FINAL

ENVIRONMENTAL ASSESSMENT FOR FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION

MOODY AIR FORCE BASE, GEORGIA



Department of the Air Force

EA Identification Number: EAXX-007-57-UAF-1739351981

June 2025

Privacy Advisory

This Draft Environmental Assessment (EA) has been provided for public comment in accordance with the National Environmental Policy Act of 1969 (NEPA), which provides an opportunity for public input on United States Department of the Air Force (DAF) decision-making, allows the public to offer input on alternative ways for DAF to accomplish what it is proposing, and solicits comments on the DAF's analysis of environmental effects.

Public commenting allows the DAF to make better, informed decisions. Letters or other written or oral comments provided may be published in the EA. As required by law, comments provided will be addressed in the EA and made available to the public. Providing personal information is voluntary. Any personal information provided will be used only to identify your desire to make a statement during the public comment portion of this process. Private addresses will be compiled to develop a mailing list for those requesting copies of EA; however, only the names of individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the EA.

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Cover Sheet

Draft Environmental Assessment
Facility and Infrastructure Construction and Modernization

a. Responsible Agency: Department of the Air Force (DAF), Moody Air Force Base (AFB)

b. Cooperating Agency: None

c. Affected Location: Moody AFB, Georgia

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e. Report Designation: Final Environmental Assessment (EA)

f. EA Identification Number: EAXX-007-57-UAF-1739351981

g. Abstract: This EA has been prepared pursuant to provisions of the National Environmental Policy Act (NEPA), as amended by Public Law 118-5, the Fiscal Responsibility Act of 2023 (42 United States Code [USC] 4321 et seq.). Potentially affected environmental resources were identified in coordination with local, state, and federal agencies. Specific environmental resources with the potential for environmental consequences include land use; noise; air quality; earth resources; water resources; biological resources; cultural resources; socioeconomics; infrastructure and utilities; transportation; hazardous materials, Environmental Restoration Program, and toxic substances; and health and safety.

The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. The Proposed Action is needed to conform with applicable antiterrorism/force protection criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and unnecessary risk to the mission due to inefficiencies.

The Proposed Action comprises 10 facility and infrastructure construction, demolition, and modernization projects to be performed within approximately the next five years (Fiscal Year 2025 through Fiscal Year 2030). The Proposed Action consists of the following proposed projects: Project 1: Guardian Angel Facility Construction and Renovation; Project 2: Aircraft Fire Training Facility Improvements; Project 3: Gate Overwatch Position Construction; Project 4: Aerospace Ground Equipment Facility Construction and Demolition; Project 5: Burma Road Realignment; Project 6: 38th Rescue Squadron Parking Lot Construction; Project 7: Airfield Stormwater Repair and Replacement; Project 8: Mission Lake Water Barrier and Stone Road Repairs; Project 9: Boundary Fence Repair; and Project 10: Building Demolition.

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LIST OF ACRONYMS AND ABBREVIATIONS

23 CES	23d Civil Engineer Squadron
23 WG	23d Wing
38 RQS	38th Rescue Squadron
41 RQS	41st Rescue Squadron
93 AGOW	93d Air Ground Operations Wing
820 BDG	820th Base Defense Group
ACAM	Air Conformity Applicability Model
ACM	asbestos-containing material
AFB	Air Force Base
AFCEC	Air Force Civil Engineer Center
AFI	Air Force Instruction
AFMAN	Air Force Manual
AFTF	Aircraft Fire Training Facility
AGE	Aerospace Ground Equipment
APE	area of potential effect
AQCR	Air Quality Control Region
AST	aboveground storage tank
AT/FP	antiterrorism/force protection
BMP	best management practice
CEIE	Installation Management Flight, Environmental Management Element
CES	Civil Engineer Squadron
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COS	Combat Operations Squadron
CWA	Clean Water Act
CZ	Clear Zone
DAF	Department of the Air Force
DAFI	Department of the Air Force Instruction
DAFMAN	Department of the Air Force Manual
dB	decibel
dBA	A-weighted decibel
dBP	peak decibel
DCE	cis-1,1-dichloroethene

DNL	day-night average sound level
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EISA	Energy Independence and Security Act
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act
ESOHC	Environmental Safety and Occupational Health Council
°F	degrees Fahrenheit
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
FY	Fiscal Year
GDNR	Georgia Department of Natural Resources
GEPD	Georgia Environmental Protection Division
GHG	greenhouse gas
GI/LID	green infrastructure and low impact development
GSU	geographically separated unit
GWP	Global Warming Potential
HAZMART	hazardous material pharmacy
HVAC	heating, ventilation, and air conditioning
ICRMP	Integrated Cultural Resources Management Plan
IDP	Installation Development Plan
LBP	lead-based paint
mton	metric tons per year
MWD	Military Working Dogs
N_2O	nitrous oxide
N/A	not applicable
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NH_3	ammonia
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NOA	Notice of Availability
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System

NRHP	National Register of Historic Places
NSR	New Source Review
O_3	ozone
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyl
PCE	dissolved-phase tetrachloroethene
pCi/L	picocuries per liter
PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
$PM_{2.5}$	particulate matter, less than 2.5 microns in diameter
PM_{10}	particulate matter, less than 10 microns in diameter
POL	petroleum, oil, and lubricant
POV	privately owned vehicle
PSD	Prevention of Significant Deterioration
PVC	polyvinyl chloride
Q-D	quantity-distance
RCRA	Resource Conservation and Recovery Act
ROI	region of influence
SAST	Suwannee alligator snapping turtle
SF	square feet
SFS	Security Forces Squadron
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SO_x	sulfur oxides
sq. ft.	square feet
SWPPP	Stormwater Pollution Prevention Plan
TCE	trichloroethylene
tpy	tons per year
UFC	Unified Facilities Criteria
US	United States
USACE	US Army Corps of Engineers
USC	United States Code
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
UST	underground storage tank
UTV	utility terrain vehicle
VOC	volatile organic compound

VoIP	voice-over-internet-protocol
VoSIP	voice-over-secure-internet-protocol
WMA	Wildlife Management Area

1.0 PURPOSE OF AND NEED FOR THE ACTION

1.1 Introduction

The 23d Wing (23 WG) and 23d Civil Engineer Squadron (23 CES) at Moody Air Force Base (AFB) prepared this Environmental Assessment (EA) to evaluate select facility and infrastructure construction and modernization projects to support installation development at Moody AFB for the 23 WG and tenant organizations. The projects considered in this EA were identified as priorities for installation development in the Moody AFB Installation Development Plan (Moody AFB 2023) and would be implemented over an approximately five-year period, from fiscal year (FY) 2025 through FY 2030.

This EA was prepared per the National Environmental Policy Act (NEPA), as amended by Public Law 118-5, the Fiscal Responsibility Act of 2023 (42 United States Code [USC] 4321 et seq.).

1.2 Background

The 23 WG is the host unit at Moody AFB. The current mission of the 23 WG is to organize, train, and equip the Flying Tigers to employ and execute the Global Precision Attack, Personnel Recovery, and Agile Combat Support service core functions to meet worldwide Combatant Commander requirements. The 23 WG organizes, trains, and employs combat-ready A-10C, HC-130J, and HH-60W aircraft and the Guardian Angel Weapons System. Approximately 5,500 military and civilian personnel comprise the 23 WG.

The 93d Air Ground Operations Wing (93 AGOW) is also located at Moody AFB. The 93 AGOW provides highly trained ground combat forces capable of integrating air and space power into the ground scheme of fire and maneuver. It provides Joint Force Commanders with expertise on the integration of air power with extending the Theater Air Control System for the Joint Forces Air Component Commander. The 93 AGOW comprises three operational Groups, one of which, the 820th Base Defense Group (820 BDG), is located at Moody AFB. The 820 BDG provides planning, training, equipment, and preparation to its three Base Defense Squadrons and one Combat Operations Squadron. The 820 BDG provides the ground forces necessary to protect the Air Force's resources.

Many Moody AFB facilities that support the 23 WG, the 93 AGOW, and tenant units have undergone minimal repair and sustainment in recent years. Some facilities do not meet the applicable Department of Defense (DoD) installation master planning criteria, consistent with Unified Facilities Criteria (UFC) 2-100-01, *Installation Master Planning*; or Air Force Instruction (AFI) 32-1015, *Integrated Installation Planning*; and Air Force Policy Directive 32-10, *Installations and Facilities*. Select Moody AFB facilities and infrastructure do not align with the 2011 US Air Force Civil Engineering Strategic Plan (US Air Force 2011) and the US Air Force Strategic Master Plan (US Air Force 2015). Further, there are facilities at Moody AFB that do not meet current US Air Force Space Optimization requirements consistent with the Sub-Activity Management Plan, Facility Space Management, and Department of the Air Force Manual (DAFMAN) 32-1084, *Facility Requirements Standards*. Select infrastructure elements, such as

gates and portions of the Moody AFB boundary fence, does not meet all applicable DoD antiterrorism/force protection (AT/FP) criteria, consistent with UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*, and the Installation Force Protection Guide (US Air Force no date).

1.3 Location

Moody AFB covers 11,881 acres in Lowndes and Lanier counties, approximately 10 miles northeast of the city of Valdosta, Georgia (**Figure 1-1**). The installation consists of the Main Base (5,518 acres), the adjacent Grand Bay Range (5,874 acres), and the geographically separated Grassy Pond Recreational Annex (489 acres), which is located 25 miles southwest of the Main Base. The proposed facility infrastructure construction and modernization projects evaluated in this EA would be limited to Moody AFB Main Base (**Figure 1-1**).

1.4 Purpose for the Action

The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. These deficiencies would be remedied through an ongoing process of construction of new facilities and new infrastructure, the repair of existing facilities and infrastructure, and the demolition of obsolete and unneeded facilities.

1.5 Need for the Action

The Proposed Action is needed to conform with applicable AT/FP criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and risk to the mission due to inefficiencies.

The Guardian Angel Facility, Aircraft Fire Training Facility (AFTF), Davidson Road and Mitchell Boulevard gates, Aerospace Ground Equipment (AGE) complex, portions of Burma Road, airfield stormwater drainage system, Stone Road and associated Mission Lake water barrier, the western Moody AFB boundary fence, and underutilized buildings all have structural and organizational limitations. Left unchecked, these deficiencies could degrade the ability of the installation to meet DAF, DoD, state, and/or federal requirements and to support current and future mission requirements. Additional military personnel and civilian staff time is unnecessarily used when mission-support facilities are not consolidated and scattered in various facilities across Moody AFB. Examples of scattered facilities and the subsequent loss of staff time and wasted resources include inadequate available parking at facilities, causing personnel to park in distant parking lots on a daily basis; visually obscured Base boundary fencing, causing Base security personnel to walk along portions of the Moody AFB perimeter for security checks instead of driving; and lack of adequate facilities at Base gates, requiring Base security personnel to provide gate protection support from parked vehicles to meet AT/FP requirements.

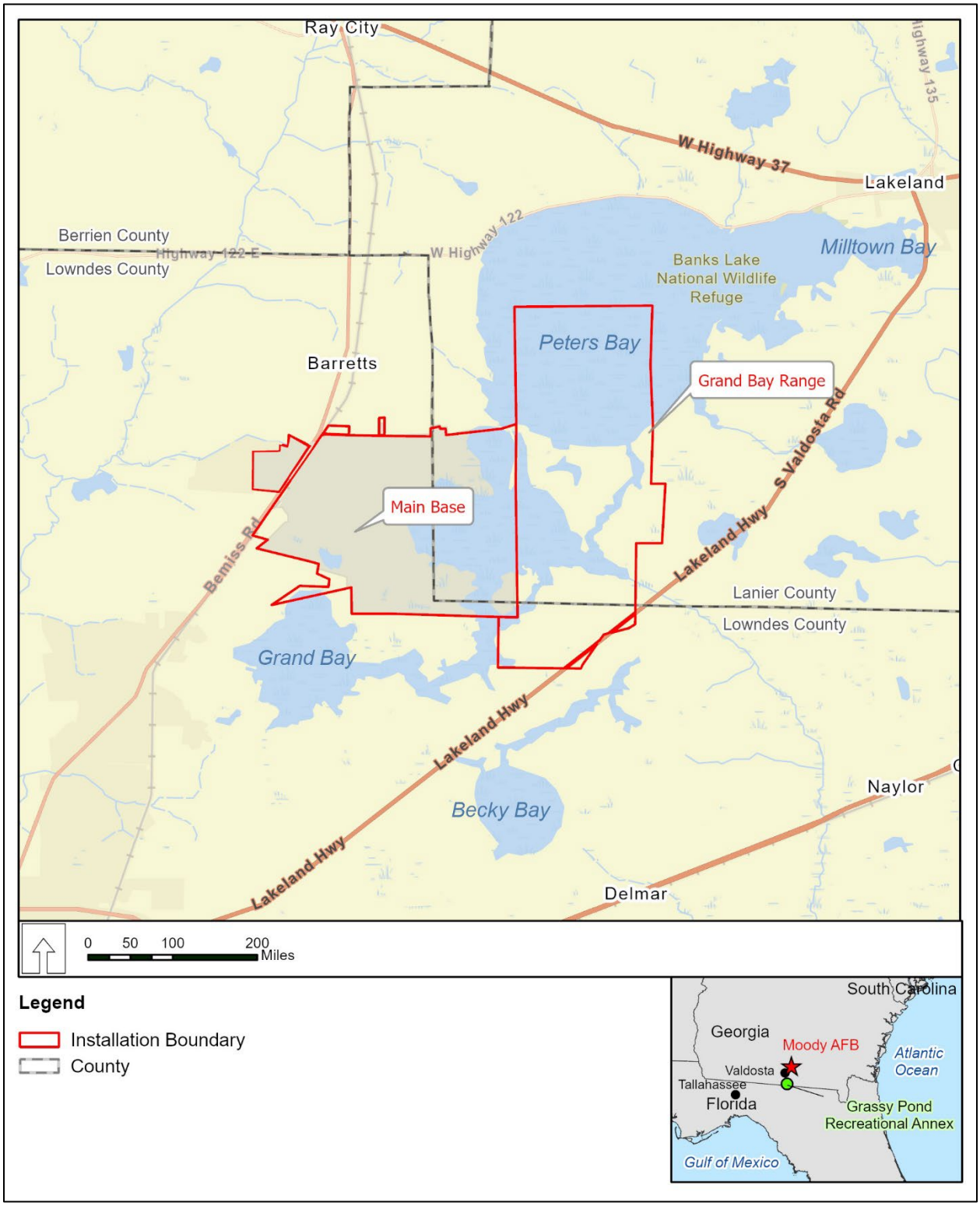


Figure 1-1. Location of Moody Air Force Base, Georgia

Risks to the military mission at Moody AFB are caused by unconsolidated mission support facilities, which makes communication among personnel and use of critical equipment more difficult; by roadways and drainage structures located in the airfield Clear Zone (CZ) that generate risk to aircraft operations in the airfield; by a lack of access to the Base boundary security fencing for patrols and facilities at gates to for security personnel to respond to threats; and by potential failure of a water control structure at Mission Lake, which would increase flooding threats and damage a critical east-west roadway on Main Base.

1.6 Decision to Be Made

This EA evaluates whether the Proposed Action would result in significant impacts on the human or natural environment. Based on the analysis in this EA, the DAF will make one of three decisions regarding the Proposed Action: 1) determine the potential environmental consequences associated with the Proposed Action or alternatives are not significant and sign a Finding of No Significant Impact (FONSI), 2) initiate preparation of an Environmental Impact Statement if it is determined that significant impacts would occur from the implementation of the Proposed Action or alternatives, or 3) select the No Action Alternative, whereby the Proposed Action would not be implemented. As required by NEPA and its implementing regulations, preparation of an environmental document must precede final decisions regarding the proposed project and be available to inform decision makers of the potential environmental impacts.

The execution of the Proposed Action would involve "construction" in a wetland as defined in EO 11990, *Protection of Wetlands*, and "action" in a floodplain under EO 11988, *Floodplain Management,* as amended by EO 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*. Therefore, a Finding of No Practicable Alternative (FONPA) will be prepared in conjunction with the FONSI.

1.7 Interagency and Intergovernmental Coordination and Consultations

1.7.1 Interagency Coordination and Consultations

Scoping is an early and open process for developing the breadth of issues to be addressed in the EA and for identifying significant concerns related to a Proposed Action. Per the requirements of the Intergovernmental Cooperation Act of 1968 (42 USC § 4231[a]) and EO 12372, *Intergovernmental Review of Federal Programs*, as amended by EO 12416, federal, state, and local agencies with jurisdiction that could be affected by the Proposed Action were notified during the development of this EA.

Appendix A identifies the stakeholders consulted during this analysis and provides copies of relevant correspondence.

1.7.2 Government-to-Government Consultations

Consistent with the National Historic Preservation Act's (NHPA) implementing regulations (36 CFR Part 800), DoD Instruction 4710.02, *DoD Interactions with Federally-Recognized Tribes*,

DAF Instruction (DAFI) 90-2002, *Interactions with Federally-Recognized Tribes*, and Air Force Manual 32-7003, *Environmental Conservation*, the DAF is also consulting with federally recognized tribes that are historically affiliated with the geographic region that includes Moody AFB regarding the potential to affect properties of cultural, historical, or religious significance. The tribal coordination process is distinct from NEPA consultation or the intergovernmental coordination processes and requires separate notification of all relevant tribes. The timelines for tribal consultation are also distinct from those of intergovernmental consultations. The Moody AFB Installation Commander is the point of contact for consultation with Native American tribes.

Appendix A identifies the Native American tribal governments that Moody AFB consulted with during development of this EA and provides copies of relevant correspondence.

1.7.3 Other Agency Consultations

Compliance with Section 7 of the Endangered Species Act (ESA) and Section 106 of the NHPA is conducted through coordination and consultation with the US Fish and Wildlife Service (USFWS) and the Georgia State Historic Preservation Office (SHPO), respectively. Concurrence from the SHPO on the DAF's no effect to historic properties determination was received on 9 and 10 December 2024, and 24 March 2025. Concurrence from the USFWS on the DAF's determination on federally listed species was received on 29 January 2025. Consultation submittals and responses are included in **Appendix A.** Moody AFB completed a wetland delineation in support of the Proposed Action and requested a jurisdictional determination of waters of the US, including wetlands, with the US Army Corps of Engineers (USACE) Regulatory Division (**Appendix B**).

1.8 Public and Agency Review of EA

The Proposed Action is subject to the requirements and objectives of EO 11990 and EO 11988 because it would involve construction in a wetland and/or an action in a floodplain if implemented. Therefore, an early public notice was published in *The Valdosta Daily Times* and *The Lanier County Advocate* on 12 May 2024 and 22 May 2024, respectively (**Appendix A**). The early public notice solicited public comments on the Proposed Action and practicable alternatives.

A Notice of Availability (NOA) announcing the 30-day public comment period for the Draft EA and proposed FONSI/FONPA was published in *The Valdosta Daily Times* and *The Lanier County Advocate*. The NOA invited the public to review and comment on the Draft EA and initiated a 30-day public and agency review period. Copies of the Draft EA and proposed FONSI/FONPA were made available for review for 30 days from the date of publication of the NOA at https://www.moody.af.mil/Resources/Environmental-Initiative and at the following locations:

Willis L. Miller Library
2906 Julia Drive
Valdosta, Georgia 31602

Miller Lakeland Library
18 South Valdosta Road
Lakeland, Georgia 31635

One agency comment was received from the USFWS during the 30-day public comment period and was incorporated into the analysis of potential environmental impacts performed as part of the EA (**Appendix A**).

1.9 Scope of This Environmental Analysis

This EA, prepared in accordance with NEPA, analyzes the potential environmental consequences associated with implementation of 10 proposed facilities and infrastructure improvement projects at Moody AFB. The EA analysis focuses on resources that would be measurably or meaningfully affected by the Proposed Action; detailed discussions of these resources are provided in **Chapter 3**. Cumulative effects are also described for each resource, as applicable. Resources dismissed from detailed analysis in the EA because the Proposed Action would have no effects on them are briefly described in **Section 3.2.**

While the components of the Proposed Action are conceptual in design, the Proposed Action would implement the proposed projects described in **Section 2.1.** The EA will guide the 23 WG and 23 CES in implementing the proposed projects at Moody AFB in a manner that is consistent with DAF standards for environmental stewardship.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The Proposed Action consists of 10 construction, demolition, and modernization projects (**Table 2-1; Figure 2-1**) that would be implemented on the Moody AFB Main Base within approximately the next five fiscal years (FY 2025 to FY 2030). These projects are evaluated collectively in this EA to streamline the NEPA compliance process; however, each project is independent of the others. The DAF could choose to implement all, none, or any combination of these projects. Specifics of the projects that compose the Proposed Action and Alternatives are described in **Section 2.3.**

Table 2-1. Proposed Construction, Demolition, and Modernization Projects and Implementation Alternatives

Project Number	Project Name	Building Demolition (sq. ft.)	Building Renovation (sq. ft.)	Building Construction (sq. ft.)	Other Improvements
1	Guardian Angel Facility Construction and Renovation Alternative 1	–	117,967	122,699	127,699 sq. ft. of ground disturbance for buildings, parking, access roads, and a retaining wall
	Guardian Angel Facility Construction and Renovation Alternative 2				152,699 sq. ft. of ground disturbance for buildings, parking, access roads, and 300 linear feet of trenching for belowground utilities
2	AFTF Improvements Alternative 1	–	–	10,000	9 acres of concrete surfacing, 1,200 linear feet of trenching, nine stadium-style lights, five fire hydrants, retention pond renovation, and propane gas tank relocation
	AFTF Improvements Alternative 2				6 acres of concrete surfacing, 1,200 linear feet of trenching, nine stadium-style lights, five fire hydrants, retention pond renovation, and propane gas tank relocation
3	Gate Overwatch Position Construction Alternative 1	–	–	2,500	Utility and communication systems connections
4	AGE Facility Construction and Demolition Alternative 1	24,097	–	56,466	Demolish Buildings 732, 752, 755, and 756 and construct a new consolidated AGE facility with warehouse area, administrative space, and covered storage.
	AGE Facility Construction and Demolition Alternative 2	7,896	13,230	37,890	Demolish Buildings 732, and 756. Building 755 would be modified to create administrative areas. Building 752 would be renovated for warehouse space. A new parts-support section and covered storage would be constructed.
5	Burma Road Realignment Alternative 1	–	–	–	Realign Burma Road, repave 6,000 linear feet of Burma Road, and remove 4.6 acres of trees.

