex. Assuming the new restaurant in the mini-mall consumes approximately the same quantity of water annually as the Burger King at MAFB, the total amount of water consumed annually by the new mini-mall (shoppette and restaurant) could be estimated at approximately 936,000 gallons, a 77 percent increase over the existing shoppette's demand and equivalent to 0.7 percent of the annual water consumption for MAFB-Gunter Annex. This does not take into account the concessions located in Building 401. Data on water consumption for Building 401 was not available; however, operations at the concessions will not change under the proposed action and will not influence the evaluation of potential impacts. Even if water demand for the shoppette portion of the new mini-mall doubled under the proposed action, this would equate to approximately 1.1 percent of the annual water consumption for MAFB-Gunter Annex. However, because there are no daily limits imposed on MAFB-Gunter Annex for water, the minor increase in water demand under the proposed action would have no significant adverse impact on potable water resources.

Wastewater

Wastewater from MAFB-Gunter Annex is sent to the Catoma Wastewater Treatment Plant in the City of Montgomery. The plant has a capacity of 21 MGD yet receives an average of only 10 MGD. The existing shoppette contributed 1,446 gallons per day to the treatment plant in FY 2001. Under the proposed action, a new fast food restaurant would be accommodated in the mini-mall. The Burger King restaurant at MAFB (Building 1087) contributed 1,118 gallons per day of wastewater to a treatment plant in FY 2001. Assuming the new restaurant in the mini-mall contributes approximately the same quantity of wastewater per day as the Burger King at MAFB, the total amount of water contributed daily by the new mini-mall (shoppette and restaurant) could be estimated at approximately 2,564 gallons per day. Even if this quantity of wastewater doubled under the proposed action, it would not adversely impact the Catoma Wastewater Treatment Plant, given its excess operating capacity. (City of Montgomery, 2002b)

Solid Waste Management

Solid waste generated at MAFB-Gunter Annex is either recycled or disposed of in the North Montgomery City Landfill located west of MAFB-Gunter Annex. As of 2002, the landfill had an estimated 21 years of remaining operating life (City of Montgomery 2002a). Given the expected lifespan of 21 years for the landfill, the facility has ample capacity to support the minor increase in overall solid waste levels generated by the proposed action.

4.12.2.2 No-Action Alternative

Under the No-Action Alternative, proposed construction activities at the installation would not occur. Baseline conditions for utility resources would remain unchanged. Therefore, no significant impacts to utilities would occur as a result of implementation of the No-Action Alternative.

5 CUMULATIVE EFFECTS

This section provides: 1) a definition of cumulative effects; 2) a description of past, present, and reasonably foreseeable actions relevant to cumulative effects; and 3) a summary of cumulative effects potentially resulting from interaction of the proposed action with other actions.

5.1 DEFINITION OF CUMULATIVE EFFECTS

Council on Environmental Quality regulations stipulate that potential environmental impacts resulting from cumulative impacts should be considered in an EA. Cumulative impacts are defined as "the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7). Recent CEQ guidance in *Considering Cumulative Effects* (CEQ 1997) affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with the proposed action. The scope must consider geographic and temporal overlaps among the proposed action and other actions. It must also evaluate the nature of interactions among these actions. In accordance with NEPA, a discussion of cumulative impacts resulting from projects that are proposed, currently under construction, recently completed, or anticipated to be implemented in the near future is necessary.

To identify cumulative effects the analysis needs to address three fundamental questions:

1. Does a relationship exist such that affected resource areas of the proposed action might interact with the affected resource areas of past, present, or reasonably foreseeable actions?
2. If one or more of the affected resource areas of the proposed action and another action could be expected to interact, would the proposed action affect or be affected by impacts of the other action?
3. If such a relationship exists, then does an assessment reveal any potentially significant impacts not identified when the proposed action is considered alone?

5.2 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS

One construction project is underway at MAFB-Gunter Annex and four are planned. The four planned projects outlined below are considered "out projects" and would likely not be realized within eight years.

5.2.1 Chapel Annex

This project is to construct a religious education annex to the existing chapel (Building 423). As part of this project, Building 401 would be demolished to accommodate additional parking at the chapel. This project is underway and is scheduled to be completed in 2004 (MAFB 2003).

5.2.2 Replace Bowling Center

MAFB-Gunter Annex is evaluating the feasibility of constructing a new bowling center at the northeast corner of Spaatz Street and Butler Avenue. A needs assessment has yet to be completed for this proposed project. As an "out project" this project is at least eight years from being realized.

5.2.3 Integrated Operational Support Facility

As part of the consolidation of the Standard Systems Group operations at MAFB-Gunter Annex, base planners propose construction of a 52,400 square foot Integrated Operational Support Facility east of Building 888 and just south of Moore Drive. As part of the project, Moore Drive would be converted into a divided median boulevard with landscaped off-street parking. As an "out project" this project is at least eight years from being realized. However, it is possible that this project could be funded as a congressional insert to the FY 04 budget.

5.2.4 Construct Enlisted Research Laboratory

This project constructs a new research laboratory as part of the Senior Non-Commissioned Officers Academy at MAFB-Gunter Annex. The facility would replace Building 1210 and be located in a vacant parcel on the south end of the installation just east of Building 1110. As an "out project" this project is at least eight years from being realized.

5.2.5 Construct New Gymnasium

This $2.3 million project would locate a gymnasium adjacent to the commissary (Building 811) just north of the site of the proposed action on the south side of Congressman William Dickinson Drive (Rt. 231). The project includes renovated tennis courts, a baseball field, and parking surrounding the main gymnasium facility. As an "out project" this project is at least eight years from being realized. However, it is possible that this project could be funded as a congressional insert to the FY 04 budget.

5.3 CUMULATIVE EFFECTS ANALYSIS

The following discussion describes how the impacts of other past, present, and reasonably foreseeable actions might be affected by those resulting from the proposed action, and whether such relationships would result in potentially significant impacts not identified when the proposed action is considered alone.

Temporal overlap of construction phases may occur between the chapel annex project and the proposed action. Temporary construction traffic associated with these projects would both use North Turner Boulevard and Spaatz Street, although no long-term traffic impacts are expected.

Potential air quality impacts of each project are minor and would include only slight increases in levels of air pollution during the construction phase. However, air pollutant emissions for all projects are well below *de minimis* levels and would not represent significant cumulative impacts

even if all construction were to occur in one year rather than spread out over approximately eight years.

The noise environment at the installation would continue to be dominated by vehicular traffic; no cumulative construction noise impacts would result. No other impacts to common resources for any of the projects have been identified. Therefore, the effects of all identified projects would not result in significant cumulative impacts.

6 UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

Analysis of the resource areas contained in this EA concludes that no unavoidable adverse environmental impacts would result from the proposed action or No-Action Alternative.

7 COMPATIBILITY OF THE PROPOSED ACTION AND ALTERNATIVE WITH THE OBJECTIVES OF FEDERAL, REGIONAL, STATE, AND LOCAL LAND USE PLANS, POLICIES, AND CONTROLS

The proposed action would be appropriately located within the community support land use zone of MAFB-Gunter Annex and would not adversely impact the current or long-range planning goals influencing the local and regional communities. Furthermore, the proposed action would fully comply with applicable Federal, state, and local plans, policies, and controls with respect to land use. In particular, the proposed action would be required to adhere to the requirements of the State of Alabama's erosion and sedimentation control regulations throughout the construction process. In addition, land disturbing activities greater than one acre are required to obtain a land disturbing permit from ADEM. AAFES would coordinate with ADEM to provide any necessary technical oversight for erosion and sedimentation control prior to any ground disturbing or construction activities and adhere to an approved erosion and sedimentation control plan throughout the construction process.

8 RELATIONSHIP BETWEEN THE SHORT-TERM USE OF THE ENVIRONMENT AND LONG-TERM PRODUCTIVITY

NEPA requires that environmental documentation include a statement on the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. Overall, the long-term productivity of the environment would be maintained with the implementation of the proposed action or the no-action alternative.