Project Number	Project Name	Building Demolition (sq. ft.)	Building Renovation (sq. ft.)	Building Construction (sq. ft.)	Other Improvements
6	38 RQS Parking Lot Construction Alternatives 1 and 2	–	–	–	Construct a 20,000 sq. ft. parking lot with 10 electric charging stations, and 500 linear feet of trenching for electrical utility connection.
7	Airfield Stormwater Repair and Replacement Alternative 1	–	–	–	Repair or replace 1,500 linear feet of belowground stormwater drainage structures, disturbing approximately 7,500 sq ft. of airfield soils. Replace approximately 2,000 sq. ft. of exposed concrete outfall structures with belowground culverts.
8	Mission Lake Water Barrier and Stone Road Repairs Alternative 1	–	–	–	3,500 cubic yards of riprap to stabilize the water barrier, 4,000 cubic yards of clay to widen Stone Road, and repaving 300 linear feet of Stone Road
	Mission Lake Water Barrier and Stone Road Repairs Alternative 2				3,500 cubic yards of riprap to stabilize the water barrier, 2,000 cubic yards of clay to widen Stone Road to the north only, and repaving 300 linear feet of Stone Road
	Mission Lake Water Barrier and Stone Road Repairs Alternative 3				3,500 cubic yards of riprap to stabilize the water barrier, realign 1,800 linear feet of Stone Road, removing 1.6 acres of vegetation and replacing with pavement for Stone Road.
9	Boundary Fence Repair Alternative 1	–	–	–	Remove 3.4 acres of vegetation along both sides of approximately 10,000 linear feet of Moody AFB boundary fence, and construct a 10-foot-wide unimproved driving lane. Install a culvert in Beatty Branch, and fill portions of the adjacent wetland for the driving lane.
	Boundary Fence Repair Alternative 2				Remove 1.7 acres of vegetation along the Moody AFB-side of approximately 10,000 linear feet of Base boundary fence.
	Boundary Fence Repair Alternative 3				Remove 3.4 acres of vegetation along both sides of approximately 10,000 linear feet of Moody AFB boundary fence.
10	Building Demolition Alternative 1	8,855	–	–	DAF would demolish 11 buildings that have been determined to be underutilized or no longer needed.

sq. ft. – square feet; **AFTF** – Aircraft Fire Training Facility; **AGE** – Aerospace Ground Equipment; **38 RQS** – 38th Rescue Squadron; **AFB** – Air Force Base

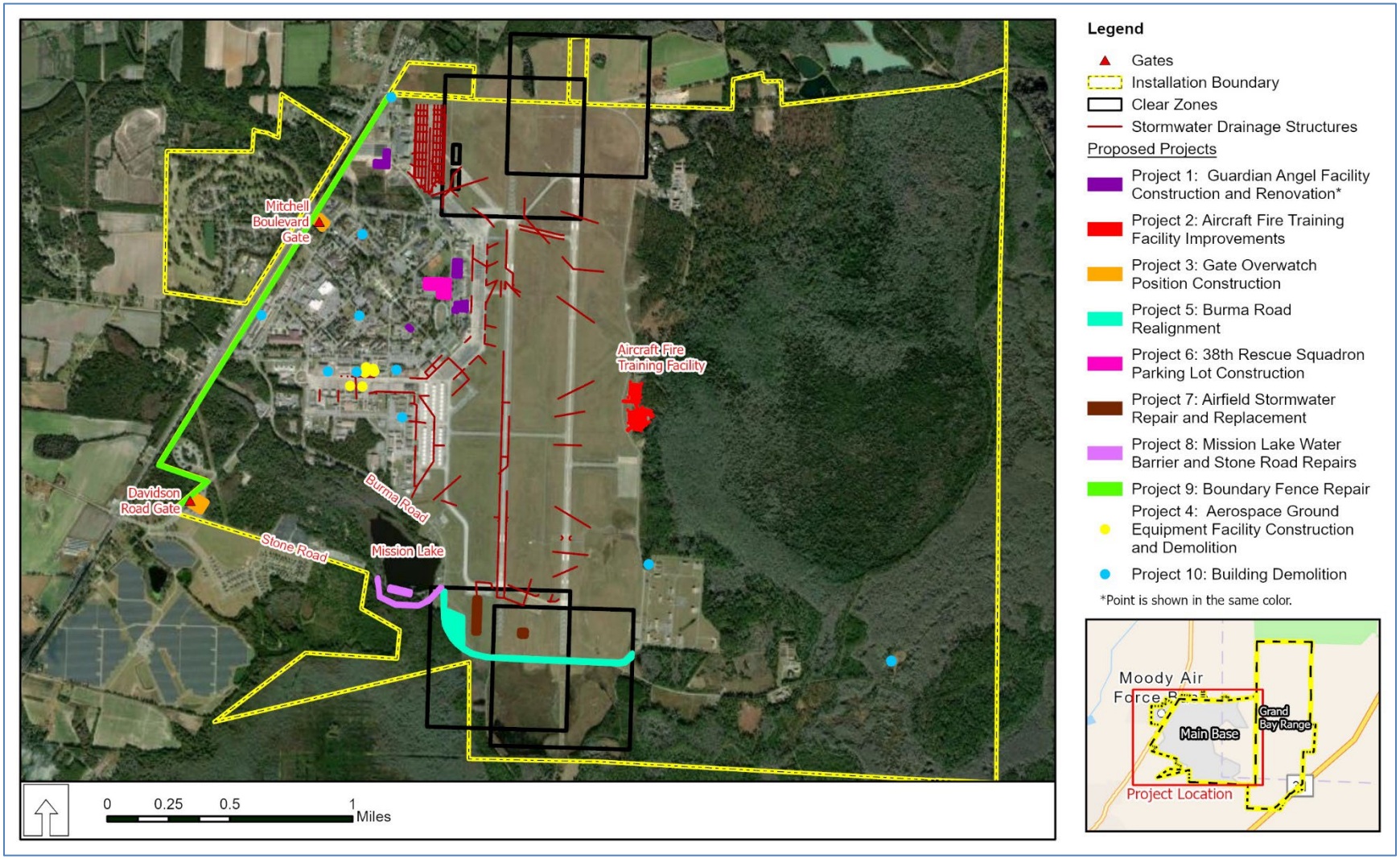


Figure 2-1. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia

2.2 Selection Standards for Project Alternatives

NEPA mandates the consideration of reasonable alternatives for the Proposed Action. "Reasonable alternatives" are those that could also be utilized to meet the purpose of and need for the Proposed Action. Selection standards are used to identify alternatives that meet the purpose of and need for the Proposed Action. Selection standards enable the 23 WG and 23 CES to critically evaluate whether all reasonable alternatives are included in the analysis. The DAF developed the following selection standards to identify reasonable alternatives for implementing projects comprising the Proposed Action:

A) Mission Support Siting – Alternatives must promote mission adjacency and operational efficiency by consolidating mission-specific facilities, functions, and operations. Alternatives must consider existing land use planning requirements as described in the Moody AFB Installation Development Plan (Moody AFB 2023) and area development plans.

B) Compatibility with Planning Guidance and Development Criteria – Alternatives must provide necessary facilities and infrastructure that meet established DoD and DAF sizing, siting, safety, and security requirements specified in UFC 4-010-01; DAFMAN 32-1084; DAFI 31-101, *Integrated Defense (ID)*; DAFI 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Program*; and Defense Explosive Safety Regulation 6055.09 DAFMAN 91-201, *Explosives Safety Standards*.

C) Sustainability – Alternatives must be able to operate in the future without a decline in either the mission or the natural and manmade systems that support it. Alternatives must meet sustainable building and low-impact development requirements in UFC 1-200-02, *High Performance and Sustainable Building Requirements*, and UFC 3-210-10, *Low Impact Development*.

D) Capacity – Alternatives must consider facility space utilization to meet the existing and future mission needs of the DAF, Moody AFB, the 23 WG, and the 93 AGOW. Alternatives must take into account the utilization of existing and proposed facilities to efficiently support specific mission functions as well as potential long-term maintenance and repair costs to manage outdated or underutilized facilities.

2.3 Descriptions of the Alternatives

The DAF evaluated design plans for each of the 10 proposed projects to identify potential design or siting alternatives. The following sections summarize the alternatives evaluated for each of the proposed projects making up the Proposed Action. This includes a No Action Alternative for each of the proposed projects. Each proposed project's No Action Alternative would not meet the purpose and need. However, analysis of the No Action Alternative provides a benchmark, enabling decision makers to compare the magnitude of the potential environmental effects of the Proposed Action; therefore, the No Action Alternative for each proposed project is carried forward for analysis in this EA.

2.3.1 Project 1: Guardian Angel Facility Construction and Renovation

Currently, the 38th Rescue Squadron (38 RQS) primary operations (i.e., Guardian Angel Facility) share a building with the 41st Rescue Squadron (41 RQS). Further, the 38 RQS operations functions are housed in multiple facilities at Moody AFB. The 38 RQS requires an adequately sized and properly configured squadron operations building to consolidate mission functions, effectively execute its mission, and conduct necessary training to ensure mission readiness. In addition, there is currently inadequate parking for privately owned vehicles (POVs) for the 38 RQS primary operations.

DAF would construct a new 55,005-square-foot, single-story squadron operations facility for relocation of the 41 RQS. Additional pavement would be constructed for emergency vehicle access and utility terrain vehicle (UTV) parking. Following relocation of 41 RQS personnel and functions to the new facility, DAF would renovate the 9,925-square-foot Building 556 (which was constructed in 1941) and the 64,568-square-foot Building 663 (which was originally constructed in 2000) for the 38 RQS and construct a 62,414-square-foot addition to Building 663 and a 5,280-square-foot addition to relocate and consolidate maritime functions to Building 556. DAF would also renovate Buildings 606, 607, and 609 (constructed in 2005, 2005, and 1941, respectively) to be fully occupied by the 38 RQS.

2.3.1.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

DAF would construct a new 55,005-square-foot squadron operations facility near Sijan Street (**Figure 2-2**) to support the 41 RQS. Approximately 5,000 square feet of additional pavement would be constructed for emergency vehicle access and UTV parking, as well as a retaining wall for slope stabilization at the building location. DAF would renovate Buildings 556 and 663, construct a 5,280-square-foot addition to Building 556, and construct a 62,414-square-foot addition to Building 663 (**Figure 2-2**). DAF would renovate Buildings 606, 607, and 609. The total area of ground disturbance is estimated to be 127,699 square feet.

2.3.1.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

DAF would construct the new 55,005-square-foot squadron operations facility south of the Project 1 Alternative 1 location (**Figure 2-2**) to support the 41 RQS. Approximately 30,000 square feet of additional pavement would be constructed for emergency vehicle access, UTV parking, and key personnel parking. Approximately 300 linear feet of trenching to a depth of approximately 60 inches below grade would be required to extend utilities (i.e., sewer, water, electric, gas, and communications) for the new 41 RQS squadron operations building. DAF would renovate Buildings 556 and 663, construct a 5,280-square-foot addition to Building 556, and construct a 62,414-square-foot addition to Building 663 (**Figure 2-2**). DAF would renovate Buildings 606, 607, and 609. The total area of ground disturbance is estimated to be 152,699 square feet.



Figure 2-2. Project 1 – Guardian Angel Facility Construction and Renovation

2.3.1.3 Project 1, No Action Alternative

DAF would not construct a new facility for the 41 RQS and would not renovate and construct an addition to Building 663 for the 38 RQS. The 38 RQS would continue to have functional operations scattered across several facilities at Moody AFB, sustaining inefficiencies in use of manpower, equipment, and materials that are not housed in a single location. The 41 RQS and 38 RQS would share Building 663 to support their primary squadron operations.

2.3.2 Project 2: Aircraft Fire Training Facility Improvements

The existing AFTF has physical limitations in meeting aircraft fire training requirements (in accordance with AFI 32-2001, *Fire and Emergency Services Program*), including the lack of proper lighting for training in low-light conditions and warning lighting (DAFMAN 91-203, *Air Force Occupational Safety, Fire, and Health Standards*); a propane tank located in an explosive quantity-distance (Q-D) arc; a degraded mockup training airplane; and the lack of an air-conditioned training facility with proper storage and emergency safety features (in accordance with the Career Field Education and Training Plan; Air Force Tactics, Techniques, and Procedures 3-32.41, *Contingency Firefighting Operations*; DAFMAN 91-203, National Fire Protection Association [NFPA] 1403, Annex D, *Heat Exhaustion and Heat Stroke in Training*, and NFPA 1584, *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*), and restrooms (in accordance with Occupational Health and Safety Administration 29 CFR 1910.141(c)). Moody AFB also lacks a designated truck driver training pad (in accordance with Career Field Education and Training Plan and NFPA 1002, *Standard for fire Apparatus Driver/Operator Professional Qualifications*), and truck driver training is conducted at temporary locations across Moody AFB as needed.

DAF would modernize the existing AFTF at Moody AFB. Using approximately 500 cubic yards of concrete, the DAF would construct an approximately 6-acre concrete pad around the AFTF, on each side of the structural fire training facility, and connect the concrete pad to North Perimeter Road. The DAF would remove and install a new mockup training aircraft for fire training. Five new fire hydrants would be installed replacing the existing fire hydrants. Approximately 100 feet of trenching to a depth of approximately 24 inches below grade would be required to connect the new hydrants to previously used locations. The DAF would install nine stadium-style lights to encompass all areas within the AFTF to allow for nighttime training. Approximately 1,200 linear feet of trenching for electrical wiring to a depth of 24 inches below grade would be completed for the nine lights; each of the nine lights would be set in concrete footers buried to a depth of 8 feet. The existing retention pond would be renovated, the propane gas tank replaced at a location beyond the existing Q-D arc, and environmental concerns associated with hazardous materials (i.e., perfluorooctanoic acid [PFOA]) managed by capping those contaminated soils with concrete. DAF would construct a 10,000-square-foot training facility that would include bathrooms, showers, a breakroom, a clean room/washroom, rollup doors on each end for drive-through capability, and concrete-finished floor and would install ceiling fans, with heating, ventilation, and air conditioning inside interior rooms. DAF would also construct an approximately 3-acre pad for a truck driving training using approximately 2,300 cubic yards of concrete.

2.3.2.1 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

DAF would construct all proposed facilities at the existing AFTF as described by the Proposed Action (**Figure 2-3**).

2.3.2.2 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

DAF would construct all the proposed facilities and infrastructure at the existing AFTF as described in Project 2, Alternative 1, except for the approximately 3-acre truck driving training pad (**Figure 2-4**). Truck driver training would continue at a temporary pad set up elsewhere on Moody AFB Main Base when needed.

2.3.2.3 Project 2, No Action Alternative

The DAF would not construct new facilities or renovate existing facilities at the AFTF. The AFTF is currently inoperable, and temporary duty travel would continue to be required for all aircraft fire training. The propane gas tank would remain in an inappropriate location within an existing, explosive Q-D arc, and environmental concerns associated with PFOA would not be properly managed. Truck driver training would continue at a temporary pad set up elsewhere on Moody AFB when needed.

2.3.3 Project 3: Gate Overwatch Position Construction

UFC 4-022-01, *Entry Control Facilities Access Control Points*, states installations must consider additional position(s) for security personnel to facilitate a response to a threat. The Davidson Road and Mitchell Boulevard gates do not meet these current AT/FP requirements. Currently, security personnel at both gates use armored vehicles parked at the gates to facilitate a response to a threat in lieu of reinforced overwatch positions.

DAF would construct two-story overwatch buildings at Moody AFB gates. Each overwatch building would be approximately 1,250 square feet, with approximately 625 square feet of new ground disturbance. Construction would include concrete footings and standard framing techniques. The overwatch buildings would be connected to utilities and communication systems, which are all located proximate to the gates.

2.3.3.1 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

The DAF would construct two-story overwatch facilities at both the Davidson Road Gate and at the Mitchell Boulevard Gate (**Figure 2-5**). Approximately 50 feet of trenching to a depth of 24 inches would be required to connect electrical and gas utility and communication systems to each proposed overwatch facility.

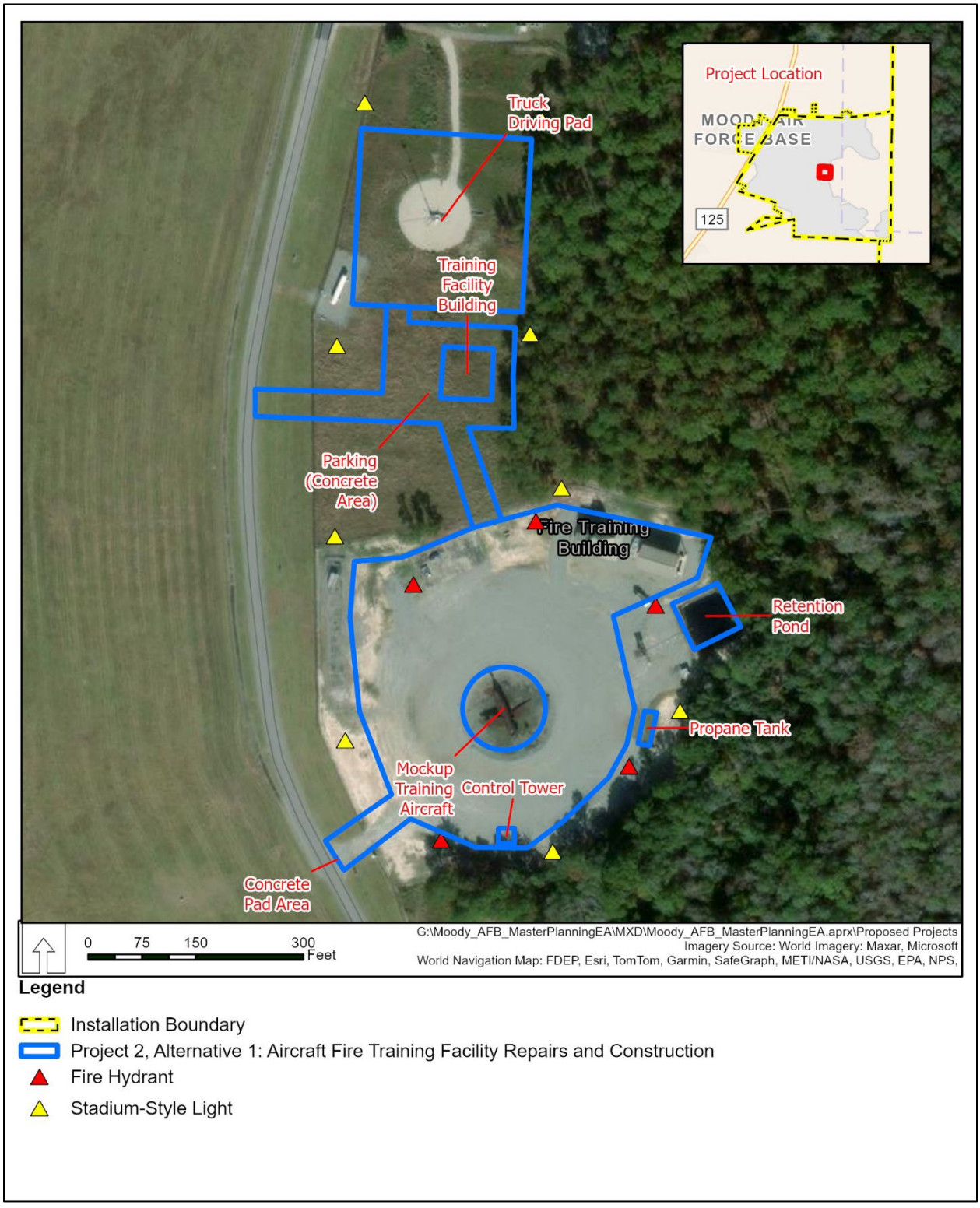


Figure 2-3. Project 2 – Aircraft Fire Training Facility Improvements Alternative 1