The proposed construction of the new mini-mall would involve some minor short-term impacts associated with building site development and construction. All other impacts to the built and natural environment are deemed minimal. Therefore, the long-term productivity of the environment would not be appreciably affected by the implementation of the proposed action.

9 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA also requires that an environmental analysis include identification of "any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects thereof on consumption or destruction of a resource that could not be replaced in a reasonable period of time. The proposed construction of a new AAFES mini-mall would result in few direct and indirect commitments of resources; these would be related mainly to the consumption of utilities (i.e. electricity, natural gas, and water).

Expenditures of electrical energy and other resources can be considered irreversible and, therefore, irretrievably committed to the proposed project. The new mini-mall facility, to the extent feasible, would include in the building design and overall operation, energy and water saving features that would minimize the use of these resources. With or without these features, however, the natural resources this action demands would be relatively insignificant and not substantially different from the commitment of resources under the no-action alternative.

10 SPECIAL PROCEDURES

Impact evaluations presented in this EA have determined that no significant environmental impacts are expected to occur as a result of implementation of the proposed action or alternatives at MAFB-Gunter Annex. This determination is based upon a thorough review and analysis of existing environmental and human resource information, the application of accepted modeling methodologies, and coordination with knowledgeable personnel from the 42 ABW, AAFES, and local, state, and Federal agencies.

There would be no significant environmental and human resources impacts for all resource areas as a result of implementation of the proposed action. Special procedures relevant to air quality (described in Section 4.1, Air Quality), stormwater discharge (described in Section 4.5, Water Resources), and potential contamination (described in Section 4.11, Hazardous Materials and Wastes) are summarized below.

The proposed action would be subject to Stage 1 vapor recovery requirements for gasoline dispensing in the State of Alabama. Therefore, AAFES would submit a Stage 1 Gasoline Dispensing Permit Application (Form 197) to ADEM for review prior to construction.

The proposed action would disturb greater than one acre of land at MAFB-Gunter Annex. Therefore, AAFES would contact the ADEM Water Division and file a Notice of Registration for NPDES General Permit coverage. In addition, a Construction Best Management Practices Plan would be developed and implemented on-site for the duration of the construction period.

Review of documents describing the investigations and actions completed to date for the ST-004 site indicates that the underground pipelines associated with the out-of-use AVGAS Distribution System remain in the area of the proposed action. The two lines have been drained and filled with cement grout, but the surrounding soils and groundwater may have been contaminated prior to the draining and filling of the lines, and this contamination may still exist in the proposed construction site. In order to minimize the threat of exposure to potentially contaminated soils at the site, any soils excavated as part of the proposed action would be properly segregated by the construction contractor and then sampled by representatives of the Environmental Section at MAFB. Sample results would determine whether soils can be reused on the site or require proper disposal off-site at a facility permitted to receive the soils pursuant to appropriate State of Alabama regulations. Furthermore, procedures to minimize dust during excavation and construction will be implemented on-site. Therefore, no significant impacts would occur as a result of implementing the proposed action.

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12 LIST OF PREPARERS

This report was prepared for, and under the direction of, the Army and Air Force Exchange Service (AAFES) by The Environmental Company, Inc. (TEC). Members of the professional staff are listed below:

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APPENDIX A
IICEP CORRESPONDENCE

IICEP RESPONSE SUMMARY

Environmental Assessment for Proposed Construction of Army and Air Force Exchange Service Mini-Mall at Maxwell Air Force Base-Gunter Annex Montgomery, Alabama

Date	IICEP Agency	Type	Issues/Comments
6/26/02	Larry Goldman, U.S. Department of the Interior, Fish and Wildlife Service	Letter	• No Federally endangered, threatened, or proposed species, or their designated critical habitat occur in the project area.
7/3/02	Jo Lewis, State of Alabama Department of Conservation and Natural Resources	Letter	• Their database indicates the area of interest has had no biological survey performed. • The closest sensitive species is recorded in their database as occurring in the Alabama River approximately 4 miles from the subject site.
7/3/02	Richard Liles, State of Alabama Department of Conservation and Natural Resources	Letter	• No objections to the project provided it does not adversely affect endangered or threatened species or impact ambient water quality.
7/18/02	Elizabeth Ann Brown, Deputy State Historic Preservation Officer, Alabama Historical Commission	Letter	• Determined that project activities would have no effect on any known cultural resources listed on or eligible for the NRHP.
7/22/03	Larry Goldman, U.S. Department of the Interior, Fish and Wildlife Service	Letter	• U.S.F.W.S. concurs with the FONSI.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 42D AIR BASE WING (AU)
MAXWELL AIR FORCE BASE ALABAMA

18 June 2002

Mr. Larry E. Goldman
U.S. Department of Interior
Fish and Wildlife Service
2001-A Highway 98
P.O. Box 1190
Daphne, AL 36526

Dear Mr. Goldman:

Maxwell Air Force Base (MAFB) is preparing an Environmental Assessment (EA) for the proposed construction of an Army and Air Force Exchange Service (AAFES) mini-mall at MAFB-Gunter Annex, AL. The proposed action includes construction of an 18,981 square foot facility on a disturbed vacant parcel. The Draft Description of Proposed Action and Alternatives (DOPAA) is included with this correspondence as an attachment.

The environmental impact analysis process for this project is being conducted by the Air Force in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your participation by reviewing the attached Draft DOPAA and solicit your comments concerning the proposed action and any potential environmental consequences. In particular, we are requesting information regarding federally listed or proposed species that may be present in the potentially affected area. Until the extent of the potential impact to species is determined, we will make no determination regarding the need for Section 7 consultation. Please provide written comments or information regarding the action at your earliest convenience but no later than 30 calendar days from receipt of this letter.

Responses should be directed to our consultant, The Environmental Company, Inc. The point of contact is Mr. Kevin Martin; he can be reached at (434) 295-4446 or by email at KJMARTIN@tecinc.com. Please forward written comments to Mr. Martin at P.O. Box 5127, Charlottesville, Virginia 22905. To expedite delivery of information, you may fax it to Mr. Martin at (434) 295-5535. Thank you for your assistance.

Sincerely,

Ruth A. VanDiver
Environmental Planning
Maxwell Air Force Base

Attachment: Draft DOPAA

LEC Maxwell Support Division

27 June 2003

Mr. Larry. E. Goldman
U.S. Department of Interior
Fish and Wildlife Service
2001-A Highway 98
P.O. Box 1190
Daphne, AL 36526

Dear Mr. Goldman:

Maxwell Air Force Base (MAFB) has prepared an Environmental Assessment (EA) for the proposed construction of an Army and Air Force Exchange Service (AAFES) mini-mall at MAFB-Gunter Annex, AL. The proposed action includes construction of an 18,981-square-foot facility on a disturbed vacant parcel. The draft Finding of No Significant Impact (FONSI) for this action is included with this correspondence as an attachment.

The environmental impact analysis process for this project is being conducted by the Air Force in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your participation by reviewing the attached draft FONSI and solicit your comments concerning its conclusions. Please provide written comments at your earliest convenience but no later than 30 calendar days from receipt of this letter.

Responses should be directed to our consultant, The Environmental Company, Inc. The point of contact is Mr. Kevin Martin; he can be reached at (434) 295-4446 or by email at KJMARTIN@tecinc.com. Please forward written comments to Mr. Martin at P.O. Box 5127, Charlottesville, Virginia 22905. To expedite delivery of information, you may fax it to Mr. Martin at (434) 295-5535. Thank you for your assistance.

Sincerely,

Janet Lanier
MSD/CEV
Maxwell Air Force Base

Attachment: Draft FONSI

400 Cannon Street, Building 1060
Maxwell AFB, AL 36112
Tel.: 334-953-5260 • 334-396-4004

IICEP DISTRIBUTION LIST

Environmental Assessment for
Proposed Construction of
Army and Air Force Exchange Service Mini-Mall
at
Maxwell Air Force Base-Gunter Annex
Montgomery, Alabama