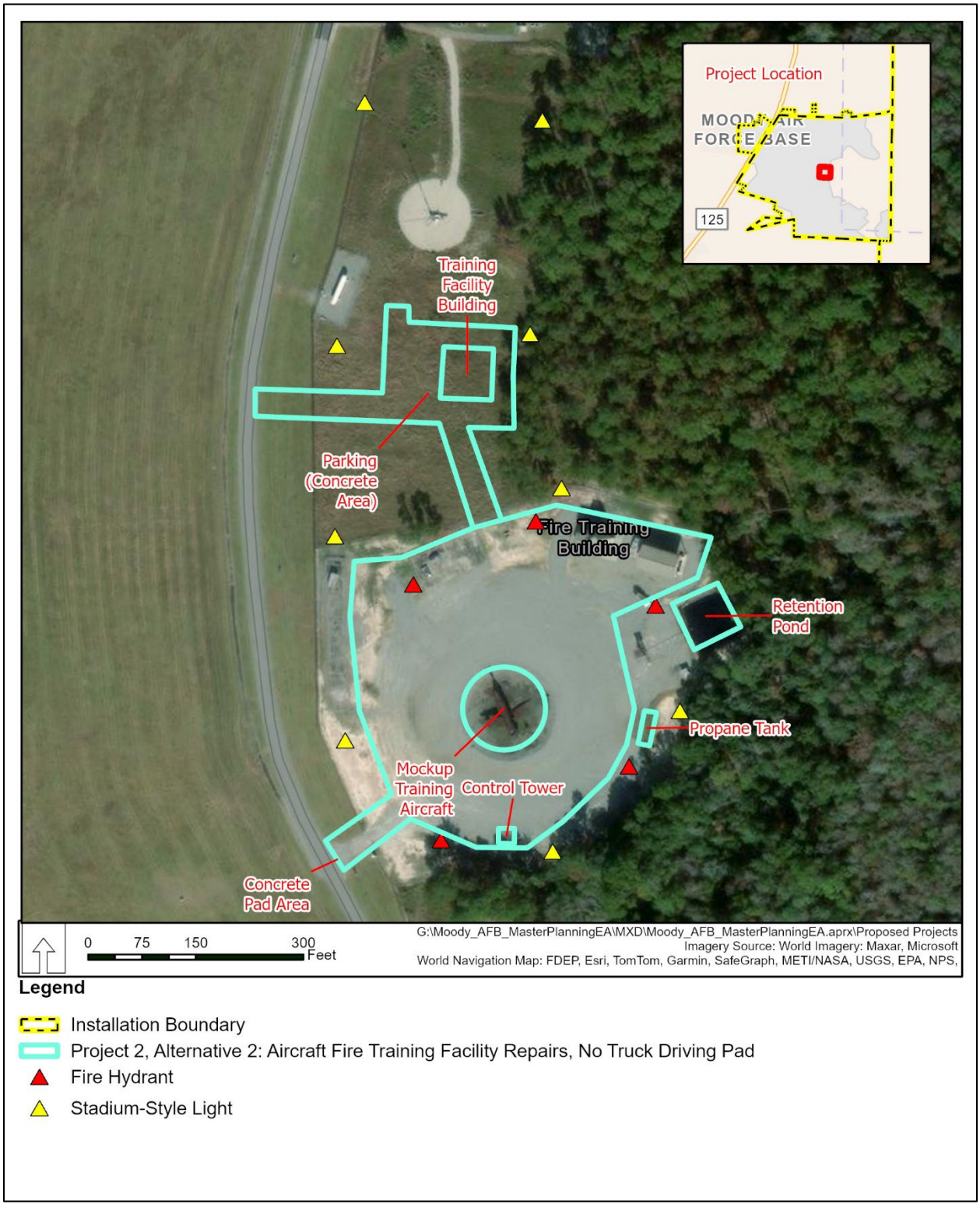


Figure 2-4. Project 2 – Aircraft Fire Training Facility Improvements Alternative 2

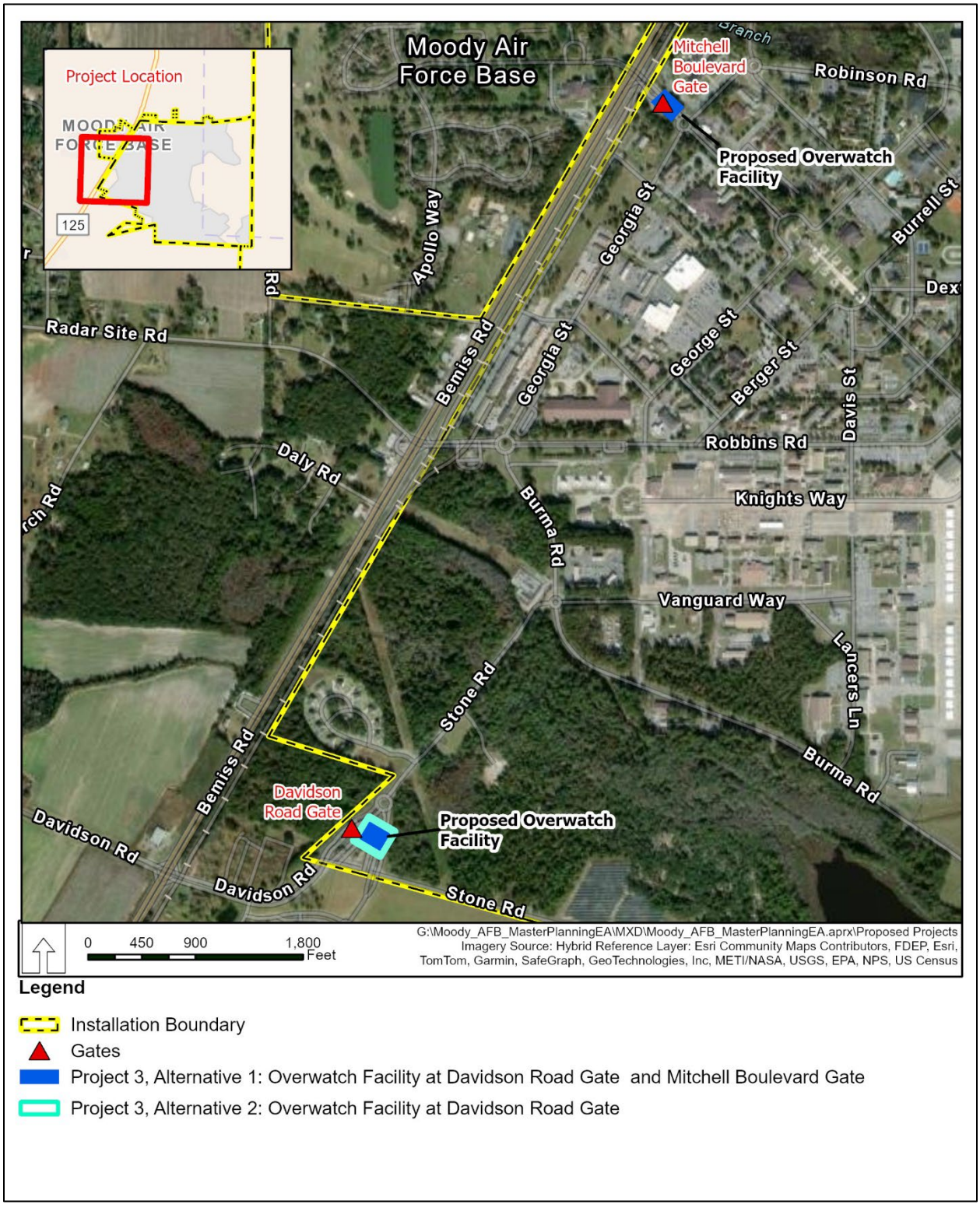


Figure 2-5. Project 3 – Gate Overwatch Position Construction

2.3.3.2 Project 3, Alternative 2: Gate Overwatch Position Construction at Davidson Road Gate Only

The DAF would construct a two-story overwatch facility only at the Davidson Road Gate (**Figure 2-5**). Approximately 50 feet of trenching to a depth of 24 inches would be required to connect electrical and gas utility and communication systems to the proposed overwatch facility.

2.3.3.3 Project 3, No Action Alternative

The DAF would not construct new overwatch facilities. Gate security personnel would continue to operate from armored vehicles parked at each gate. The gate security features would not meet AT/FP requirements.

2.3.4 Project 4: Aerospace Ground Equipment Facility Construction and Demolition

The current AGE complex at Moody AFB lacks adequate warehouse and office space. These functions are unconsolidated on Moody AFB and therefore lead to inefficiencies in AGE operations. This proposed project would construct new AGE facilities, renovate existing AGE facilities, and demolish existing AGE facilities within the existing AGE complex to consolidate AGE facilities and operations.

2.3.4.1 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

The DAF would demolish Buildings 732, 752, 755, and 756 (which were constructed in 1997, 1994, 1962, and 1977, respectively) and construct a new consolidated AGE facility with warehouse area, administrative space, and covered storage (**Figure 2-6**). A total of 24,097 square feet of existing buildings would be demolished, and 22,656 square feet of new building space, and 33,810 square feet of covered storage would be constructed. The covered storage would be constructed over an already paved area; no new surface paving or concrete would be required.

2.3.4.2 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

The DAF would demolish Buildings 732, and 756. Building 755 would be modified to create administrative areas (e.g., offices, break room, conference room). Building 752 would be renovated for warehouse space. DAF would construct a new parts-support section (**Figure 2-7**). A total of 7,896 square feet of existing buildings would be demolished; 13,230 square feet of Buildings 752 and 766 would be renovated and 4,080 square feet of new building space would be constructed. A total of 33,810 square feet of covered storage would be constructed. The covered storage would be constructed over an already paved area; no new surface paving or concrete would be required.

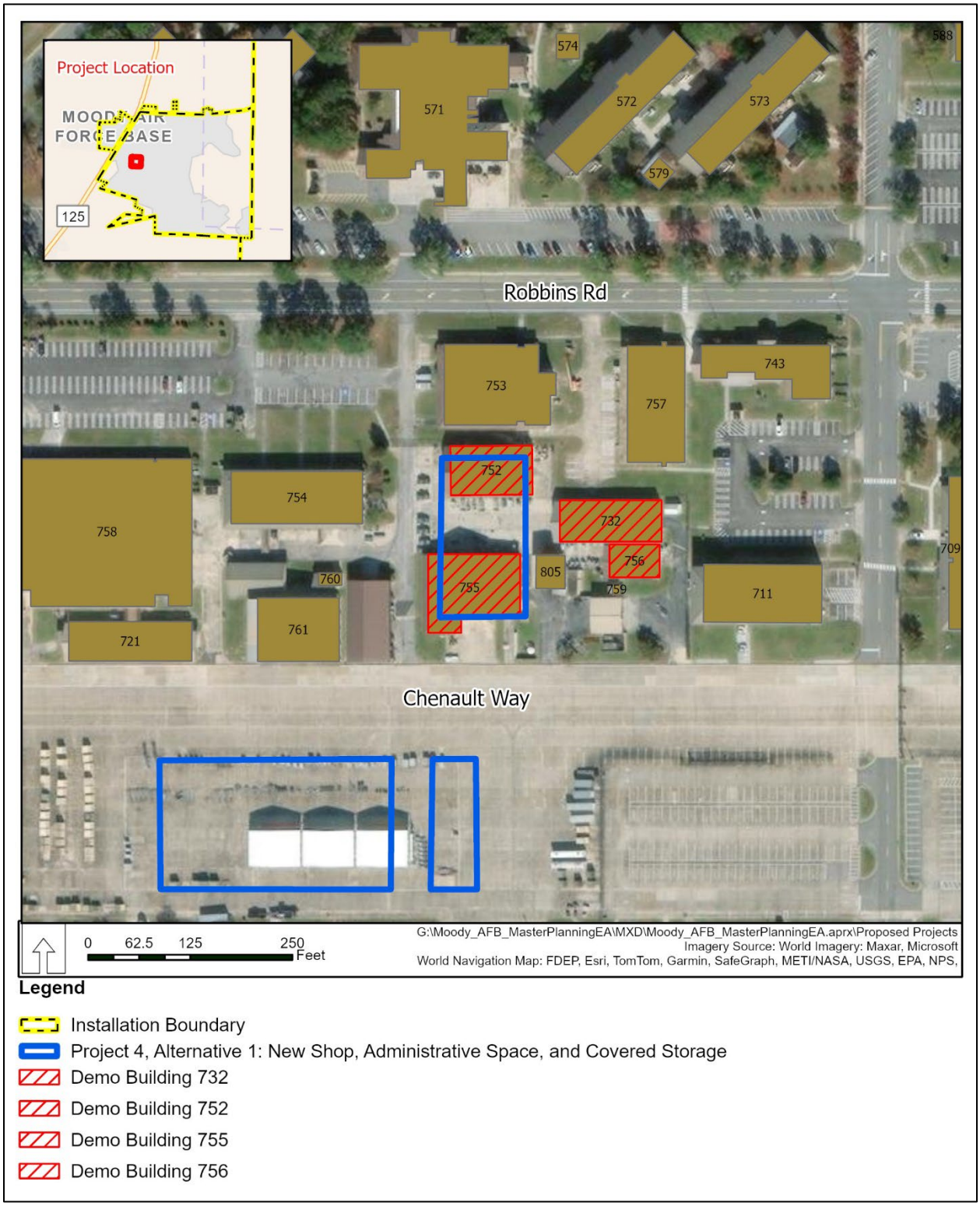


Figure 2-6. Project 4, Alternative 1 – Aerospace Ground Equipment Facility with New Shop, Administrative Space, and Covered Storage

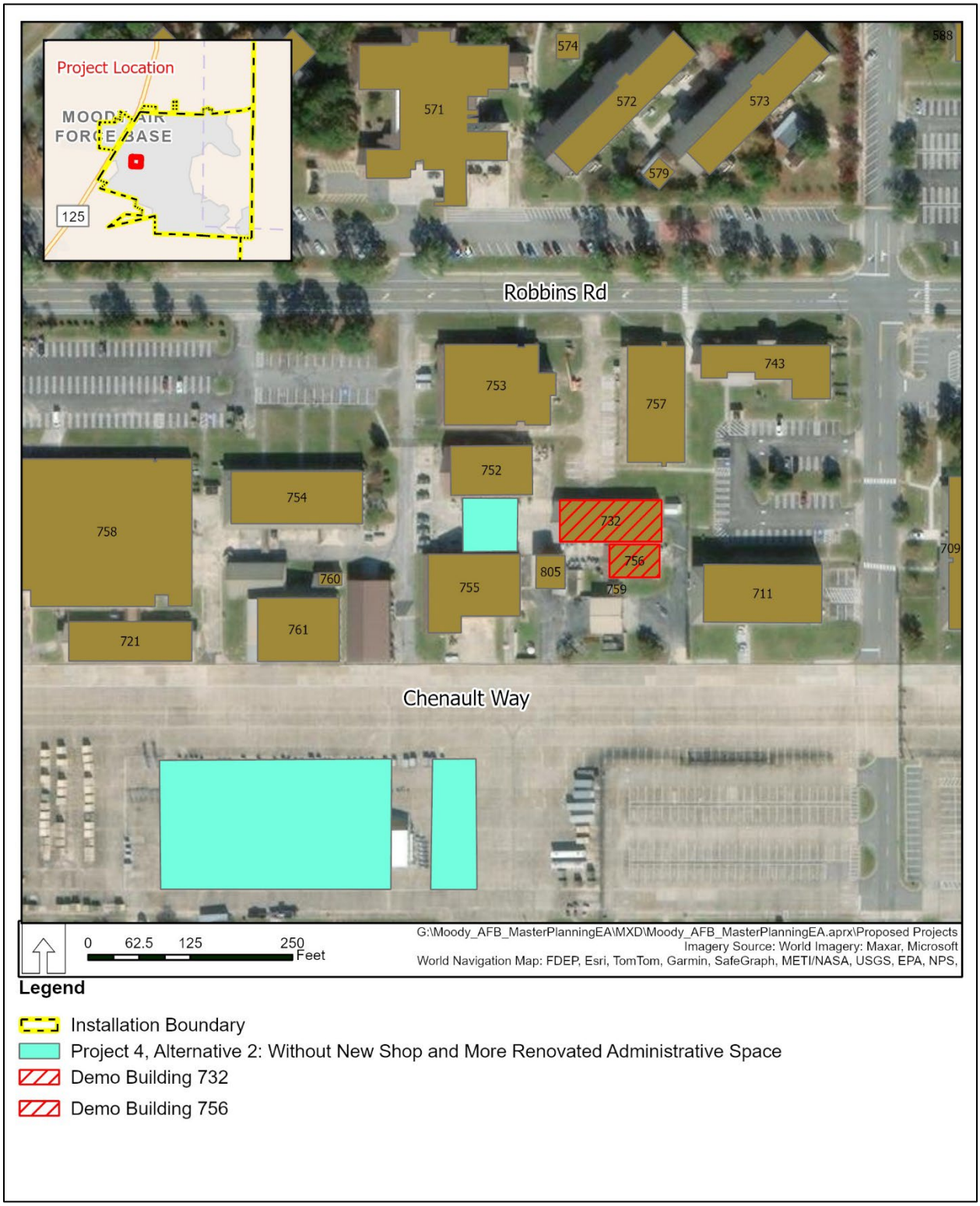


Figure 2-7. Project 4, Alternative 2 – Aerospace Ground Equipment Facility without New Shop and More Renovated Administrative Space

2.3.4.3 Project 4, No Action Alternative

The DAF would not demolish existing buildings or construct new facilities to consolidate AGE functions at a single AGE campus at Moody AFB. AGE operations would continue in incontiguous, antiquated facilities and would not be able to accommodate newer aircraft equipment, which is larger than existing equipment for the A-10s, HH-60s, and C-130s. Future missions would require utilizing a different facility for AGE.

2.3.5 Project 5: Burma Road Realignment

A CZ is an area 3,000 feet wide, centered on the centerline of the runway, extending 3,000 feet from the ends of the runway. This is the area associated with the airfield that has the greatest risk of accidents. Land use compatibility guidelines in accordance with AFI 32-1015 and Air Force Handbook 32-708, *AICUZ Program Manager's Guide*, are established for the CZ for aircraft and personnel safety, such as limitations on certain types of potential obstructions. Part of Burma Road is located within the graded portion of the Runway 18R/36L CZ. Because this portion of Burma Road is located in the graded portion of the CZ, it currently requires an airfield waiver from the land use compatibility guidelines for the CZ. Further, trees adjacent to Burma Road and within the CZ do not meet the requirements of UFC 3-260-1, *Airfield and Heliport Planning and Design*.

Burma Road would be realigned to the southwest and beyond the graded portion of the Runway 18R/36L CZ. As part of the Burma Road realignment, the Moody AFB boundary fence and airfield fence would be realigned. The realigned Base boundary fence would be constructed to current AT/FP standards. Realignment of Burma Road would require the removal of trees from the realignment footprint. Approximately 6,000 linear feet of Burma Road would be realigned and repaved.

2.3.5.1 Project 5, Alternative 1: Burma Road Realignment

The DAF would realign and repave approximately 6,000 linear feet of Burma Road with either conventional or permeable asphalt. The realignment of Burma Road would move it out of the graded portion of the CZ (**Figure 2-8**). Realignment of Burma Road would require the removal of approximately 4.6 acres of trees from the realignment footprint and graded portion of the CZ.

2.3.5.2 Project 5, No Action Alternative

DAF would not realign and repave Burma Road. Existing trees and Burma Road would remain located within the graded portion of the CZ, and an airfield waiver would continue to be required as Burma Road and the trees would not meet the requirements of UFC 3-260-1.



Figure 2-8. Project 5 – Burma Road Realignment

2.3.6 Project 6: 38th Rescue Squadron Parking Lot Construction

A new 20,000-square-foot parking lot for 125 POVs to support the 38 RQS operation in Building 663 would be constructed on an existing fitness track east of Building 663 (**Figure 2-9**). The parking lot would be paved with conventional asphalt. A total of 10 electric charging stations for POVs would be included at the parking lot, and approximately 500 feet of trenching for electrical connections would occur to support those charging stations.

2.3.6.1 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

A new 20,000-square-foot parking lot for 125 POVs would be constructed on an existing fitness track east of Building 663 (**Figure 2-9**). The parking lot would be paved with either conventional or permeable asphalt. A total of 10 electric charging stations for POVs would be included at the parking lot, and approximately 500 feet of trenching for electrical connections to an estimated depth of 24 inches would occur to support those charging stations.

2.3.6.2 Project 6, No Action Alternative

Under the No Action Alternative, DAF would not construct a new parking lot to support the 38 RQS. No additional electric charging stations for POVs would be provided. There would continue to be inadequate parking for POVs at Building 663 to support the 38 RQS.

2.3.7 Project 7: Airfield Stormwater Repair and Replacement

The Moody AFB airfield stormwater drainage system is mostly below ground. Portions of the drainage system have noticeably begun to fail, and deterioration of underground drainage structures has caused visible slumping of surface soils within the airfield. The stormwater drainage system failures could lead to sediment transport in stormwater as well as causing the system to not meet Storm Water Management Facilities requirements of UFC 3-260-1.

An intrusion and infiltration study of the airfield stormwater drainage system would be completed to identify the exact location and types of stormwater drainage failures. Culverts and belowground drainage features identified as failing by the study would be removed and replaced. Additionally, two exposed concrete outfall structures (totaling approximately 2,000 square feet) passing under Burma Road at the south end of the airfield that are within the graded portion of the Runway 18R/36L CZ would be removed and replaced with belowground culverts.



Figure 2-9. Project 6 – 38th Rescue Squadron Parking Lot Construction

2.3.7.1 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

The DAF would complete a condition survey of all stormwater structures previously located during the 2023 Ground Penetrating Radar Airfield Survey. Based upon existing visual evidence of belowground drainage structure failures, up to 15 percent of the existing stormwater system (i.e., approximately 1,500 linear feet) would be repaired or replaced (**Figure 2-10**). Existing belowground drainage lines consist primarily of concrete, reinforced concrete, corrugated metal, vitrified clay, terra cotta, and cast iron. Approximately 1,500 linear feet of these older belowground structures would be excavated, removed, and replaced with the same-sized stormwater drainage pipe, using concrete, high-density polyethylene, or corrugated metal stormwater pipes. Stormwater system repairs would require excavation within the airfield at select locations to access the belowground stormwater structures, disturbing approximately 7,500 square feet of airfield soils. Excavation, repair, and replacement activities would be coordinated with airfield operations to ensure that at least one Moody AFB runway would always remain operational.

Two concrete stormwater outfall structures located in the CZ would be removed and replaced with belowground culverts. This would remove approximately 700 linear feet of aboveground concrete flow dissipation outfall structures and replace them with either 700 linear feet of belowground concrete, high-density polyethylene or corrugated metal stormwater pipes to disperse stormwater flows passing from the airfield surface through existing culverts located beneath Burma Road.

2.3.7.2 Project 7, No Action Alternative

DAF would not conduct a study to determine where belowground stormwater features require repair and replacement. Damaged and failing stormwater structures in the airfield would remain unchanged. Surface slumping of soils and ground disturbance from the failure of belowground drainage feature would persist on the ground surface at the airfield. Stormwater drainage would remain inefficient. Concrete structures would remain in the CZ, and an airfield waiver with land use compatibility guidelines for the CZ would continue to be required.

2.3.8 Project 8: Mission Lake Water Barrier and Stone Road Repairs

The water barrier for Mission Lake underlies a portion of Stone Road. The Mission Lake water barrier and Stone Road show signs of aging and degradation, and approximately 300 feet of Stone Road adjacent to Mission Lake lacks shoulders, which poses a safety risk for vehicles. Further, a failure of the Mission Lake water barrier would lead to the unwanted and potentially uncontrolled drainage of Mission Lake.