Mr. Larry E. Goldman U.S. Department of Interior Fish and Wildlife Service 2001-A Highway 98 P.O. Box 1190 Daphne, AL 36526	State of Alabama Department of Conservation and Natural Resources State Lands Division Natural Heritage Section 64 North Union Street P.O. Box 301456 Montgomery, AL 36130
Alabama Department of Environmental Management P.O. Box 301463 1400 Coliseum Boulevard Montgomery, AL 36130	U.S. Army Engineer District, Mobile P.O. Box 2288 Mobile, AL 36628-0001
Mr. Richard C. Liles State of Alabama Department of Conservation and Natural Resources Game and Fish Division 64 North Union Street P.O. Box 301456 Montgomery, AL 36130-1256	Ms. Ann B. Harper Central Alabama Regional and Planning Development Commission 125 Washington Avenue Third Floor Montgomery, AL 36104
Ms. Elizabeth A. Brown Deputy State Historic Preservation Officer State of Alabama Alabama Historical Commission 468 South Perry Street Montgomery, AL 36130-0900	

United States Department of the Interior

FISH AND WILDLIFE SERVICE
P. O. Drawer 1190
Daphne, Alabama 36526

IN REPLY REFER TO
02-1256

June 26, 2002

Mr. Kevin J. Martin
The Environmental Company, Inc.
P.O. Box 5127
Charlottesville, VA 22905

Dear Mr. Martin:

We are responding to a letter from the Department of the Air Force, dated June 18, 2002, requesting comments on the preparation of an Environmental Assessment for a proposal to construct an Army and Air Force Exchange Facility (AAFES) at Maxwell AFB-Gunter Annex, Montgomery County, Alabama. We have reviewed the information you enclosed and are providing the following comments in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

According to our records, no Federally endangered, threatened, or proposed species, or their designated Critical Habitat occur in the project area. Therefore, no further endangered species consultation will be required for this portion of the project unless: 1) the identified action is subsequently modified in a manner that causes an effect on listed species or a designated Critical Habitat; 2) new information reveals the identified action may affect Federally protected species or designated Critical Habitat in a manner or to an extent not previously considered; or 3) a new species is listed or Critical Habitat is designated under the Endangered Species Act that may be affected by the identified action.

If you have any questions or need additional information, please contact Mr. Bruce Porter at (251) 441-5181, ext. 37 or visit our website http://daphne.fws.gov. Please refer to the reference number located at the top of this letter.

Sincerely,

Larry E. Goldman
Field Supervisor

STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
64 NORTH UNION STREET
MONTGOMERY, ALABAMA 36130

DON SIEGELMAN
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COMMISSIONER

STATE LANDS DIVISION
JAMES H. GRIGGS, DIRECTOR

NATURAL HERITAGE SECTION
GREGORY M. LEIN, CHIEF
TELEPHONE (334) 242-3484
FAX NO. (334) 242-0999

July 3, 2002

Mr. Kevin Martin
The Environmental Company, Inc.
P.O. Box 5127
Charlottesville VA 22905

Re: Sensitive Species Information Request
Project # AAFES mini-mall at MAFB-Gunter Annex

Dear Mr. Martin:

Our office received your request on June 24, 2002 and has since developed the following information pertaining to state protected, federally listed threatened and endangered species, and species that we believe to be sensitive to environmental perturbations. I have enclosed a list of sensitive species which the Natural Heritage Section Database or the U.S. Fish and Wildlife Service have indicated occur or have occurred in Montgomery County. Additionally, I have listed some potentially helpful and informative web sites at the end of this letter.

The Natural Heritage Section database contains numerous records of sensitive species in Montgomery County. Our database indicates the area of interest has had no biological survey performed at the delineated location, by our staff or any individuals referenced in our database. Therefore we can make no accurate assessment to the past or current inhabitancy of any federal or state protected species at that location. A biological survey conducted by trained professionals is the most accurate way to ensure that no sensitive species are jeopardized by the development activities. The closest sensitive species is recorded in our database as occurring in the Alabama River approximately 4 miles from the subject site. The Alabama River provides habitat for numerous sensitive species. These aquatic species appears unlikely to be impacted by this project.

I hope this information will be useful to you. The provided information is to help you in fulfilling your necessary legal obligations. The information does not suggest that protected species are not at this location. The specific location of a sensitive species is considered confidential information by a State Lands Division Regulation and can be released only to individuals who enter into a confidentiality and indemnity contract with the State Lands Division.

The Natural Heritage Section provides this information as a service to the people of Alabama. The NHS acts as a clearing house for species distribution data. We happily accept any information environmental researchers are willing to donate. Sensitive species exact locations are kept confidential. If you would be willing to donate any information to this database, we will be better able to assist all individuals interested in environmental compliance.

Sincerely,

Jo Lewis

Jo Lewis
Database Manager

enclosures

Potentially helpful web sites

Information about federally listed species
http://www.pfmt.org/wildlife/endangered/
http://www.al.nrcs.usda.gov/FOTG/alTE.html
http://ecos.fws.gov/webpage/webpage_usa_lists.html?#AL
http://southeast.fws.gov/daphne/specieslst.htm

Non-game species regulation starts on page 75
http://www.dcnr.state.al.us/agfd/2000-2001_regs.pdf

federal list of threatened and endangered species for Alabama

list of Alabama State Parks and links to more info
http://www.dcnr.state.al.us/parks/state_parks_index_1a.html

http://bluegoose.arw.r9.fws.gov/
http://www.fws.gov/where/regfield.html

list of Refuges in AL with additional pages of refuge details
http://refuges.southeast.fws.gov//index.html

ALABAMA'S FEDERALLY LISTED AND STATE PROTECTED SPECIES (BY COUNTY)

This list is a combination of the June 2001 U.S.F.W. Service (Daphne field Office) federally listed species by county list and the Alabama State Lands Division's Natural Heritage Section Database of species distributions data. This list is continually being updated, and, therefore, it may be incomplete or inaccurate and is provided strictly for informational purposes. It does not constitute any form of Section 7 consultation. We recommend that the U.S.F.W. Service Field Office in Daphne be contacted for Section 7 consultations. Site specific information can be provided by the Alabama State Lands Division's Natural Heritage Section and/or the U.S.F.W. Service (Daphne field Office) prior to project activities. To be certain of occurrence, surveys should be conducted by qualified biologists to determine if a sensitive species occurs within a project area. Species not listed for a given county does not imply that they do not occur there, only that their occurrence there is as yet unrecorded by these two agencies.

Key to codes on list: (P) - Historical Record and/ or Possible Occurrence in the County
Federal E - Endangered C - Candidate Species
Federal T - Threatened NEP - Nonessential Experimental Populations

Montgomery

Protection Status	Common name	Scientific Name	State Regulation Applicable
Endangered	Wood Stork	Mycteria americana	220-2-.92 (1) (d)
Threatened	Eastern Indigo Snake	Drymarchon corais couperi	220-2-.92 (1) (c)
State Protected	Osprey	Pandion haliaetus	220-2-.92 (1) (d)
State Protected	Crystal Darter	Crystallaria asprella	220-2-.92 (1) (a)
State Protected	Alabama Map Turtle	Graptemys pulchra	220-2-.92 (1) (c)

Notes:

- Bald eagle Haliaeetus leucocephalus, red-cockaded woodpecker Picoides borealis and the American peregrine falcon (Falco peregrinus anatum) may occur in any county, if habitat exists.
- Wood stork / July - October
- Bald eagle / Wintering birds possible in areas with reservoirs.
- Sea turtles / Only loggerhead is potential nester, the rest are in coastal waters.
- Black bear Ursus americanus sp. - known to exist in Mobile County, but not listed.

-Gulf moccasi nshell Mediondus penicillatus, oval pigtoe Pleurobema pyriforme, Chipola slabshell El liptio chipolaensis, and purple bankclimber Elliptoideus sloatianus, are freshwater mussels of the family Unionidae found only in eastern Gulf Slope streams draining the Apalachicolan Region, defined as streams from the Escambia to the Suwannee river systems, and occurring in southeast Alabama, southwest Georgia, and north Florida. All are listed as "Endangered".

- Fanshell Cyprogenia stegaria, Oyster mussel Epioblasma capsaeformis, Catspaw (purple cat's paw pearlymussel) Epioblasma obliquata obliquata, are historically known to be found in the Tennessee River system and drainage.