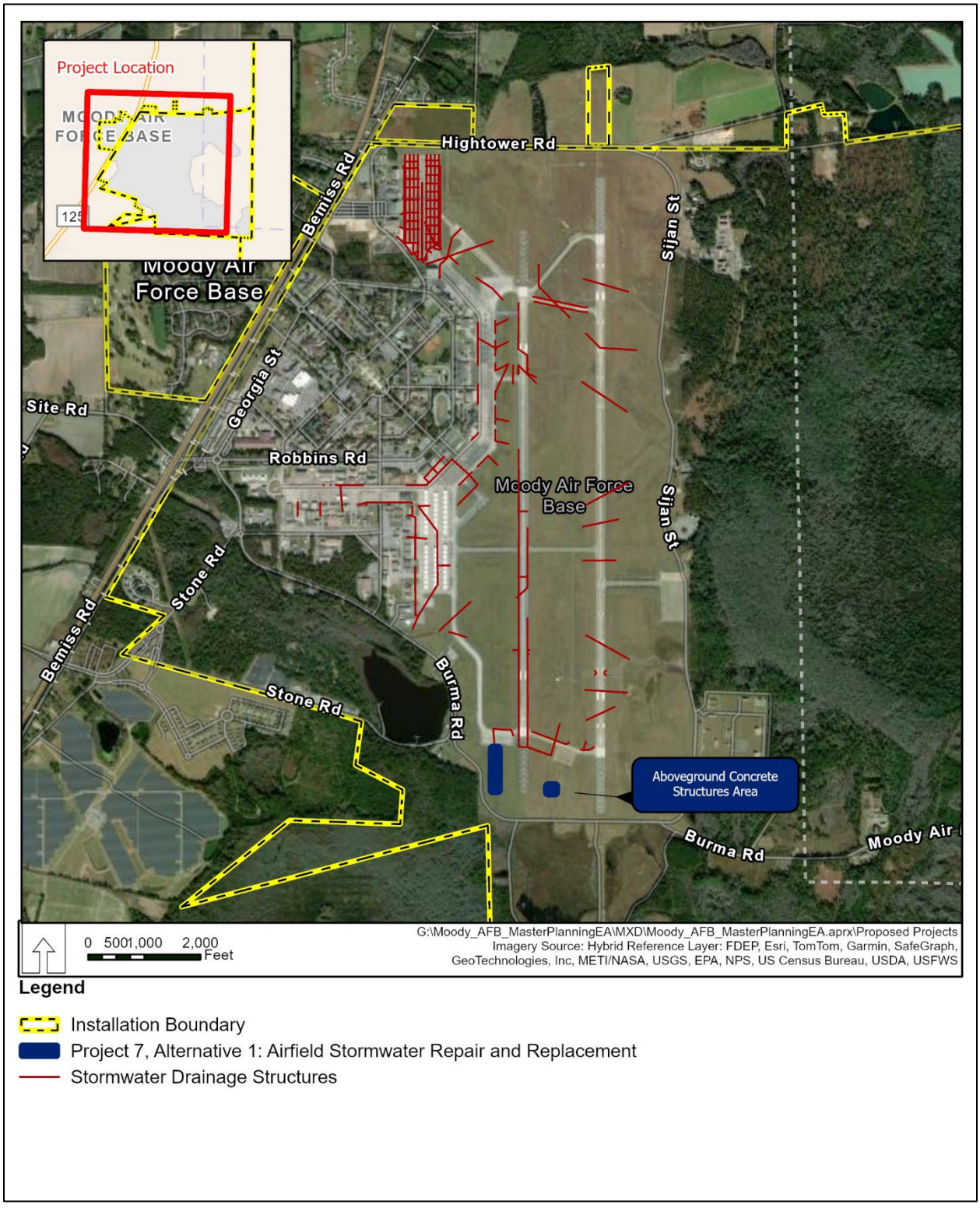


Figure 2-10. Project 7 – Airfield Stormwater Repair and Replacement

The Mission Lake water barrier would be strengthened and stabilized by installing riprap at a width of 20 feet from the toe of the slope on each side of Stone Road for a distance of 300 feet It is estimated that approximately 3,500 cubic yards of riprap would be used to stabilize the water barrier. Further, Stone Road would be widened to include adequate shoulders; approximately 4,000 cubic yards of clay fill would be used to construct the new Stone Road shoulders on both sides of the road. Approximately 300 feet of the surface of Stone Road at the water barrier would be improved through milling and overlaying of the surface.

2.3.8.1 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

DAF would extend the shoulders of Stone Road both to the north and south along an approximately 300-foot section of road currently lacking shoulders (**Figure 2-11**). The water barrier for Mission Lake would be strengthened by installing 3,500 cubic yards of riprap at the toe of slope on both sides of the water barrier. It is estimated that 20 feet of riprap would be placed on both sides of the water barrier and a total of 4,000 cubic yards of clay would be used to backfill over the water barrier to support new shoulders for Stone Road. Stone Road would be closed during the construction of shoulder and water barrier improvements and then repaved prior to reopening the road for travel.

2.3.8.2 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

Project 8, Alternative 2, would be the same as Project 8, Alternative 1, except for the approximately 300 feet of Stone Road that lacks shoulders. A new shoulder would be constructed only on the north side (Mission Lake side) of Stone Road and not on the south side of Stone Road (**Figure 2-11**), where a parallel drainage channel would potentially be impacted by fill material. Approximately 2,000 cubic yards of clay fill would be required to construct the shoulder on the north side of Stone Road. Stone Road would be closed during the construction of shoulder and water barrier improvements then repaved prior to reopening the road for travel.

2.3.8.3 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

DAF would strengthen the water barrier as described for Project 8, Alternative 1. However, instead of widening 300 feet of Stone Road, Stone Road would be realigned to no longer pass over the top of the Mission Lake water barrier (**Figure 2-11**). Approximately 1,800 linear feet of a new two-lane road with shoulders would be constructed to realign Stone Road south of the Mission Lake water barrier and south of the stream channel that originates as the outfall from Mission Lake and runs parallel to and south of the current Stone Road alignment. This would require approximately 1.6 acres of tree removal, grading, and new pavement to realign Stone Road. The former Stone Road alignment would be decommissioned, old pavement removed, and the surface covered in turf grasses or gravel, as necessary to support the Mission Lake water barrier.

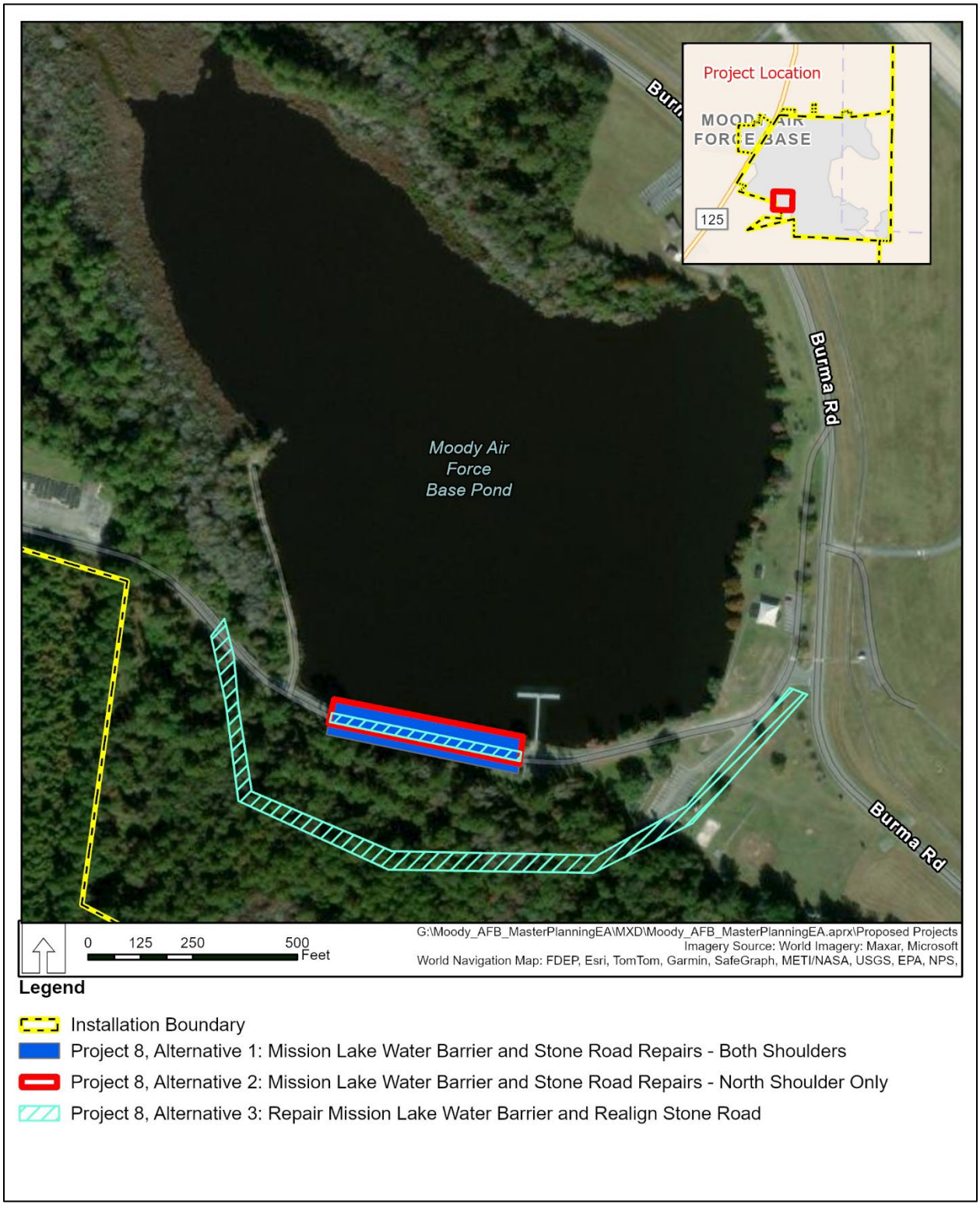


Figure 2-11. Project 8 – Mission Lake Water Barrier and Stone Road Repairs

2.3.8.4 Project 8, No Action Alternative

The Mission Lake water barrier would not be strengthened under the No Action Alternative. The water barrier to Mission Lake would continue to degrade, with a risk of potential future failure, draining Mission Lake. Further, there would be no shoulders on either side of approximately 300 feet of Stone Road along Mission Lake, continuing to make this portion of Stone Road a safety hazard for vehicular travel.

2.3.9 Project 9: Boundary Fence Repair

Portions of the Moody AFB boundary fence along the western Moody AFB boundary contain mature woody vegetation that extends to the fence line. There is no perimeter driving lane parallel to the western Base boundary fence because of this vegetation. Required fence maintenance is difficult without proper access to the fence. Further, the lack of a clear line-of-sight at the boundary fence does not meet AT/FP requirements.

To meet AT/FP requirements, the vegetation would be cleared along the Moody AFB western boundary fence to create a clear line of sight and provide adequate width for a driving lane on the inside of the boundary fence. All stumps and belowground vegetation would be removed on the Moody AFB side of the boundary fence, and a single-lane dirt road (approximately 10 feet wide) would be constructed parallel to the fence line. The existing fence would be repaired as needed in areas that are currently inaccessible due to vegetation encroachment.

2.3.9.1 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

DAF would remove vegetation along approximately 10,000 linear feet of the Moody AFB boundary fence to create a 16-foot-wide corridor by clearing all vegetation on both sides of the fence (**Figure 2-12**). It is estimated that approximately 3.4 acres of vegetation would be removed. Stumps would be removed, and soils would be prepared to create a driving lane within the 16-foot-wide corridor. This would include grading the roadway through an existing wetland area, placing a culvert in Beatty Branch, and building the driving lane over the culverted Beatty Branch. The driving lane would be approximately 10 feet wide with an unimproved (i.e., dirt) surface. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth.

2.3.9.2 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

DAF would remove all aboveground vegetation along approximately 10,000 linear feet of the Moody AFB boundary fence to create a 16-foot-wide corridor clear of vegetation only on the Moody AFB side of the fence (**Figure 2-12**). It is estimated that approximately 1.7 acres of aboveground vegetation would be removed. Stumps and other belowground vegetation material would be left in place, and no driving lane would be constructed. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth.

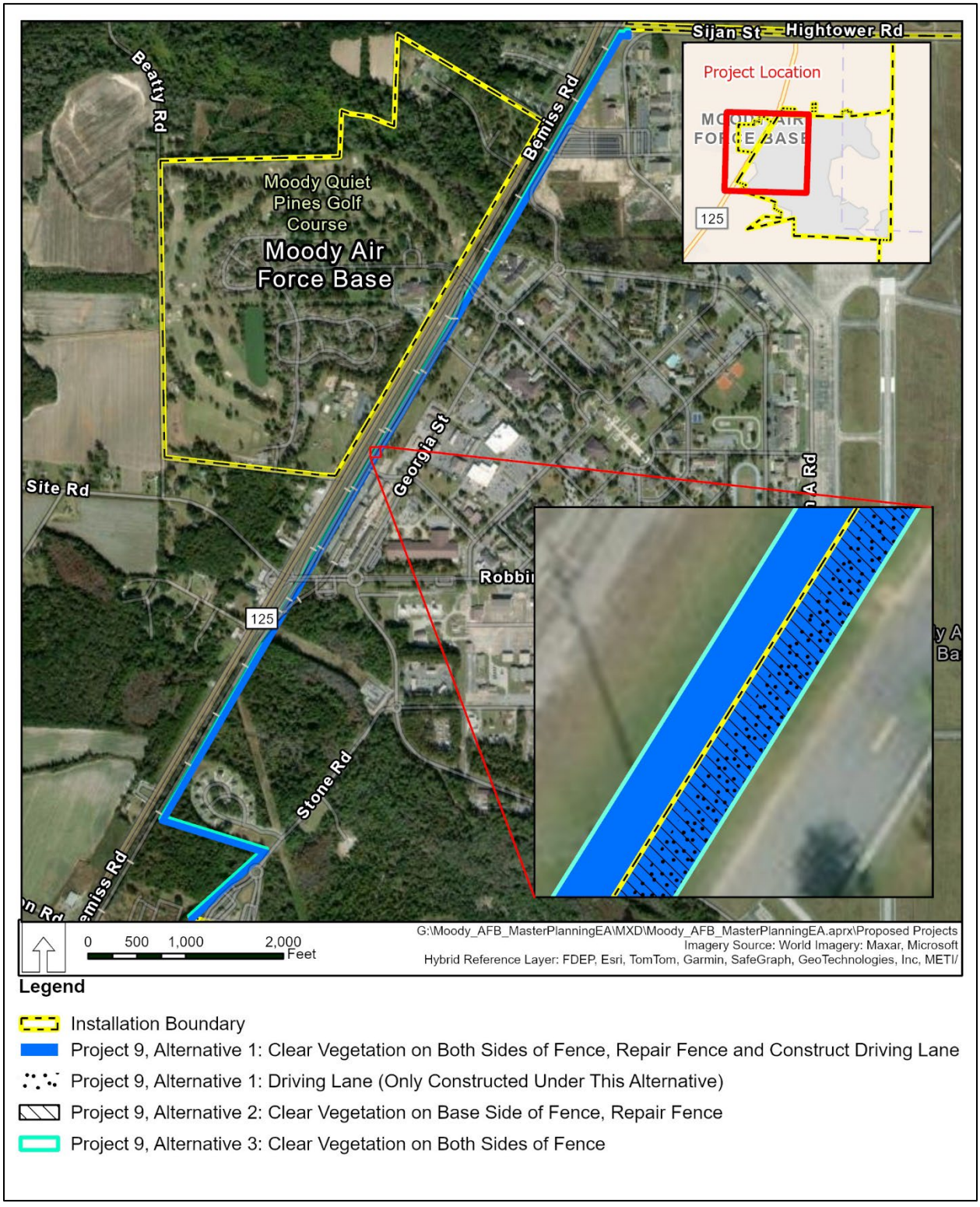


Figure 2-12. Project 9 – Boundary Fence Repair

2.3.9.3 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

DAF would remove all aboveground vegetation along approximately 10,000 linear feet of the Moody AFB boundary fence to create a 16-foot-wide corridor clear of vegetation on both sides of the Moody AFB boundary fence (**Figure 2-12**). It is estimated that approximately 3.4 acres of vegetation would be removed. Stumps and other belowground vegetation material would be left in place, and no driving lane would be constructed. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth.

2.3.9.4 Project 9, No Action Alternative

Vegetation growth would remain along portions of the Moody AFB boundary fence on the west side of Main Base. Line-of-sight for security personnel along the Moody AFB boundary would continue to be greatly obscured by the vegetation. There would be limited to no access along the entire length of the fence line, and there would be no vehicle access for Moody AFB security officers to patrol the perimeter along the Base boundary fence. Portions of the Base boundary fence would remain in disrepair because those areas cannot be accessed due to dense vegetation.

2.3.10 Project 10: Building Demolition

DAF would demolish 11 buildings that have been determined to be underutilized or no longer needed (**Figure 2-13; Table 2-2**). Demolition activities would remove a total of 8,855 square feet of building space from Moody AFB Main Base.

Table 2-2. Project 10, Proposed Building Demolition

Building Number	Building Area (square feet)	Year Built	Functional Status
153	440	2005	Latrine next to dorm facilities
200	264	1992	Unused bathroom at Grand Bay Range
656	76	1996	Damaged and unused guard shack at the Hightower Gate
707	3,042	1987	Human performance optimization; functions would be consolidated to Building 706
720	113	1981	Old air compressor building
760	429	1984	Old Washrack office
762	120	1991	Explosive Ordnance Disposal concrete pebble stone building
763	120	1988	Explosive Ordnance Disposal concrete pebble stone building
798	3,712	2001	Human performance optimization
961	297	1953	Contractor-operated civil engineer supply store storage
1145	242	2003	In-line pump/chlorine injector facility

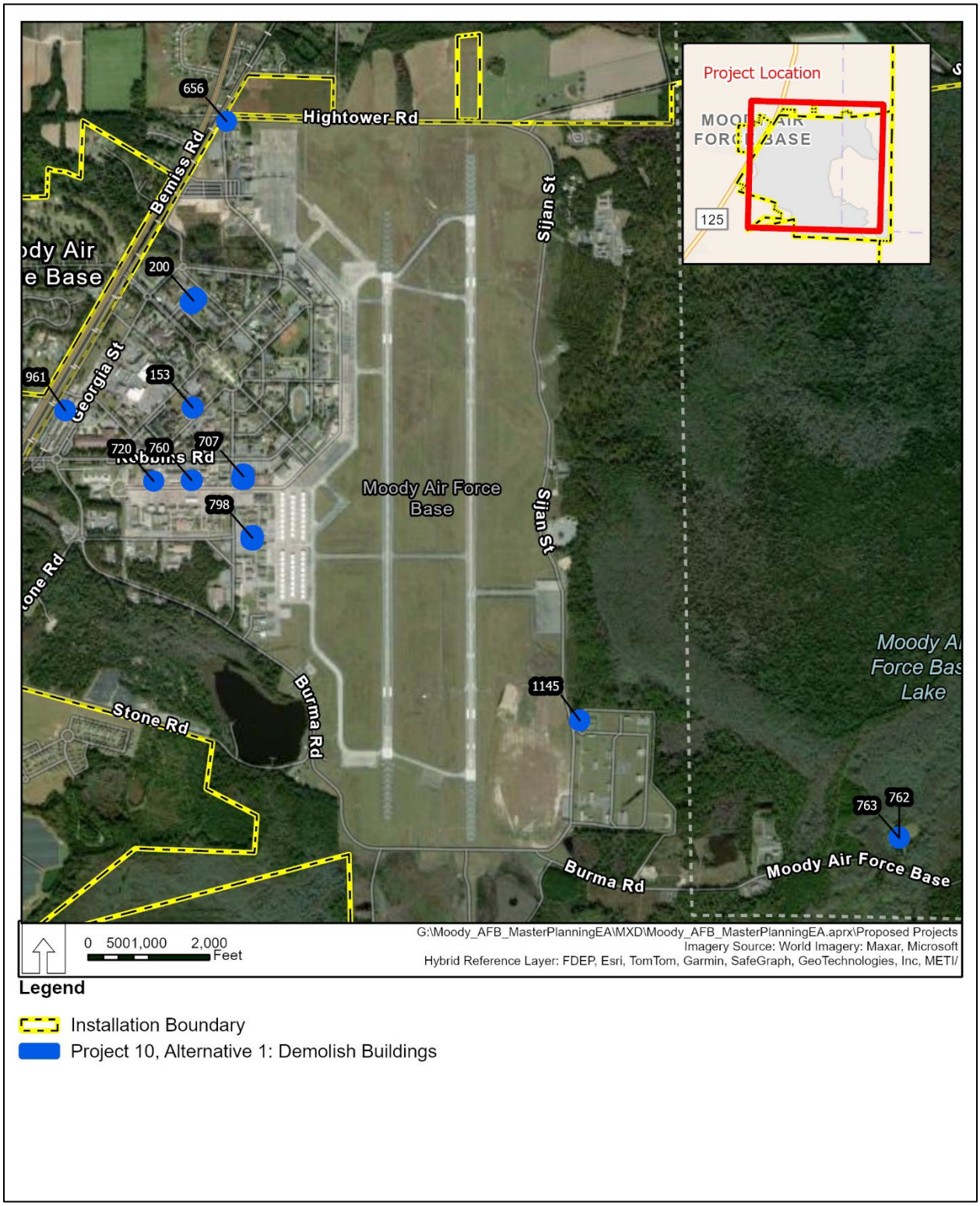


Figure 2-13. Project 10 – Building Demolition

2.3.10.1 Project 10, Alternative 1: Demolish Eleven Buildings

DAF would demolish 11 buildings that have been determined to be underutilized or no longer needed as described by the Proposed Action (**Figure 2-13; Table 2-2**). All demolished materials and solid waste would be removed from Moody AFB using dump trucks and haul-off debris containers. All demolition debris and other associated solid waste would be transported to the Evergreen Landfill in Valdosta, Georgia. Demolished building locations would either be left with the foundation building pad in place, or the building foundations removed, and the soils revegetated and maintained as grass-covered space.

2.3.10.2 Project 10, No Action Alternative

None of the 11 underutilized buildings on Moody AFB Main would be demolished. The DAF would either mothball the buildings or continue to maintain these underutilized or unneeded facilities, pay for utility costs for heating and air conditioning of the facilities, and manage the overall space utilization of the underperforming facilities.

2.4 Screening of Alternatives

Table 2-3 compares the alternatives that were identified as potentially meeting the purpose of and need for the Proposed Action and whether or not each would meet the selection standards presented in **Section 2.2.** Green indicates that the alternative would fully meet the requirements for that criterion; yellow indicates that the alternative would partially meet the requirements for that criterion; and red indicates that the criterion under consideration would not be met.

Table 2-3. Screening of the Alternatives

Alternatives	Selection Standards				Meets the Purpose and Need
	Mission Support Siting	Compatibility with Planning Guidance and Development Criteria	Sustainability	Capacity	
	A	B	C	D	
Project 1: Guardian Angel Facility Construction and Renovation					
Alternative 1	Yes	Yes	Yes	Yes	Yes
Alternative 2	Yes	Yes	Yes	Yes	Yes

Alternatives	Selection Standards				Meets the Purpose and Need
	Mission Support Siting	Compatibility with Planning Guidance and Development Criteria	Sustainability	Capacity	
	A	B	C	D	
Project 2: Aircraft Fire Training Facility Improvements					
Alternative 1	Yes	Yes	Yes	Yes	Yes
Alternative 2	Yes	Yes	Yes	Yes	Yes
Project 3: Gate Overwatch Position Construction					
Alternative 1	Yes	Yes	Yes	Yes	Yes
Alternative 2	Yes	Partial	Yes	Yes	Yes
Project 4: Aerospace Ground Equipment Facility Consolidation and Demolition					
Alternative 1	Yes	Yes	Yes	Yes	Yes
Alternative 2	Yes	Yes	Yes	Yes	Yes
Project 5: Burma Road Realignment					
Alternative 1	Yes	Yes	Yes	Yes	Yes
Project 6: 38th Rescue Squadron Parking Lot Construction					
Alternative 1	Yes	Yes	Yes	Yes	Yes
Project 7: Airfield Stormwater Repair and Replacement					
Alternative 1	Yes	Yes	Yes	Yes	Yes

Alternatives	Selection Standards				Meets the Purpose and Need
	Mission Support Siting	Compatibility with Planning Guidance and Development Criteria	Sustainability	Capacity	
	A	B	C	D	
Project 8: Mission Lake Water Barrier and Stone Road Repairs					
Alternative 1	Yes	Yes	Yes	Yes	Yes
Alternative 2	Yes	Yes	Yes	Yes	Yes
Alternative 3	Yes	Yes	Yes	Yes	Yes
Project 9: Boundary Fence Repair					
Alternative 1	Yes	Yes	Yes	Yes	Yes
Alternative 2	Yes	Yes	Yes	Yes	Yes
Alternative 3	Yes	Yes	Yes	Yes	Yes
Project 10: Building Demolition					
Alternative 1	Yes	Yes	Yes	Yes	Yes

2.5 Alternative Actions Considered but Eliminated from Further Analysis

Of the alternatives considered for the 10 proposed projects and described in **Section 2.4**, all but one alternative for Project 3 have been carried forward for further analysis in this EA. Proposed projects 1 through 4, 8, and 9 each considered alternatives for implementation, and all alternatives considered meet the selection standards as well as the purpose and need and are carried forward for further analysis. For Project 7, the stormwater drainage repair and replacement activities are proposed for the portions of the belowground stormwater system that are deteriorating or failing. There are no alternatives to repair and replacement of these system components, as belowground stormwater drains are required to properly drain the airfield. For

Project 10 there are no alternatives to demolishing the 11 buildings that have been determined by DAF to be underutilized or beyond repair. Each building has been carefully evaluated for potential renovation or reuse, and determined to be beyond its useful and serviceable life. Therefore, the decision for each of the 11 buildings is binary, either to demolish or continue to manage as an unusable building. No further alternatives were considered by DAF for these 11 buildings. The alternative actions considered but eliminated from further analysis are described in **Section 2.5.1** through **Section 2.5.3**.

2.5.1 Project 5, Burma Road Realignment Permeable Paving Alternative

For Project 5, Burma Road Realignment, DAF considered an alternative paving solution for the realigned Burma Road, using permeable asphalt instead of conventional asphalt. However, upon review, DAF determined that the type of asphalt proposed to be used for Project 5 did not constitute an alternative, but instead is a design option for the proposed project. No other action alternatives for Project 5 were considered, because only by realigning Burma Road and the airfield/Moody AFB boundary fence and removing trees can the airfield obtain an airfield waiver for the CZ as well as comply with UFC 3-260-1.

2.5.2 Project 6, 38 RQS Parking Lot Construction Permeable Paving Alternative

For Project 6, 38 RQS Parking Lot Construction, there are no other alternative locations that could support additional parking for the 38 RQS Operations, which is located in Building 663. The parking to support the building must be proximate to the building or else not be a viable alternative. Further, similar to Project 5, DAF considered an alternative paving solution for the proposed 38 RQS, using permeable asphalt instead of conventional asphalt. However, this was determined to be a design option and not an alternative.

2.5.3 Project 3, Alternative 2: Build Overwatch Positions at Davidson Road Gate Only

The lack of hardened overwatch facilities at the two Moody AFB gates that are used for normal daily operations, the Davidson Road Gate and the Mitchell Boulevard Gate, do not meet applicable DoD AT/FP criteria, including UFC 4 010-01. Project 3, Alternative 2, would only construct an overwatch facility at the Main Gate, leaving the Mitchell Boulevard Gate without adequate AT/FP facilities. Therefore, Project 3, Alternative 2, only partially meets Selection Standard B, “Compatibility with Planning Guidance and Development Criteria.” Project 3, Alternative 1, includes building an overwatch facility at both the Davidson Road Gate and the Mitchell Boulevard Gate and therefore incorporates the components of Alternative 1 for implementing the proposed project. Therefore, Project 3, Alternative 2, is not carried forward for further evaluation.

2.6 Summary of Potential Environmental Consequences

The potential impacts associated with the Proposed Action and No Action Alternative are summarized in **Table 2-4.** The summary is based on information discussed in detail in **Chapter 3** of the EA and includes a concise definition of the issues addressed and the potential environmental impacts associated with each alternative action.

Table 2-4. Summary of Potential Environmental Impacts by Project

Table 2-4 is separated into sub-tables that describe the effect each alternative would have on the respective resource areas for each of the 10 proposed projects.

Project 1: Guardian Angel Facility Construction and Renovation

Resource	Alternative 1	Alternative 2	No Action Alternative
Land Use	Long-term, negligible, beneficial impact on land use as the proposed project would be compatible with existing land uses and land use plans.	Long-term, negligible, beneficial impact on land use as the proposed project would be compatible with existing land uses and land use plans.	No impacts on land use would occur.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. At approximately 500 feet from the construction activities, the predicted maximum noise levels would drop below 65 dBA. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. No sensitive noise receptors would be impacted.	Impacts would be similar to those described for Alternative 1, but would include a slightly larger area of construction. No sensitive noise receptors would be impacted.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary and long-term, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from grading and trenching activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Operational emissions increase would occur from a new standby diesel generator.	Temporary and long-term, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from grading and trenching activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Criteria pollutant emissions would be slightly higher than Alternative 1. Operational emissions increase would occur from a new standby diesel generator.	No air quality impacts would occur.
Soils	Short-term and long-term minor adverse impacts from 2.93 acres of soil disturbance during construction activities and an increase in impermeable surfaces indirectly causing soil erosion following construction. Erosion and sediment control BMPs would be implemented to reduce impacts on soils.	Impacts on soils would be similar to Alternative 1. There would be 3.51 acres of soil disturbance.	There would be no impacts on soils.
Water Resources	Long-term, minor, adverse impacts on water resources from soil disturbance during construction activities that could impact water quality and increased impermeable areas that could increase stormwater runoff quantities. BMPs would be implemented to reduce impacts on water quality from construction activities.	Impacts would be similar to Alternative 1 but with a slightly greater area of impermeable surfaces following construction activities, increasing the potential volume of stormwater runoff. Potential indirect impacts on adjacent potentially jurisdictional waters of the United States would be avoided through the use of BMPs during construction.	There would be no impacts on water resources.
Biological Resources	Short-term, minor, adverse impacts on biological resources from disturbance to relatively common wildlife from construction noise and equipment movement. BMPs would be implemented to protect aquatic habitat from sedimentation during construction. There would be no effect on any listed species.	Short-term, minor, adverse impacts on biological resources from disturbance to relatively common wildlife from construction noise and equipment movement. BMPs would be implemented to protect aquatic habitat from sedimentation during construction. There would be no effect on any listed species.	There would be no impacts on biological resources.
Cultural Resources	There would be no adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings.	The potential effects to archaeological and architectural resources would be the same as described for Project 1, Alternative 1.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during construction and the disposal of debris and other solid waste generated during construction activities at local landfills. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities.	The potential impacts on infrastructure and transportation would be similar to those described for Alternative 1 because the 38 RQS operations facility would be constructed at a different location but using similar equipment and materials.	There would be no impacts on infrastructure.

Resource	Alternative 1	Alternative 2	No Action Alternative
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. ERP site SS-38 overlaps with the proposed project area; however, contaminated soils and groundwater would be avoided, or a construction waiver granted. ACM and LBP sampling would be conducted prior to renovation activities, and if determined to be present, ACM and LBP would be properly handled and disposed of in accordance with federal, state, and local laws during renovation activities.	Impacts would be similar to Project 1, Alternative 1, but with a slightly larger area of ground disturbance and potentially the use of more hazardous materials during construction.	There would be no impacts on hazardous materials, hazardous wastes, ERP sites, or toxic substances.
Socioeconomics – Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	Impacts on socioeconomics would be the same as Project 1, Alternative 1.	There would be no impacts on socioeconomics.
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	Impacts on health and safety would be the same as Alternative 1.	There would be no increased health and safety risk and no impacts on health and safety.

dBA – A-weighted decibel; **BMP** – best management practice; **NRHP** – National Register of Historic Places; **AFB** –Air Force Base; **CWA** - Clean Water Act; **ERP** – Environmental Restoration Program; **ACM** – asbestos-containing materials; **LBP** – lead-based paint; **DoD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration

Project 2: Aircraft Fire Training Facility Improvements

Resource	Alternative 1	Alternative 2	No Action Alternative
Land Use	Long-term, negligible, beneficial impact on land use as the proposed project would be compatible with existing land uses and land use plans.	Long-term, minor adverse impacts on land use as the truck driver training at Moody AFB would not meet the requirements of the Career Field Education and Training Plan and potentially occur in areas with incompatible land use designations.	Long-term, minor adverse impacts on land use at Moody AFB as the AFTF propane tank would continue to be located within the boundary of an existing Q-D arc and truck driver training would potentially occur in areas with incompatible land use designations.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. Noise from trucks during driving training, would be consolidated to the AFTF and no longer be present at temporary locations throughout the base. No sensitive noise receptors would be impacted.	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. No sensitive noise receptors would be impacted. Noise from trucks during driver training would continue to be present at temporary locations throughout the base.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary and long-term, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Operational emissions increase would occur from an increase in heating square footage from the new facility.	Temporary and long-term, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Construction emissions would be slightly less than for Alternative 1. Operational emissions increase would occur from an increase in heating square footage from the new facility.	No air quality impacts would occur.
Soils	Short-term and long-term minor adverse impacts from 9.87 acres of soil disturbance during construction activities and an increase in impermeable surfaces indirectly causing soil erosion following construction. Erosion and sediment control BMPs would be implemented to reduce impacts on soils.	Impacts on soils would be similar to Alternative 1. There would be impacts from 6.87 acres of soil disturbance.	There would be no impacts on soils.
Water Resources	Long-term, minor, adverse impacts on water resources from soil disturbance during construction activities that could impact water quality and increased impermeable areas that could increase stormwater runoff quantities. BMPs would be implemented to reduce impacts on water quality from construction activities.	Impacts on water resources would be similar to Alternative 1 but with a slightly smaller impermeable surface area, lessening stormwater runoff potential.	There would be no impacts on water resources.

Resource	Alternative 1	Alternative 2	No Action Alternative
Biological Resources	Short-term, minor, adverse impacts on biological resources from disturbance to relatively common wildlife from construction noise and equipment movement. BMPs would be implemented to protect aquatic habitat from sedimentation during construction. The project area is proximate to gopher tortoise habitat and occupied burrows. Preconstruction surveys for gopher tortoise and eastern indigo snake will be conducted prior to construction. The AFTF improvements may affect but is not likely to adversely affect the eastern indigo snake and have no effects on other listed species.	Impacts on biological resources would be similar to Alternative 1 but would involve a slightly smaller area of ground disturbance. The project area is proximate to gopher tortoise habitat and occupied burrows. Preconstruction surveys for gopher tortoise and eastern indigo snake will be conducted prior to construction. The AFTF improvements may affect but is not likely to adversely affect the eastern indigo snake and have no effects on other listed species.	There would be no impacts on biological resources.
Cultural Resources	There would be no adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base, and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings.	The potential effects to archaeological and architectural resources would be the same as described for Project 2, Alternative 1.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during construction and the disposal of debris and other solid waste generated during construction activities at local landfills. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities.	The potential impacts on infrastructure and transportation would be similar to those described for Alternative 1 but with a shorter construction timeline and less construction debris generated for disposal in regional landfills.	There would be no impacts on infrastructure.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. ERP site FT-07 overlaps with the proposed project area; however, contaminated groundwater would be avoided, or a construction waiver granted. No impacts from toxic substances.	Impacts would be similar to those described for Alternative 1. With a smaller construction footprint, there would be less hazardous materials and waste generated during construction AFTF construction activities. The potential for impacts from contaminated groundwater from ERP site FT-07 would be the same as Project 2, Alternative 1. There would be no impacts on ACM or LBP.	There would be no impacts on hazardous materials, hazardous waste, ERP sites, or toxic substances.
Socioeconomics- Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	Impacts on socioeconomics would be the same as Alternative 1.	There would be no impacts on socioeconomics.
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	Impacts on health and safety would be the same as Alternative 1.	There would be no increased health and safety risk and no impacts on health and safety.

AFTF – Aircraft Fire Training Facility; **BMP** – best management practice; **AFB** – Air Force Base; **ERP** – Environmental Restoration Program; **DoD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration

Project 3: Gate Overwatch Position Construction

Resource	Alternative 1	No Action Alternative
Land Use	Long-term, negligible, beneficial impacts on land use as the proposed project would be compatible with existing land uses and land use plans.	The Davidson Road and Mitchell Boulevard Gates would continue to not meet the current AT/FP requirements for additional positions for security personnel.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. At approximately 500 feet from the construction activities, the predicted maximum noise levels would drop below 65 dBA. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. No sensitive noise receptors would be impacted.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary and long-term, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Operational emissions increase would occur from an increase in heating square footage from the newly constructed buildings.	There would be no impacts on air quality.

Resource	Alternative 1	No Action Alternative
Soils	Short-term and long-term minor adverse impacts on soils from 0.12 acre of soil disturbance during construction activities and an increase in impermeable surfaces indirectly causing soil erosion following construction. Erosion and sediment control BMPs would be implemented to reduce impacts on soils.	There would be no impacts on soils.
Water Resources	Long-term, negligible, adverse impacts on water resources from soil disturbance during construction activities that could impact water quality and 1,250 square feet of additional impermeable areas that could increase stormwater runoff quantities. BMPs would be implemented to reduce impacts on water quality from construction activities.	There would be no impacts on water resources.
Biological Resources	Short-term, negligible, adverse impacts on biological resources from disturbance to relatively common wildlife from construction noise and equipment movement. There would be no effects on listed species.	There would be no impacts on biological resources.
Cultural Resources	There would be no adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base, and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during construction and the disposal of debris and other solid waste generated during construction activities at local landfills. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities	There would be no impacts on infrastructure and transportation.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. ERP site SS-39 overlaps with the proposed project area; however, contaminated groundwater would be avoided, or a construction waiver granted. No impacts from toxic substances.	There would be no impacts on hazardous materials, hazardous wastes, ERP sites, or toxic substances.
Socioeconomics – Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	There would be no impacts on socioeconomics.
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	There would be no increased health and safety risk and no impacts on health and safety.

dBA – A-weighted decibel; **AFB** – Air Force Base; **BMP** – best management practice; **ERP** – Environmental Restoration Program; **NRHP** – National Register of Historic Places; **DoD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration

Project 4: Aerospace Ground Equipment Facility Construction and Demolition

Resource	Alternative 1	Alternative 2	No Action Alternative
Land Use	Long-term, negligible, beneficial impacts on land use as the proposed project would be compatible with existing land uses and land use plans.	Long-term, negligible, beneficial impacts on land use as the proposed project would be compatible with existing land uses and land use plans.	Long-term, minor, adverse impacts on land use as AGE functions would continue to occur at locations across Moody AFB and without adequate warehouse and office space to support the AGE requirements.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. At approximately 500 feet from the construction activities, the predicted maximum noise levels would drop below 65 dBA. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. No sensitive noise receptors would be impacted.	Impacts would be the same as those described for Alternative 1.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary and long-term, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Operational emissions increase would occur from an increase in heating square footage from the new facilities and a standby diesel generator.	Temporary and long-term, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Construction emissions would be slightly less than Alternative 1. Operational emissions increase would occur from an increase in heating square footage from the new facilities and a standby diesel generator.	There would be no impacts on air quality.

Resource	Alternative 1	Alternative 2	No Action Alternative
Soils	Short-term and long-term minor adverse impacts on soils from 2.36 acres of soil disturbance during construction activities and an increase in impermeable surfaces indirectly causing soil erosion following construction. Erosion and sediment control BMPs would be implemented to reduce impacts on soils.	Impacts on soils would be similar to Alternative 1. There would be 1.99 acres of soil disturbance.	There would be no impacts on soils.
Water Resources	Long-term, minor, adverse impacts on water resources from soil disturbance during construction activities that could impact water quality and increased impermeable areas that could increase stormwater runoff quantities. BMPs would be implemented to reduce impacts on water quality from construction activities.	Impacts on water resources would be similar to those described for Alternative 1. There would be slightly less soil disturbance than under Alterative 1.	There would not be any impacts on water resource.
Biological Resources	Short-term, negligible, adverse impacts on biological resources from disturbance to relatively common wildlife from construction noise and equipment movement. There would be no effects on listed species. Tricolored bats do not typically utilize buildings for roosting in the Tricolored Bat Year-Round Active Zone 2, which includes Moody AFB. A qualified biologist would inspect buildings for the presence of tricolored bat prior to demolition. Therefore, Project 4, Alternative 1 would have no effect on any federally or state listed species.	Impacts on biological resources would be the same as those described for Alternative 1.	There would not be any impacts on biological resources.
Cultural Resources	There would be no adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings. The project includes demolition of Buildings 732, 752, 755, and 756. Neither Building 732 or Building 752 are 50 years old or will become 50 years old during the course of the proposed project and, therefore, do not require evaluation. Building 755 was constructed in 1962 and was previously determined ineligible. Building 756 was constructed in 1977 and has not yet been evaluated and could potentially turn 50 years old before the Project 4, Alternative 1 is completed. Therefore, Moody AFB will complete an evaluation prior to the proposed building demolition.	There would be adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings. The project includes demolition of Building 755. Building 755 was constructed in 1962 and was previously determined ineligible.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during construction and the disposal of debris and other solid waste generated during construction activities at local landfills. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities.	The potential impacts on infrastructure and transportation would be similar to those described for Alternative 1. However, less building demolition would occur generating slightly less materials to be transported and disposed of in regional landfills.	There would be no impacts on infrastructure.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. ERP site SS-24 overlaps with the proposed project area; however, contaminated groundwater would be avoided, or a construction waiver granted. ACM has been determined to be present in Building 756. ACM and LBP sampling would be conducted prior to renovation activities in Buildings 755 and 756, and if determined to be present, ACM and LBP would be properly handled and disposed of in accordance with federal, state, and local laws during renovation activities.	Impacts would be the same as those described for Alternative 1.	There would be no impacts on hazardous materials, hazardous waste, ERP sites, or toxic substances.
Socioeconomics – Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	Impacts on socioeconomics would be the same as Alternative 1.	There would be no impacts on socioeconomics.

Resource	Alternative 1	Alternative 2	No Action Alternative
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	Impacts would be the same as Alternative 1.	There would be no increased health and safety risk and no impacts on health and safety.

dBA – A-weighted decibel; **ERP** – Environmental Restoration Program; **BMP** – best management practice; **AFB** –Air Force Base; **NRHP** – National Register of Historic Places; **ACM** – asbestos-containing material; **LBP** – lead-based paint; **DoD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration

Project 5: Burma Road Realignment

Resource	Alternative 1	No Action Alternative
Land Use	Long-term, minor, beneficial impacts on land use because Burma Road would be removed from the graded portion of the CZ, trees would be removed from the CZ, and the fence realigned to meet AT/FP standards.	Long-term, minor, adverse impacts on land use as an airfield waiver from the land use compatibility guidelines of the CZ would continue to be required.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. At approximately 500 feet from the construction activities, the predicted maximum noise levels would drop below 65 dBA. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. No sensitive noise receptors would be impacted.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations.	There would be no impacts on air quality.
Soils	Short-term and long-term minor adverse impacts on soils from 7.63 acres of soil disturbance during construction activities and an increase in impermeable surfaces indirectly causing soil erosion following construction. Erosion and sediment control BMPs would be implemented to reduce impacts on soils. If permeable pavement would be used to surface Burma Road, long-term impacts on soils would be reduced.	There would be no impacts on soils.
Water Resources	Long-term, minor, adverse impacts on water resources from soil disturbance during construction activities that could impact water quality and increased impermeable areas that could increase stormwater runoff quantities. BMPs would be implemented to reduce impacts on water quality from construction activities. If permeable pavement was chosen as an option for surfacing Burma Road, the long-term impacts on water resources from increased impermeable surfaces would be reduced.	There would be no impacts on water resources.
Biological Resources	Long-term, minor, adverse impacts on biological resources from removal of 4.6 acres of forested habitat and loss of breeding habitat for some common bird and reptile species. There is a possibility that the tricolored bat could utilize trees at Moody AFB for roosting. Therefore, tree removal would not occur from 1 May to 15 July to avoid the tricolored bat pup season. With the seasonal restrictions on tree removal activities, Project 5, Alternative 1, would not jeopardize the continued existence of the tricolored bat.	There would be no impacts on biological resources.
Cultural Resources	There would be no adverse effects on historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during construction and the disposal of debris and other solid waste generated during construction activities at local landfills. Trees removed from the CZ would be process off-site and used for lumber or mulch. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities.	There would be no impacts on infrastructure and transportation.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. ERP site LF-01 overlaps with the proposed project area; however, contaminated groundwater would be avoided, or a construction waiver granted. No impacts from toxic substances.	There would be no impacts on hazardous materials, hazardous wastes, ERP sites, or toxic substances.
Socioeconomics – Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	There would be no impacts on socioeconomics.