-Gentian pinkroot Spigelia gentianoides, has been historically found along the Alabama-Florida border.

-West Indian Manatee Trichechus manatus, have been known to move north along the gulf coast west

STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
P.O. BOX 301450
64 NORTH UNION STREET, SUITE 468
MONTGOMERY, ALABAMA 36130-1450
(334) 242-3486
FAX (334) 242-3489
www.dcnr.state.al.us

DON SIEGELMAN
GOVERNOR

RICHARD C. LILES
ACTING COMMISSIONER

July 3, 2002

Mr. Kevin Martin
The Environmental Company, Inc.
P. O. Box 5127
Charlottesville, Virginia 22905

RE: Construction of Exchange Service Mini-Mall
Maxwell Air Force Base - Gunter Annex

Dear Mr. Martin:

Personnel of the Division of Wildlife and Freshwater Fisheries of the Department of Conservation and Natural Resources reviewed the above referenced proposal. We have no objections to this project provided it does not adversely affect endangered or threatened species or impact ambient water quality. Information on federally listed species is available from the U. S. Fish and Wildlife Service. A list of state-protected species is available from the Natural Heritage Program of the State Lands Division at the address below. You are hereby advised that further coordination with the State Lands Division regarding state property rights pertaining to this project may be required. Contact the Lands Division at:

State Lands Division
64 North Union Street
Montgomery, Alabama 36130
334-242-3484

For assistance in delineating wetlands in the project area, contact the U. S. Army Corps of Engineers. This Department will request appropriate mitigation for any wetland impacts.

Sincerely,

Richard C. Liles
Acting Commissioner

cc: Lands Division

STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 SOUTH PERRY STREET
MONTGOMERY, ALABAMA 36130-0900

LEE H. WARNER
EXECUTIVE DIRECTOR

TEL: 334-242-3184
FAX: 334-240-3477

July 18, 2002

Mr. Kevin Martin
P. O. Box 5127
Charlottesville, VA 22905

Re: AHC 02-1146
Construct AAFES Mini-Mall
Gunter Annex
Montgomery County, AL

Dear Mr. Martin:

Upon review of the proposed project, the Alabama Historical Commission has determined that the project activities will have no effect on any known cultural resources listed on or eligible for the National Register of Historic Places. Therefore, our office can concur with the proposed activities.

However, should any archaeological cultural resources be encountered during project activities, work shall cease and our office shall be consulted immediately. This stipulation shall be placed on the construction plans to insure contractors are aware of it.

We appreciate your efforts on this issue. If we may be of further service or if you have any questions or comments, please contact Stacye Hathorn of our office and be sure to **include the project number referenced above**.

Sincerely,

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

United States Department of the Interior

FISH AND WILDLIFE SERVICE
P. O. Drawer 1190
Daphne, Alabama 36526

IN REPLY REFER TO:
03-1172

July 22, 2003

Mr. Kevin J. Martin
The Environmental Company, Inc.
P.O. Box 5127
Charlottesville, VA 22905

Dear Mr. Martin:

We are responding to a letter from LEC Maxwell Support Division, dated June 27, 2003, requesting comments on the Finding of No Significant Impact (FONSI) associated with the proposal to construct an Army and Air Force Exchange Facility (AAFES) at Maxwell AFB-Gunter Annex, Montgomery County, Alabama. We have reviewed the information you enclosed and are providing the following comments in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The Service concurs with the FONSI, therefore, no further endangered species consultation will be required for this project unless: 1) the identified action is subsequently modified in a manner that causes an effect on listed species or a designated Critical Habitat; 2) new information reveals the identified action may affect Federally protected species or designated Critical Habitat in a manner or to an extent not previously considered; or 3) a new species is listed or Critical Habitat is designated under the Endangered Species Act that may be affected by the identified action.

If you have any questions or need additional information, please contact Mr. Bruce Porter at (251) 441-5864 or visit our website http://daphne.fws.gov. Please refer to the reference number located at the top of this letter.

Sincerely,

Larry E. Goldman
Field Supervisor