Resource	Alternative 1	No Action Alternative
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	There would be no increased health and safety risk and no impacts on health and safety.

CZ – Clear Zone; **dBA** – A-weighted decibel; **AFB** – Air Force Base; **NRHP** – National Register of Historic Places; **ERP** – Environmental Restoration Program; **DoD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration; **AT/FP** – antiterrorism/force protection

*Project 6: 38*th *Rescue Squadron Parking Lot Construction*

Resource	Alternative 1	No Action Alternative
Land Use	Long-term, negligible, adverse, impacts on land use as the proposed parking would replace a fitness track in an area designated for Outdoor Recreation land use.	There would be no impacts on land use.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. At approximately 500 feet from the construction activities, the predicted maximum noise levels would drop below 65 dBA. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. No sensitive noise receptors would be impacted.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations.	There would be no impacts on air quality.
Soils	Short-term and long-term minor adverse impacts on soils from 0.48 acre of soil disturbance during construction activities and an increase in impermeable surfaces indirectly causing soil erosion following construction. Erosion and sediment control BMPs would be implemented to reduce impacts on soils. If permeable pavement would be used to surface the parking lot, long-term impacts on soils would be reduced.	There would be no impacts on soils.
Water Resources	Long-term, minor, adverse impacts on water resources from soil disturbance during construction activities that could impact water quality and increased impermeable areas that could increase stormwater runoff quantities. BMPs would be implemented to reduce impacts on water quality from construction activities. If the permeable pavement option would be used to surface the parking lot, long-term impacts from surface water runoff would be reduced.	There would be no impacts on water resources.
Biological Resources	Short-term, negligible, adverse impacts on biological resources from construction equipment noise and equipment movement that could indirectly disturb some relatively common reptile and bird species. The construction of a parking lot would have no effect on any listed species.	There would be no impacts on biological resources.
Cultural Resources	There would be no adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during construction and the disposal of debris and other solid waste generated during construction activities at local landfills. The electrical use by electric POVs at the 10 electric charging stations would not impact the electrical grid or availability. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities.	There would be no impacts on infrastructure or transportation.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. No ERP sites would be impacted. No impacts from toxic substances.	There would be no impacts on hazardous materials, hazardous wastes, ERP sites, or toxic substances.
Socioeconomics – Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	There would be no impacts on socioeconomics.
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	There would be no increased health and safety risk and no impacts on health and safety.

dBA – A-weighted decibel; **BMP** – best management practice; **NRHP** – National Register of Historic Places; **POV** – personally-operated vehicle; **ERP** – Environmental Restoration Program; **DoD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration

Project 7: Airfield Stormwater Repair and Replacement

Resource	Alternative 1	No Action Alternative
Land Use	Long-term, minor, beneficial impacts on land use as the replacement of failing belowground drainage structures would be compatible with the Airfield Operations and Maintenance land use designation and the removal of two aboveground concrete structures would remove obstructions from the CZ.	Long-term, minor, adverse impacts on land use as aboveground concrete structures would remain in the CZ requiring an airfield waiver from land use compatibility guidelines.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. At approximately 500 feet from the construction activities, the predicted maximum noise levels would drop below 65 dBA. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. No sensitive noise receptors would be impacted.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and trenching operations.	There would be no air quality impacts.
Soils	Short-term and long-term minor adverse impacts on soils from 0.33 acre of soil disturbance during construction activities and an increase in impermeable surfaces indirectly causing soil erosion following construction. Erosion and sediment control BMPs would be implemented to reduce impacts on soils. Long-term, negligible, beneficial impacts on soils due to a reduction in soil erosion from soil slumping and failure at the belowground stormwater features.	There would be no impacts on soils.
Water Resources	Long-term, minor beneficial impacts on water resources from the repair and replacement of stormwater features. Construction activities could negatively impact water quality through sediment transport in stormwater and transport of POLs from construction equipment. However, BMPs would reduce these impacts. Repairs to degrading stormwater structures would reduce sediment erosion into structures during rain events and reduce sedimentation into water bodies.	There would be no impacts on water resources.
Biological Resources	Short-term, negligible, adverse impacts on biological resources from construction equipment noise and equipment movement that could indirectly disturb some relatively common reptile and bird species. The construction of a parking lot would have no effect on any listed species.	There would be no impacts on biological resources.
Cultural Resources	There would be no adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during construction and the disposal of debris and other solid waste generated during construction activities at local landfills. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities.	There would be no impacts on infrastructure or transportation.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. ERP site LF-01 overlaps with the proposed project area; however, contaminated groundwater would be avoided, or a construction waiver granted. No impacts from toxic substances.	There would be no impacts on hazardous materials, hazardous wastes, ERP sites, or toxic substances.
Socioeconomics – Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	There would be no impacts on socioeconomics.
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	There would be no increased health and safety risk and no impacts on health and safety.

CZ – Clear Zone; **dBA** – A-weighted decibel; **POL** – petroleum, oils and lubricants; **BMP** – best management practice; **NRHP** – National Register of Historic Places; **ERP** – Environmental Restoration Program; **AFB** – Air Force Base; **DoD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration

Project 8: Mission Lake Water Barrier and Stone Road Repairs

Resource	Alternative 1	Alternative 2	Alternative 3	No Action Alternative
Land Use	There would be no impacts on land use.	There would be no impacts on land use.	Long-term, minor, adverse impacts on land use because the realignment of Stone Road would permanently pave a portion of an area designated for Outdoor Recreation land use.	There would be no impacts on land use.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. At approximately 500 feet from the construction activities, the predicted maximum noise levels would drop below 65 dBA. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. No sensitive noise receptors would be impacted.	Noise impacts would be the same as those described for Alternative 1.	Noise impacts would be the same as those described for Alternative 1.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations.	Temporary, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Construction emissions would be slightly less than those under Alternative 1.	Short-term, minor, adverse impacts on air quality from anticipated increases in short-term construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Construction emissions would be slightly more than Alternatives 1 and 2.	There would be no impacts on air quality.
Soils	Short-term and long-term minor adverse impacts from 0.83 acre of soil disturbance during construction activities and an increase in impermeable surfaces indirectly causing soil erosion following construction. Erosion and sediment control BMPs would be implemented to reduce impacts on soils.	Impacts on soils would be similar to Alternative 1. There would be 0.69 acre of soil disturbance.	Impacts would be similar to Alternative 1; however, there would be 3.70 acres of soil disturbance.	Slow deterioration of the Mission Lake water barrier could erode soils through channeling and gullies at the outfall. This continual soil erosion would have long-term, minor, adverse impacts on soils.
Water Resources	Long-term, direct, minor, adverse impacts and long-term, minor indirect, beneficial impacts on water resources. The repairs to the water barrier and Stone Road shoulders would directly fill 0.48 acre of potentially jurisdictional waters of the US with riprap and clay. To reduce impacts, Moody AFB would obtain a CWA Section 404/401 permit, comply with all permit requirements, and implement any associated mitigation measures. Repairs to the water barrier would provide long-term protection to the waters of Mission Lake and reduce the risk of water barrier failure and associated erosion.	Impacts on water resources would be the same as Alternative 1.	Impacts on water resources would be similar to those described for Project 8, Alternative 1. The realignment of Stone Road and repairs to the Mission Lake water barrier would directly impact 0.76 acre of waters of the US. To reduce these impacts, Moody AFB would obtain a CWA Section 404/401 permit, comply with all permit requirements, and implement any associated mitigation measures. The realignment of Stone Road would create a larger impermeable surface area than Alternatives 1 and 2 leading to greater potential for stormwater runoff. Repairs to the water barrier would provide long-term protection to the waters of Mission Lake and reduce the risk of water barrier failure and associated erosion.	There would be no impacts on water resources.
Biological Resources	Long-term, minor, adverse impacts on biological resources would occur from the installation of riprap at the toe of each slope on either side of Stone Road causing the loss of both wetlands and aquatic habitat. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species. The use of BMPs would ensure construction activities do not adversely	Impacts on biological resources would be similar to those described in Alternative 1 but would have a smaller area of aquatic impacts. The proposed project may affect but is not likely to adversely affect the Suwannee alligator snapping turtle.	Impacts on biological resources would be similar but slightly greater than Project 8, Alternatives 1 and 2. In addition to the repair of Mission Lake water barrier, the realignment of an estimated 1,800 linear feet of Stone Road would result in the removal of approximatively 1.6 acres of trees south of Mission Lake outfall channel resulting in the loss of breeding and foraging habitat for relatively common reptile and bird species. There is a possibility that the tricolored	There would be no impacts on biological resources.

Resource	Alternative 1	Alternative 2	Alternative 3	No Action Alternative
	impact aquatic species in Mission Lake and Mission Lake outfall channel. There is marginally suitable habitat for the Suwannee alligator snapping turtle. However, its occurrence in the proposed project area would be highly unlikely, especially along the developed edge of Mission Lake at the existing water barrier composed of riprap and Stone Road. Noise and equipment movement during proposed construction activities such as the placement of riprap along the banks and within open-water areas of Mission Lake would further deter the Suwannee alligator snapping turtle from being present in the project area during construction activities. BMPs would be used to ensure construction activities do not substantially increase water turbidity in Mission Lake. Therefore, Project 8, Alternative 1 may affect but is not likely to adversely affect the Suwannee alligator snapping turtle.		bat could utilize trees at Moody AFB for roosting. Therefore, tree removal would not occur from 1 May to 15 July, to avoid the tricolored bat pup season (USFWS 2024b). With the seasonal restrictions on tree removal activities, Project 8, Alternative 3, would not jeopardize the continued existence of the tricolored bat. Additionally, as described for Project 8, Alternative 1, it is highly unlikely that the Suwannee alligator snapping turtle would be present in Mission Lake proximate to the proposed construction activities, and noise and equipment movement would further deter the Suwannee alligator snapping turtle from being present. Therefore, Project 8, Alternative 3 may affect but is not likely to adversely affect the Suwannee alligator snapping turtle.	
Cultural Resources	There would be no adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings.	The potential effects to historic properties would be the same as described for Alternative 1.	The potential effects to historic properties would be the same as described for Alternative 1.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during construction and the disposal of road material debris and other solid waste generated during construction activities at local landfills. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities.	The potential impacts on infrastructure and transportation would be similar to those described for Alternative 1. However, less road material construction debris would be generated and transported to local landfills.	The potential impacts on infrastructure and transportation would be similar to those described for Alternative 1. However, less road material construction debris would be generated and transported to local landfills.	There would be no impacts on infrastructure.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. There would be no impacts on ERP sites. No impacts from toxic substances.	Impacts would be the same as those described for Alternative 1.	Impacts would be the same as those described for Alternative 1.	There would be no impacts on hazardous materials, hazardous wastes, ERP sites, or toxic substances.
Socioeconomics – Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	Impacts on socioeconomics would be the same as Alternative 1.	Impacts on socioeconomics would be the same as Alternative 1.	There would be no impacts on socioeconomics.
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.	There would be no increased health and safety risk and no impacts on health and safety.

dBA – A-weighted decibel; **ERP** – Environmental Restoration Program; **AFB** –Air Force Base; **NRHP** – National Register of Historic Places; **CWA** – Clean Water Act; **GDNR** Georgia Department of Natural Resources; **USFWS** – US Fish and Wildlife Service; **DoD** - Department of Defense; **OSHA** – Occupational Safety and Health Administration

Project 9: Boundary Fence Repair

Resource	Alternative 1	Alternative 2	Alternative 3	No Action Alternative
Land Use	Long-term, minor, beneficial impact on land use by creating a clear line-of-sight along the western boundary fence and fully supporting AT/FP requirements.	Long-term, negligible, beneficial impact on land use with the improved line-of-sight at the western base boundary fence.	Impacts on land use would be similar to Alternative 2, but would provide improved line-of-sight to the base boundary fence relative to Alternative 2.	Long-term, minor, adverse impacts on land use aw the AT/FP requirements for the western base boundary fence would not be met.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed construction activities. One on-base housing area is proximate to the western base boundary fence; five of these residences are located within 200 feet of the proposed construction corridor and could experience temporary noise levels as high as 80 dBA DNL during construction. However, these impacts would be short term (i.e., less than one month of construction proximate to the housing area), only occur to on-base housing, would occur during daytime hours, and would cease after the completion of vegetation removal and driving lane construction. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities.	Impacts from noise would be similar to those described for Alternative 1. Noise impacts would be limited to aboveground woody vegetation removal.	Impacts from noise would be similar to those described for Alternative 1. Noise impacts would be limited to aboveground woody vegetation removal.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, and worker commutes.	Temporary, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, and worker commutes. Construction emissions would be less than those under Alternative 1.	Temporary, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, and worker commutes. Construction emissions would be less than those under Alternative 1 and similar to those under Alternative 2.	There would be no impacts on air quality.
Soils	Short-term and long-term minor adverse impacts on 3.40 acres of soils from soil disturbance during construction activities and an increase in impermeable surfaces indirectly causing soil erosion following construction. Erosion and sediment control BMPs would be implemented to reduce impacts on soils.	Short-term, negligible, adverse impacts on soils from aboveground woody vegetation removal. There would be some very minor soil disturbance during vegetation removal, but disturbed areas would rapidly revegetate with herbaceous plants after removal activities.	Impacts on soils would be the same as Alternative 2.	There would be no impacts on soils.
Water Resources	Long-term, direct, adverse impacts on water resources from filling of 0.26 acre of potentially jurisdictional waters of the US to create a driving lane. To reduce wetland impacts, Moody AFB would obtain a CWA Section 404/401 permit, comply with all permit requirements, and implement any associated mitigation measures. BMPs would be implemented during construction to reduce short-term impacts.	There would be no impacts on water resources.	There would be no impacts on water resources.	There would be no impacts on water resources.
Biological Resources	Long-term, minor, adverse impacts on biological resources from the permanent loss of forested habitats and construction of a driving lane along the western base boundary. There is a possibility that the tricolored bat could utilize trees at Moody AFB for roosting. Therefore, tree removal would not occur	Impacts on biological resources would be similar to those described under Alternative 1. However, there would be very limited soil disturbance and only aboveground woody vegetation would be removed. There would be no effects on federally listed species and with appropriate scheduling of tree removal, the	Impacts on biological resources would be similar to those described under Alternative 1. However, there would be very limited soil disturbance and only aboveground woody vegetation would be removed. There would be no effects on federally listed species and with appropriate scheduling of tree removal, the	There would be no impacts on biological resources.

Resource	Alternative 1	Alternative 2	Alternative 3	No Action Alternative
	from 1 May to 15 July, to avoid the tricolored bat pup season. With the seasonal restrictions on tree removal activities, Project 9, Alternative 1, would not jeopardize the continued existence of the tricolored bat. There is marginally suitable habitat for the Suwannee alligator snapping turtle in Beatty Branch but its occurrence in the project area would be highly unlikely, especially adjacent to the Moody AFB boundary fence. Noise and construction equipment movement would further deter any Suwannee alligator snapping turtles from being present during construction. BMPs would be used to ensure construction activities do not substantially increase water turbidity. Therefore, Project 9, Alternative 1 may affect but is not likely to adversely affect the Suwanee alligator snapping turtle.	removal of trees would not jeopardize the continued existence of the tricolored bat.	removal of trees would not jeopardize the continued existence of the tricolored bat.	
Cultural Resources	There would be no adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings.	The potential effects to historic properties would be the same as described for Project 9, Alternative 1.	The potential effects to historic properties would be the same as described for Project 9, Alternative 1.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during construction. Trees removed from the boundary fence line would be process off-site and used for mulch or lumber. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities.	The potential impacts on infrastructure and transportation would be similar to those described for Alternative 1. However, without the construction of a driving lane and removal of half as much woody vegetation, the length of construction activities and associated impacts on the base transportation network would be shorter.	The potential impacts on infrastructure and transportation would be similar to those described for Alternative 1. However, without the construction of a driving lane, the length of construction activities and associated impacts on the base transportation network would be shorter.	There would be no impacts on infrastructure or transportation.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. ERP site SS-39 overlaps with the proposed project area; however, contaminated groundwater would be avoided, or a construction waiver granted. No impacts from toxic substances.	Impacts would be similar to those described for Alternative 1. However, the volume of hazardous materials used and hazardous waste potentially generated would be less.	Impacts would be similar to those described for Alternative 1. However, the volume of hazardous materials used and hazardous waste potentially generated would be less.	There would be no impacts on hazardous materials, hazardous wastes, ERP sites, or toxic substances.
Socioeconomics – Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	Impacts on socioeconomics would be the same as Alternative 1.	Impacts on socioeconomics would be the same as Alternative 1.	There would be no impacts on socioeconomics.
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	Impacts would be the same as Alternative 1.	Impacts would be the same as Alternative 1.	There would be no increased health and safety risk and no impacts on health and safety.

AT/FP – antiterrorism/force protection; **dBA** – A-weighted decibel; **DNL** – day-night average sound level; **ERP** – Environmental Restoration Program; **CWA** – Clean Water Act; **AFB** –Air Force Base; **BMP**– best management practice; **NRHP** – National Register of Historic Places; **DoD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration

Project 10: Building Demolition

Resource	Alternative 1	No Action Alternative
Land Use	Long-term, negligible, beneficial impacts with the demolition of 11 buildings reducing the long-term maintenance and management costs of underutilized facilities.	There would be no impacts on land use.
Noise	Temporary, minor adverse, impacts as a result of noise from the proposed demolition activities. At approximately 500 feet from the construction activities, the predicted maximum noise levels would drop below 65 dBA. Noise from construction vehicles would increase on roadways during construction but would cease at the end of those activities. No sensitive noise receptors would be impacted.	There would be no change in the noise environment at Moody AFB.
Air Quality and Greenhouse Gases	Temporary, minor, adverse impacts on air quality from anticipated increases in temporary construction emissions associated with fugitive dust from construction activities, operation of diesel-fuel construction equipment and vehicles hauling materials, and worker commutes. Long-term negligible beneficial impacts from a net decrease in heated space after the demolition of 11 buildings.	There would be no impacts on air quality.
Soils	Short-term minor adverse impacts on 0.2 acre of soils from soil disturbance during demolition activities. Erosion and sediment control BMPs would be implemented during demolition to reduce impacts on soils. There would be a reduction in impermeable surfaces following demolition providing a long-term, negligible beneficial impact on soils through reduced stormwater runoff and erosion.	There would be no impacts on soils.
Water Resources	There would be no substantial impacts on water resources as the demolition and removal of 11 buildings would decrease the impermeable surface area at Moody AFB in the long term. BMPs would be implemented during demolition activities to reduce constructed-related impacts on water quality.	There would be no impacts on soils.
Biological Resources	Short-term, negligible, adverse impacts on biological resources from noise from construction equipment and equipment movement. No breeding habitat for any species would be lost due to buildings demolition. The demolition of 11 buildings at Moody AFB would have no effect on any listed species. Tricolored bats do not typically utilize buildings for roosting in Tricolored Bat Year-Round Active Zone 2, which includes Moody AFB. A qualified biologist would inspect buildings for the presence of tricolored bat prior to demolition. Therefore, the demolition of 11 buildings at Moody AFB would have no effect on the tricolored bat.	There would be no impacts on biological resources.
Cultural Resources	There would be no adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings. Buildings 153, 200, 656, 707, 720, 760, 762, 763, 798, 961, and 1145 would be demolished. Except for Building 961, none are presently 50 years of age and will not be 50 years of age prior to the completion of the project. These buildings do not require evaluation at this time and would not be affected by the project. Building 961 was constructed in 1963 and was not identified as a historic property and, therefore, is not eligible for the NRHP.	There would be no impacts on cultural resources.
Infrastructure	Short-term, negligible, adverse impacts on transportation and utilities from potential short-term utility interruptions during demolition and the disposal of debris and other solid waste generated during construction activities at local landfills. There would be increased vehicle traffic at the Moody AFB gates during construction activities and would cease at the end of construction activities.	There would be no impacts on infrastructure and transportation.
Hazardous Materials and Wastes, ERP, and Toxic Substances	Short-term, negligible, adverse impacts on hazardous materials and wastes during construction. All Moody AFB plans for proper handling and disposal of hazardous materials and wastes would be followed. ERP sites SS-24 and SS-38 overlap with the proposed project area; however, contaminated groundwater would be avoided, or a construction waiver granted. There is the potential for short-term, minor, adverse impacts from ACM encountered during the demolition of Buildings 707, 760, 763, and 961, and LBP during the demolition of Building 961. However, ACM and LBP sampling would be conducted prior to demolition activities, and if determined to be present, ACM and LBP would be properly handled and disposed of in accordance with federal, state, and local laws during demolition activities.	There would be no impacts on hazardous materials, hazardous wastes, ERP sites, or toxic substances.
Socioeconomics – Income and Employment	Short-term, minor beneficial impact on socioeconomics from increased expenditures during construction activities.	There would be no impacts on socioeconomics.

Resource	Alternative 1	No Action Alternative
Health and Safety	Short-term, negligible, adverse impacts on health and safety from increased risks associated with construction activities. However, construction personnel would follow federal and state safety regulations and DoD and OSHA safety standards.	There would be no increased health and safety risk and no impacts on health and safety.

dBA – A-weighted decibel; **ERP** – Environmental Restoration Program; **AFB** –Air Force Base; **NRHP** – National Register of Historic Places; **ACM** – asbestos-containing material; **LBP** – lead-based paint; **DoD** – Department of Defense; **OSHA** – Occupational Safety and Health Administration

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the environment potentially affected by the Proposed Action and presents an analysis of potential environmental consequences of the identified alternatives for the implementation of the Proposed Action. The NEPA requires that the analysis address those areas and the components of the environment with the potential to be affected; locations and resources with no potential to be affected need not be analyzed in detail. The existing conditions of each relevant environmental resource are described to give the public and agency decision makers a meaningful point from which to compare potential future environmental, social, and economic effects.

The criteria for evaluating impacts and assumptions for the analyses are presented for each resource area. Evaluation criteria for potential impacts were obtained from standard criteria; federal, state, or local agency guidelines and requirements; and/or legislative criteria. Impacts may be direct or indirect and are described in terms of type and degree, which is consistent with NEPA regulations. “Direct effects” are caused by an action and occur at the same time and place as the action. “Indirect effects” are caused by the action and occur later in time or are farther removed from the place of impact but are reasonably foreseeable. “Cumulative effects” result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. “Beneficial effects” cause a positive change in the condition or appearance of the resource, or a change that moves the resource toward a desired condition. “Adverse effects: cause a change that moves the resource away from a desired condition, or detracts from its appearance or condition. The definitions of all resources are provided in **Appendix C**. The estimated total areas of disturbance for each proposed project alternative used in evaluating impacts are provided in **Table 3-1.**

3.1 Environmental Resource Areas Not Carried Forward for Detailed Analysis

It was determined that the Proposed Action would not have the potential for direct, indirect, or cumulative impacts associated with the proposed demolition and construction of facilities at Moody AFB on the following resource areas. Therefore, these have not been carried forward for detailed analysis in this EA.

Airspace Management. There would be no changes or modifications to airspace, flight activities, or aircraft training activities as a result of the Proposed Action. The Proposed Action would not change the flight patterns for aircraft at Moody AFB or in the special use airspace used for training activities. There would be no impacts on airspace management as a result of the Proposed Action.

Geology and Topography. The Proposed Action would not change or be impacted by the geology and topography at Moody AFB. All proposed infrastructure construction and modernization projects at Moody AFB would potentially disturb surface soils through grading, contouring, and construction. Soils are analyzed in **Section 3.7.** The underlying geology would not be disturbed, and the topography of Moody AFB would not be altered. Therefore, there would be no impacts on geology and topography as a result of the Proposed Action.

Table 3-1. Estimated Total Area of Impacts for Each Proposed Project Alternative

Proposed Project	Proposed Project Alternative	Estimated Total Area of Disturbance (acre)
Project 1. Guardian Angel Facility Construction and Renovation	Alternative 1. Guardian Angel facility Construction and renovation North Site	2.93
	Alternative 2. Guardian Angel facility Construction and renovation South Site	3.51
Project 2. Aircraft Fire Training Facility Repairs and Construction	Alternative 1. Aircraft Fire Training Facility Improvements with Truck Driving Training	9.87
	Alternative 2. Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad	6.87
Project 3. Gate Overwatch Position Construction	Alternative 1. Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates	0.12
Project 4. Aerospace Ground Equipment Facility Construction and Demolition	Alternative 2. Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage	2.36
	Alternative 2. Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space	1.99
Project 5. Burma Road Realignment	Alternative 1. Burma Road Realignment	7.63
Project 6. 38th Rescue Squadron Parking Lot Construction	Alternative 1. 38th Rescue Squadron Parking Lot Construction	0.48
Project 7. Airfield Stormwater Repair and Replacement	Alternative 1. Airfield Stormwater Repair and Replacement	0.33
Project 8. Mission Lake Water Barrier and Stone Road Repairs	Alternative 1. Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders	0.83
	Alternative 2. Mission Lake Water Barrier and Stone Road Repairs – North Shoulder	0.69
	Alternative 3. Repair Mission Lake Water Barrier and Realign Stone Road	3.70
Project 9. Boundary Fence Repair	Alternative 1. Boundary Fence Repair with Driving Lane	3.40
	Alternative 2. Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence	1.70 (aboveground vegetation only)
	Alternative 3. Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence	3.40 (aboveground vegetation only)
Project 10. Buildings Demolition	Alternative 1. Demolish Eleven Buildings	0.20

Socioeconomics – Housing and Education. There would be no change in the number of personnel assigned to Moody AFB as a result of the Proposed Action. Therefore, there would be no impacts on housing or school enrollment because of the proposed project. However, other aspects of socioeconomics, which includes income and employment, are analyzed in **Section 3.13.**

3.2 Analyzed Resources and Regions of Influence

The expected geographic scope of potential environmental consequences is referred to as the region of influence (ROI). The ROI boundaries vary depending on the nature of each resource (**Table 3-2**). For example, the ROI for some resources, such as air quality, extends over a large jurisdiction unique to that resource.

Table 3-2. Region of Influence for the Proposed Action by Resource

Resource	Region of Influence
Land Use	Moody AFB
Noise	Moody AFB and Proximate Off-Base Areas
Air Quality and Greenhouse Gases	Southwest Georgia Intrastate Air Quality Control Region
Soils	Moody AFB
Water Resources	Moody AFB and Proximate Off-Base Areas
Biological Resources	Moody AFB
Cultural Resources	A 100-Foot Buffer Surrounding the Proposed 10 Facility Projects and Implementing Alternatives
Infrastructure	Moody AFB
Hazardous Materials and Wastes, ERP, and Toxic Substances	Moody AFB
Socioeconomics – Income and Employment	Lowndes and Lanier Counties, Georgia
Health and Safety	Moody AFB

AFB – Air Force Base; **ERP** – Environmental Restoration Program

3.3 Reasonably Foreseeable Future Actions

Table 3-3 provides a list of the reasonably foreseeable future actions that could interact with the Proposed Action and were considered when evaluating potential cumulative impacts of the action alternatives. No reasonably foreseeable future off-base actions proximate to Moody AFB were identified.

Table 3-3. Reasonably Foreseeable Future Actions

Project	Project Summary	Anticipated Implementation Date	Relationship to Proposed Action
Moody Air Force Base Future Actions			
F-35A Beddown	Beddown, operate, and construct associated infrastructure for two squadrons of F-35A aircraft to replace the existing A-10 aircraft.	2029 – 2030	Noise, air quality, health and safety, water resources, infrastructure, biological resources, earth resources
Creation of an 820th BDG Campus	Four 14,617 SF squadron buildings, one 6,751 SF armory; and four warehouses would be constructed. The campus would utilize approximately 36 acres.	2030	Noise, water resources, infrastructure, biological resources, earth resources
Make Interior Renovations and Repairs to Building 207	Project is to renovate a portion of the building for a Consolidated Violence Prevention Office and to provide a Childcare Lending Library for the Child Development Center.	2027	Noise, infrastructure
Make Interior Renovations and Repairs to Building 324 (Dormitory)	Project is to replace HVAC and ducts, along with electrical, plumbing, and fire suppression systems.	2025	Noise, infrastructure
Construct Parking at A-10 Area, Main Base	Project is to provide parking for privately owned vehicles that will meet AT/FP standoff requirements of UFC 4-101- 01, DoD Minimum Antiterrorism Standards for Buildings, for maintenance and support personnel in the A-10 area.	2029	Noise, water resources, infrastructure, biological resources, earth resources
Construct Additional Parking at the Golf Course	Project is to provide needed additional parking for golf course patrons, including patrons of the golf course, pro shop or snack bar.	2030	Noise, water resources, infrastructure, biological resources, earth resources
Construct Jogging Trail along Stone Road, Davidson Road Gate/Stone	Project is to construct a trail along the east side of Stone Road to reduce the number	2030	Noise, water resources, infrastructure,

Project	Project Summary	Anticipated Implementation Date	Relationship to Proposed Action
Road Intersection to Burma Road Traffic Circle	of traffic crossings and improve user safety.		biological resources, earth resources
Military Working Dog Kennels	Project is to demolish the existing Building 1708 kennels for the 23 SFS and 820 COS MWDs and build a new facility on the same footprint with an addition to the west side.	2029	Noise, Infrastructure
23 SFS Squadron Operations Building	Project is to build a new Squadron Operations facility for the 23 SFS north of the MWD Kennels.	2029	Noise, infrastructure
Demolish Building 617	Project is to demolish building once the new 23 SFS facility is built to minimize maintenance costs and free up valuable space on the flightline for future operations.	2024	Noise

820th BDG – 820th Base Defense Group; **SF** square feet; **HVAC** – heating, ventilation, and air conditioning; **AT/FP** – antiterrorism/force protection; **UFC** – Unified Facilities Criteria; **DoD** – Department of Defense; **EO** – Executive Order; **MWD** – Military Working Dog; **SFS** – Security Forces Squadron; **COS** – Combat Operations Squadron

3.4 Land Use

See **Appendix C-1** for the definition of the resource.

3.4.1 Affected Environment

Moody AFB includes the Main Base Administrative Area (Main Base), the Grand Bay Range, and the Grassy Pond Recreational Annex. All proposed construction, demolition, and modernization projects would occur on Main Base. Land uses for each of the proposed projects composing the Proposed Action are provided in **Table 3-4** and shown in **Figure 3-1.**

Table 3-4. Land Use Category at the Proposed Action Project Areas

Land Use Category	Proposed Action Project	Area (acres)
Administration	Project 1	1.39
	Project 3	0.83
	Project 9	0.46
	Project 10	0.08
Aircraft Operations & Maintenance	Project 1	1.46
	Project 2	6.25
	Project 4	0.65
	Project 5	3.30
	Project 7	0.25
	Project 9	0.78
	Project 10	0.10
Airfield	Project 10	0.00
Community – Commercial	Project 1	0.12
Community Service	Project 2	2.20
	Project 3	1.05
	Project 9	0.42
	Project 10	0.01
Housing	Project 10	0.15
Industrial	Project 2	4.05
	Project 3	0.19
	Project 4	0.01
	Project 5	0.16
	Project 9	0.21
	Project 10	0.01
Open Space	Project 3	0.34
	Project 9	1.72
	Project 10	0.01
Outdoor Recreation	Project 5	1.13
	Project 6	3.16
	Project 7	0.04
	Project 8	1.10
Water	Project 8	0.32

3.4.2 Environmental Consequences

Potential impacts on land use are based on the level of land use sensitivity in areas potentially affected by the Proposed Action as well as compatibility of those actions with existing conditions. In general, a land use impact would be adverse if it met one of the following criteria:

- Is inconsistent or noncompliant with existing land use plans or policies.
- Precludes the viability of existing land use.
- Precludes continued use or occupation of an area.
- Is incompatible with adjacent land use to the extent that public health or safety is threatened.
- Conflicts with planning criteria established to ensure the safety and protection of human life and property.

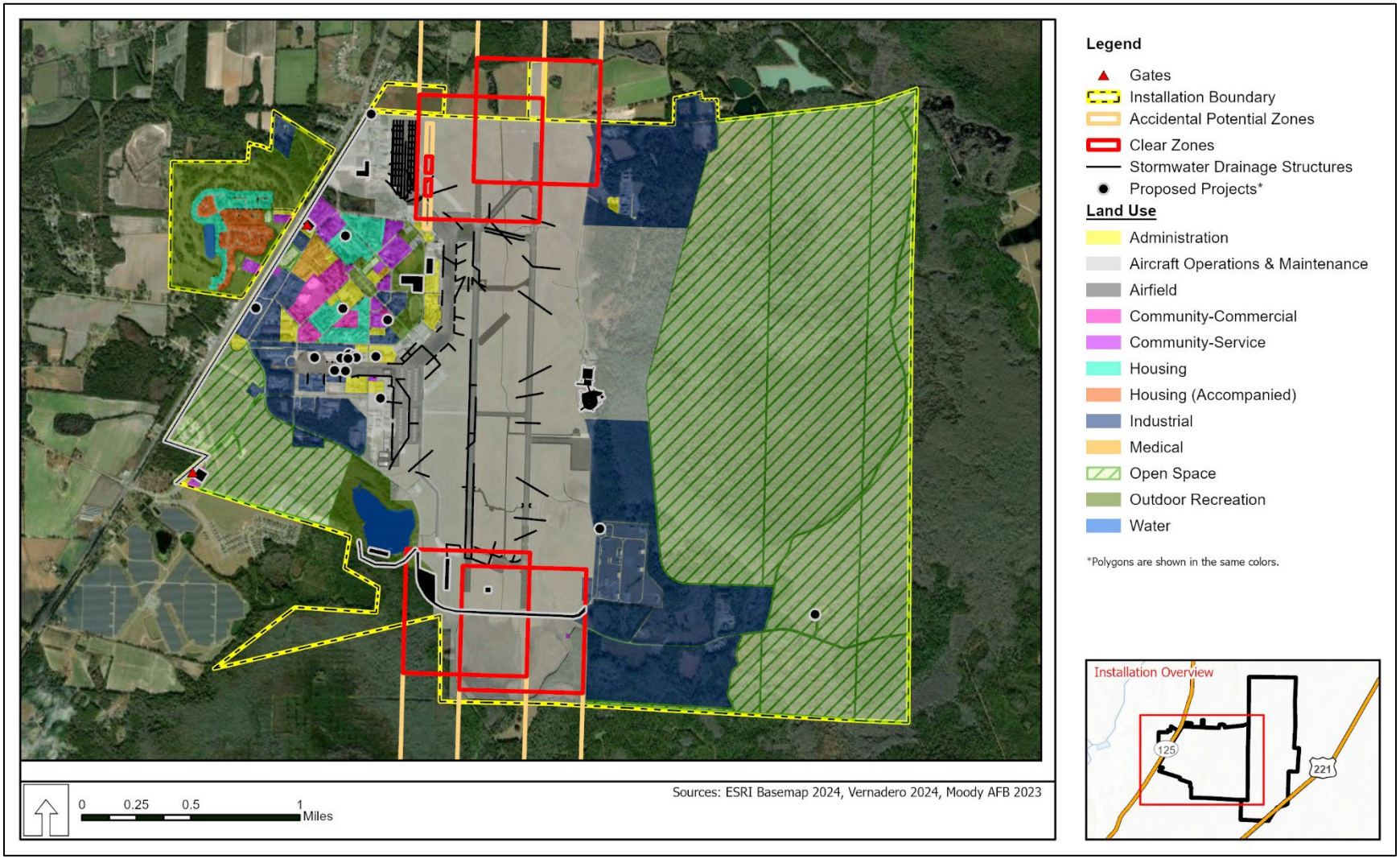


Figure 3-1. Land Use Categories at Moody Air Force Base Main Base

None of the proposed projects would occur off-base and therefore would not impact off-base land use planning or zoning requirements by Lowndes and Lanier counties. Under the Proposed Action, there would be no change in land ownership or land use categories. None of the proposed projects would alter the Moody AFB noise contours or be incompatible with the land use restrictions such as structure height limitations, noise exposure, or CZ development restrictions (Moody AFB 2015a).

3.4.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

The construction of a new squadron operations facility, additional pavement and parking, additions to Buildings 663 and 556, and renovation of buildings would have a long-term negligible, beneficial impact on land use at Moody AFB. The proposed project would occur entirely on Moody AFB, consolidate mission functions, and be within areas designated as Administration, Aircraft Operations and Maintenance, and Community – Commercial designated land uses. The proposed project would be compatible with the Moody AFB Installation Development Plan (IDP) and designated land uses. Flightline constraints for Building 663, including a 41-foot height limitation, would be supported with the proposed building addition.

3.4.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

Impacts on land use would be the same as those described for Project 1, Alternative 2. The construction of a new squadron operations facility, additional pavement and parking, additions to Buildings 663 and 556, and renovation of buildings would have a long-term, negligible beneficial impacts on lands at Moody AFB.

3.4.2.3 Project 1, No Action Alternative

Under the No Action Alternative, there would be no construction of a new squadron operations facility, additional pavement and parking, additions to Buildings 663 and 556, or renovation of existing buildings. Therefore, there would be no impacts on land use at Moody AFB.

3.4.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

Impacts of the AFTF improvement with a truck driving training pad would have long-term, negligible beneficial impacts on land use. The proposed AFTF improvements would occur entirely on Moody AFB and within areas designated as Aircraft Operations and Maintenance, Community Service, and Industrial designated land uses. The proposed project would be compatible with the Moody AFB IDP and designated land uses. Further, truck driver training, which is currently conducted at temporary locations, would be consolidated on the proposed training pad in accordance with the Career Field Education and Training Plan, and the propane tank would be relocated beyond the boundary of an existing Q-D arc.

3.4.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

AFTF improvements without a truck driving training pad would have long-term, minor adverse impacts on land use. Similar to Project 2, Alternative 2, the proposed AFTF improvements would occur entirely on Moody AFB and within appropriate designated land uses. However, truck driver training would continue to be conducted at temporary locations, would not meet the requirements of the Career Field Education and Training Plan, and temporary locations on Moody AFB for truck driver training would not necessarily be compatible with land use designations at those locations.

3.4.2.6 Project 2, No Action Alternative

Under the No Action Alternative, there would be no AFTF improvements and no construction of a truck driver training pad. Therefore, there would be long-term, minor adverse impacts on land use at Moody AFB. The AFTF propane tank would continue to be located within the boundary of an existing Q-D arc, and truck driver training would occur at temporary locations on Moody AFB that would not necessarily be compatible with existing land use designations.

3.4.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

The proposed construction of two gate overwatch positions at the Davidson Road and Mitchell Boulevard Gates would have long-term, negligible, beneficial impacts on land use. The proposed overwatch position at the Davidson Road Gate would be within an area with an Administration land use designation and the proposed overwatch position at the Mitchell Boulevard Gate would be within an area with a Community Service land use designation. Therefore, the proposed overwatch facilities would be compatible with the existing land use designations, would meet the planning requirements of the Moody AFB IDP, and would support the current AT/FP additional position for security personnel requirements.

3.4.2.8 Project 3, No Action Alternative

There would be no construction of overwatch positions at the Davidson Road and Mitchell Boulevard Gates. Therefore, the Davidson Road and Mitchell Boulevard Gates would continue to not meet the current AT/FP requirements for additional positions for security personnel.

3.4.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

The demolition of Buildings 732, 752, 755, and 756 and construction of a new AGE facility, consolidating AGE warehouse, administration, and storage space and operations, would have long-term, negligible, beneficial impacts on land use. The proposed AGE facility consolidation would be within areas designated for Aircraft Operations and Maintenance and Industrial land uses, which would be compatible with the proposed AGE facility construction and operations.

Further, Project 4, Alternative 1, would consolidate AGE functions that are currently in multiple locations on Moody AFB.

3.4.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

The demolition of Buildings 732 and 756, renovations of Buildings 755 and 752, and construction of construction of covered storage, consolidating AGE warehouse, administration, and storage space and operations, would have long-term, negligible, beneficial impacts on land use. Similar to Project 4, Alternative 2, the proposed AGE facility consolidation would be within areas designated for Aircraft Operations and Maintenance and Industrial land uses, which would be compatible with the proposed AGE facility construction and operations and would consolidate AGE functions that are currently in multiple locations on Moody AFB.

3.4.2.11 Project 4, No Action Alternative

Under the No Action Alternative, there would not be building demolition and construction in support of AGE function consolidation. AGE functions would continue to occur at locations across Moody AFB and without adequate warehouse and office space to support the AGE requirements. Therefore, there would be long-term, minor, adverse impacts on land use under the No Action Alternative.

3.4.2.12 Project 5, Alternative 1: Burma Road Realignment

The realignment of Burma Road would have long-term, minor, beneficial impacts on land use. The proposed realignment of Burma Road would occur in areas designated with Aircraft Operations and Maintenance, Industrial, and Outdoor Recreation land uses. Although the realignment of Burma Road would result in the loss of 1.13 acres of land designated for Outdoor Recreation, the realignment would move Burma Road out of the graded portion of the CZ and remove trees adjacent to Burma Road and within the CZ; these trees do not meet UFC 3-260-1 requirements. Further, the realigned base boundary fence along Burma Road would be constructed to meet AT/FP standards.

3.4.2.13 Project 5, No Action Alternative

Burma Road would not be realigned and trees within the CZ would not be removed. An airfield waiver from the land use compatibility guidelines of the CZ would continue to be required. Further, the boundary fence would not meet current AT/FP standards. Therefore, the No Action Alternative would have long-term, minor, adverse impacts on land use.

3.4.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

The proposed construction of a new parking lot to support the 38 RQS operations in Building 663 would have long-term, negligible, adverse, impacts on land use. The proposed parking would be sited in accordance with the Moody AFB IDP but would replace a fitness track in an area designated for Outdoor Recreation. Although there are adequate recreational facilities on

Moody AFB, the parking area would permanently replace a recreational facility in an area on base designated for Outdoor Recreation land use.

3.4.2.15 Project 6, No Action Alternative

There would be no impacts on land use as a new parking lot to support the 38 RQS operations would not be constructed.

3.4.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

The repair and replacement of failing belowground stormwater drainage structures, and the removal and replacement of two aboveground concrete stormwater outfall structures, would have long-term, minor, beneficial impacts on land use. The replacement of belowground drainage structures would primarily occur in areas designated as Aircraft Operations and Maintenance land use and would be compatible with continuing to provide adequate stormwater drainage for the airfield and nearby flightline facilities. Further, removing the two aboveground concrete structures at the south end of the airfield would remove obstructions from the CZ.

3.4.2.17 Project 7, No Action Alternative

Aboveground concrete structures would remain in the CZ, requiring an airfield waiver from land use compatibility guidelines in the CZ. Further, there would be continued slumping of surface soils in the airfield area due to belowground stormwater drainage structure failures. The airfield waiver and stormwater structure failures would have long-term, minor, adverse impacts on land use under the No Action Alternative.

3.4.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

The repairs to Stone Road and the Mission Lake water barrier would have no impacts on land use. Impacts on land from the construction activities would be temporary; once the repairs were completed, activities associated with the repair work would cease. The designated land uses at Stone Road and Mission Lake are Outdoor Recreation and Water, and the proposed repairs, would be compatible with these designated land uses.

3.4.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

As described for Project 8, Alternative 1, there would be no impacts on land use from the proposed repairs to the Stone Road shoulder and Mission Lake water barrier. The proposed repairs would be compatible with the designated land uses.

3.4.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

The repair of the Mission Lake water barrier and realignment of Stone Road would have long-term, minor, adverse impacts on land use. Although the repair of the Mission Lake water barrier would be compatible with designated land uses and follows the Moody AFB IDP guidance, the

realignment of Stone Road would permanently pave a portion of an area with an Outdoor Recreation land use designation. Further, the new alignment of Stone Road would bisect the Outdoor Recreation land use polygon located south of Mission Lake and would reduce its overall usability for outdoor recreational purposes.

3.4.2.21 Project 8, No Action Alternative

There would be no impacts on land use under the No Action Alternative. Stone Road shoulders would remain in disrepair and be a safety hazard for vehicles traveling south of Mission Lake. The Mission Lake water barrier would likely continue to deteriorate.

3.4.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

The removal of vegetation along both sides of the boundary fence and construction of a driving lane on the inside of the boundary fence would have a long-term, minor, beneficial impact on land use. The removal of vegetation creating a clear line-of-sight at the western boundary fence as well as constructing a single-lane perimeter dirt road for boundary fence patrols would fully support the AT/FP requirements for the western boundary fence. Areas where vegetation would be removed include Administration, Aircraft Operations and Maintenance, Community Service, Industrial, and Open Space land use designations, all of which would be compatible with the vegetation removal and dirt access road along the perimeter boundary fence.

3.4.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

The removal of vegetation along the base side of the western base boundary fence would have a long-term, negligible, beneficial impact on land use. The removal of vegetation creating an improved line-of-sight at the boundary fence would partially support the Moody AFB AT/FP requirements for the western boundary fence. Areas where vegetation would be removed include Administration, Aircraft Operations and Maintenance, Community Service, Industrial, and Open Space land use designations, all of which would be compatible with the vegetation removal.

3.4.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

Impacts on land use would be similar to those described for Project 9, Alternative 2, but would provide improved line-of-sight to the base boundary fence relative to Alternative 2. The removal of vegetation along the base side of the boundary fence would have a long-term negligible beneficial impact on land use.

3.4.2.25 Project 9, No Action Alternative

There would be long-term, minor, adverse impacts on land use under the No Action Alternative. The AT/FP requirements for the western base boundary fence would not be fully met and both line-of-sight and access would remain restricted along the western base boundary of Moody AFB.

3.4.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

There would be negligible, long-term, beneficial impacts on land use from the demolition of 11 buildings at Moody AFB. The demolition of the buildings would be compatible with the planning guidance in the Moody IDP and the land use designations where the 11 buildings are located: Administration, Aircraft Operations and Maintenance, Airfield, Community Service, Housing, Industrial, and Open Space. Demolition of these underused facilities would reduce maintenance costs and management support.

3.4.2.27 Project 10, No Action Alternative

There would be no impacts on land use under the Project 10, No Action Alternative. There would be no changes in land use by maintaining the 11 buildings in their current locations and configurations.

3.4.2.28 Cumulative Actions and Other Considerations

The proposed projects that compose the Proposed Action would be developed and implemented in accordance with the Moody IDP. Further, all other reasonably foreseeable proposed projects on Moody AFB would also be evaluated by base community planners to ensure that they are compatible with existing and future Moody AFB land uses and land use plans. Therefore, the consistency with land uses and land use plans by proposed projects at Moody AFB would have long-term, minor, beneficial cumulative impacts on land use.

The Moody AFB Air Installation Compatibility Use Zones (Moody AFB 2015a) and Lowndes County land use planning efforts ensure that most development projects proximate to Moody AFB remain compatible with DAF operations and functions.

3.5 Noise

See **Appendix C-2** for the definition of the resource.

3.5.1 Affected Environment

The noise associated with Moody AFB is dominated by aircraft operations, which include the A-10C and HC-130 fixed-wing aircraft and HH-60 helicopters. Transient aircraft that use the airfield include aircraft such as C-17, KC-10, F-22, F-16, executive jets, helicopters, and various other military aircraft.

Figure 3-2 shows the baseline day-night average sound level (DNL) noise contours for Moody AFB and the Grand Bay Range plotted in 5 decibel (dB) increments, ranging from 65 to 85 A-weighted decibels (dBA) DNL. The noise contours depict operational conditions as outlined in the 2015 Air Installation Compatible Use Zone Study for Moody AFB (Moody AFB 2015a), and there have been no substantial changes in operations or mission since they were developed. The existing 65 dBA DNL noise contour extends approximately 2 miles from both ends of the primary runways at Moody AFB and 1 mile both north and south of the Grand Bay Range.

Additionally, ground training areas on Moody AFB generate small-arms noise on Main Base. **Figure 3-3** shows the 87 and 104 peak decibel (dBP) noise contours for ground training activities on Moody AFB Main Base. Noise-sensitive land uses such as residences, hospitals, and schools are normally not recommended in areas exposed to greater than 87 dBP, and strongly discouraged in areas exposed to greater than 104 dBP (US Army 2007; Hede 1982).

3.5.2 Environmental Consequences

Factors considered in determining whether implementing an alternative may have a significant adverse noise impact include the extent or degree to which implementation of an alternative would expose people to noise levels in excess of applicable standards or at levels that may be harmful. All activities associated with the Proposed Action would generate relatively continuous noise throughout demolition, construction, and renovation activities and would then cease after these facility modification activities would be completed. All facilities that would house personnel and located on Moody AFB within greater than 65 dBA noise contours would be designed and constructed with considerations towards recommended noise level reductions as described by the Moody AFB Air Installation Compatible Use Zone Study (Moody AFB 2015a).

3.5.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

The construction of a new squadron operations facility, additional pavement and parking, additions to Buildings 663 and 556, and renovation of buildings would temporarily increase ambient noise levels within the Proposed Action area and in nearby areas during project implementation activities. Relatively continuous noise would be generated during construction. These continuous noise levels would be generated by equipment that has source levels (at 3.28 feet) ranging from approximately 70 to 110 dBA. Typical noise levels of heavy construction equipment are presented in **Table 3-5.** Sound levels decrease with greater distances from a sound source, which is called the attenuation rate. Attenuation rates are highly dependent on the terrain over which the sound is passing and the characteristics of the medium in which it is propagating. The rate used in these estimates represents a decrease in sound level of 4.5 dB per doubling of distance. This average rate has been shown to be an accurate estimate from field data on grassy surfaces (Harris 1998).

Table 3-5. Noise Levels of Heavy Construction Equipment

Construction Category and Equipment	Predicted Noise Level at 50 Feet (dBA)
Front End Loader	79-80
Excavator	81-85
Crane	75–87
Dump Truck	76-84

Source: US Department of Transportation 2017
dBA – A-weighted decibel

There would be temporary, minor adverse, impacts as a result of noise from the proposed squadron operations facility construction activities. At a distance of approximately 500 feet from the construction activities, the predicted maximum noise levels would drop below 65 dBA, a noise level that is equivalent to normal conversation or background music. The proposed project site is not near any off-base buildings or structures; noise levels at or below 65 dBA off base within 500 feet of the proposed construction activities would remain on base, further attenuating construction noise to any off-base receptors. Upon completion of construction, noise from these construction activities would cease.

Construction activities would temporarily increase traffic noise to and from the proposed construction location. Additional traffic noise from POVs operated by construction workers and transport of construction equipment would be limited to existing roadways that approach Moody AFB gates and on-base roadways. Traffic noise would be temporary and would cease at the end of construction activities. Noise from the increased traffic in support of the construction activities would not be perceptible and would not contribute to off-base noise increases.

3.5.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

Noise impacts under Project 1, Alternative 2, would be the similar to those described for Project 1, Alternative 1, but would include a slightly larger area for construction activities. However, all construction would occur on Moody AFB, would be temporary in nature, and would not impact any off-base sensitive noise receptors. Traffic noise would be temporary, limited to existing roadways, and would not be perceptible. Upon the completion of building construction and renovation activities, construction noise activities would cease.

3.5.2.3 Project 1, No Action Alternative

Under the No Action Alternative, there would be no construction of a new squadron operations facility, additional pavement and parking, additions to Buildings 663 and 556, and renovation of existing buildings. The noise environment would remain unchanged. Therefore, there would be no impacts from noise.

3.5.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

As described for Project 1, Alternative 1, there would be temporary, minor, adverse impacts as a result of noise from the proposed construction of AFTF improvements and the truck driving training pad. All construction would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise receptors. Traffic noise would be temporary, limited to existing roadways, and would not be perceptible. There would be no changes in the truck driving training operations on base, but instead those operations would be consolidated to the AFTF, and all associated noise from truck driving would be consolidated to the AFTF as well. Aircraft operations and small-arms use during ground training activities would continue to be the predominant noise sources at the AFTF location.

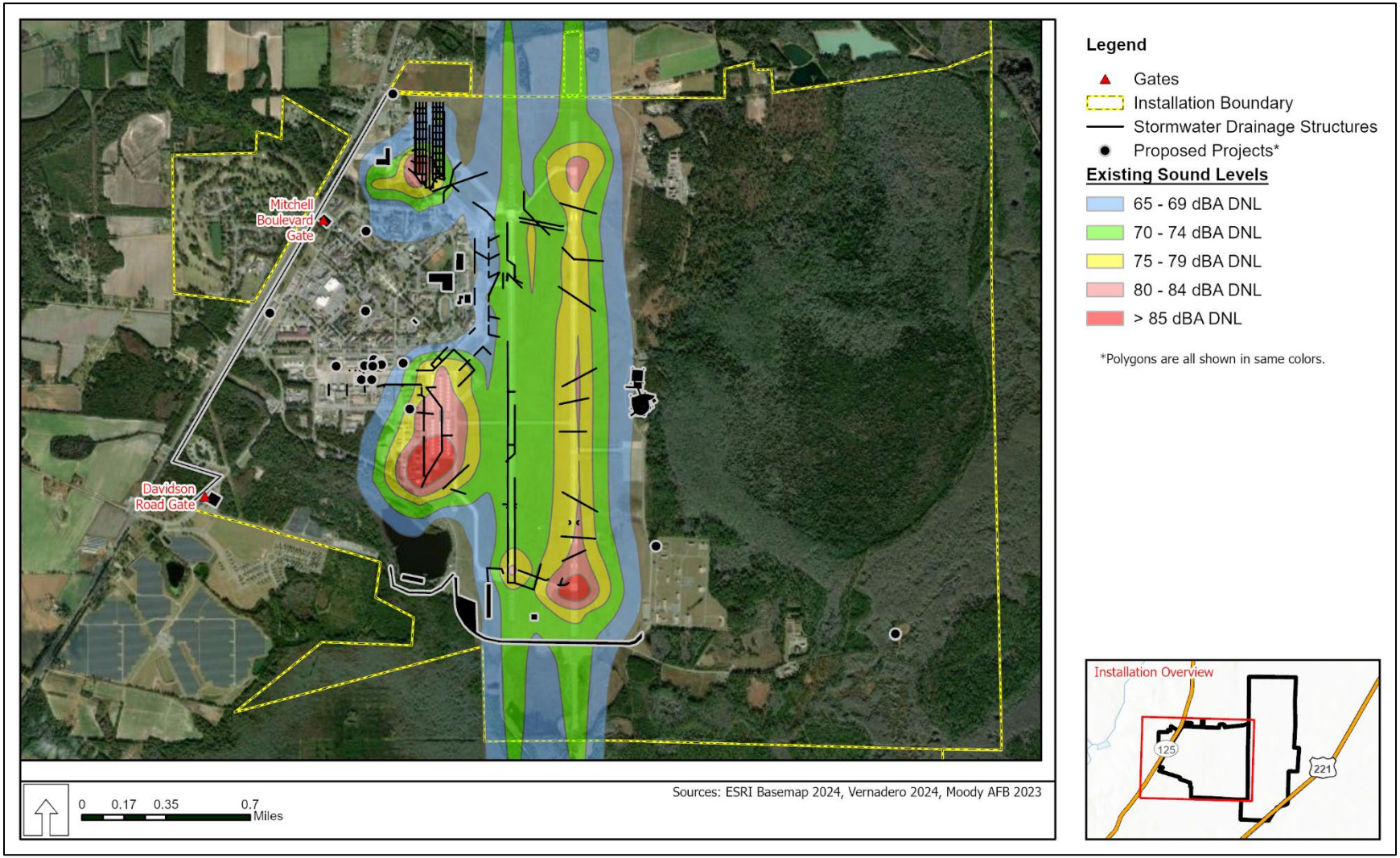


Figure 3-2. Aircraft Noise Contours for Moody Air Force Base Main Base

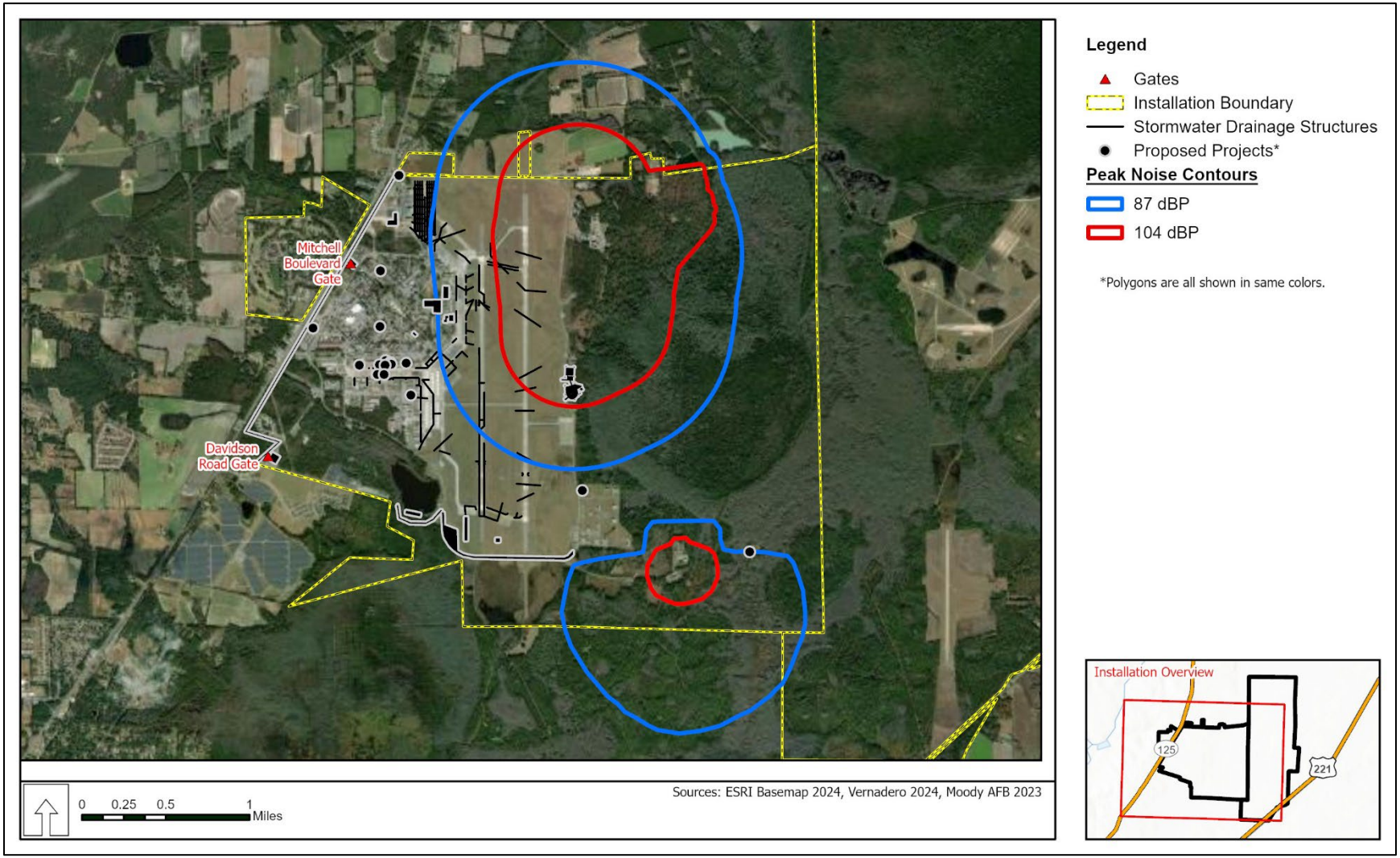


Figure 3-3. Small-Arms Noise Contours at Moody Air Force Base Main Base

3.5.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

Impacts on noise would be similar to those described for Project 1, Alternative 1. However, noise from trucks during truck driving training would continue to be spread out across Moody AFB at various available temporary truck driving training locations.

3.5.2.6 Project 2, No Action Alternative

There would be no impacts on noise under the No Action Alternative. There would be no construction or modification of the AFTF and noise from trucks during driver training would occur at temporary locations throughout the base.

3.5.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

Noise impacts under Project 3, Alternative 1, would be similar to those described for Project 1, Alternative 1. All construction would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise receptors. There is residential housing both on-base and off-base proximate to the Davidson Road Gate. However, all residential housing is greater than 500 feet from the proposed overwatch position construction area and noise from construction activities would not exceed 65 dBA at these residences. Traffic noise would be temporary, limited to existing roadways, and would not be perceptible.

3.5.2.8 Project 3, No Action Alternative

Under the No Action Alternative, there would be no construction of overwatch positions at the Davidson and Mitchell Boulevard gates. The noise environment would remain unchanged. Therefore, there would be no impacts from noise.

3.5.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

Noise impacts under Project 4, Alternative 1, would be similar to those described for Project 1, Alternative 1, but at a different location on Main Base. All construction, demolition, and renovation would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise receptors. Traffic noise would be temporary, limited to existing roadways, and would not be perceptible. Aircraft operations would continue to be the predominant noise source.

3.5.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

Noise impacts under Project 4, Alternative 2, would be the same as those described for Project 4, Alternative 1. All construction, demolition, and renovation would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise

receptors. Traffic noise would be temporary, limited to existing roadways, and would not be perceptible. Aircraft operations would continue to be the predominant noise source.

3.5.2.11 Project 4, No Action Alternative

Under the No Action Alternative, there would be no construction, demolition, and renovation activities to support the AGE functions consolidation. The noise environment would remain unchanged. Therefore, there would be no impacts from noise.

3.5.2.12 Project 5, Alternative 1: Burma Road Realignment

Noise impacts under Project 5, Alternative 1, would be similar to those described for Project 1, Alternative 1. but at a different location on Main Base. All road and fence construction and tree removal would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise receptors. Traffic noise would be temporary, limited to existing roadways, and would not be perceptible. Vehicle operations on Burma Road following realignment would be unchanged.

3.5.2.13 Project 5, No Action Alternative

Under the No Action Alternative, there would be no road and fence construction or tree removal to support the Burma Road realignment. The noise environment would remain unchanged. Therefore, there would be no impacts from noise.

3.5.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

Noise impacts under Project 6, Alternative 1, would be similar to those described for Project 1, Alternative 1, but at a different location on Main Base. The parking lot construction would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise receptors. Construction traffic noise would be temporary, limited to existing roadways, and would not be perceptible. Aircraft operations and small-arms use from ground training activities would continue to be the predominant noise sources.

3.5.2.15 Project 6, No Action Alternative

Under the No Action Alternative, there would be no parking lot construction to support the 38 RQS. The noise environment would remain unchanged. Therefore, there would be no impacts from noise.

3.5.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

Noise impacts under Project 7, Alternative 1, would be similar to those described for Project 1, Alternative 1, but at a different location on Main Base. The stormwater system repairs, and removal of concrete structures would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise receptors. Construction traffic noise would be temporary, limited to existing roadways, and would not be perceptible. Aircraft operations

and small-arms use from ground training activities would continue to be the predominant noise sources.

3.5.2.17 Project 7, No Action Alternative

Under the No Action Alternative, there would be no construction activities associated with stormwater system repairs or removal of the concrete structures south of the airfield. The noise environment would remain unchanged. Therefore, there would be no impacts from noise.

3.5.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

Noise impacts under Project 8, Alternative 1, would be similar to those described for Project 1, Alternative 1, but occur at a different location on Main Base. The Mission Lake water barrier and Stone Road repairs would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise receptors. Construction traffic noise would be temporary, limited to existing roadways, and would not be perceptible.

3.5.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

Noise impacts under Project 8, Alternative 2, would be the same as those described for Project 8, Alternative 1. The Mission Lake water barrier and Stone Road repairs would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise receptors. Construction traffic noise would be temporary, limited to existing roadways, and would not be perceptible.

3.5.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

Noise impacts under Project 8, Alternative 3, would the same as those described for Project 8, Alternative 1. The Mission Lake water barrier and Stone Road repairs would occur within the boundaries of Moody AFB, be temporary in nature, and not impact any off-base sensitive noise receptors. Construction traffic noise would be temporary, limited to existing roadways, and would not be perceptible.

3.5.2.21 Project 8, No Action Alternative

Under the No Action Alternative, there would be no construction activities repairs of the Mission Lake water barrier or Stone Road. The noise environment would remain unchanged. Therefore, there would be no impacts from noise.

3.5.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

Noise impacts under Project 9, Alternative 1, would be similar to those described for Project 1, Alternative 1. The removal of vegetation and construction of driving lane along the base boundary fence would occur within the boundaries of Moody AFB and be temporary in nature.

Construction traffic noise would be temporary, limited to existing roadways, and would not be perceptible.

All off-base residential areas proximate to the western base boundary fence are located west of Bemiss Road, and construction noise would attenuate to less than 65 dBA DNL due to distance from the construction at all off-base residences. Noise from vehicular traffic on Bemiss Road would likely exceed the noise from construction activities along the base boundary fence.

One on-base housing area is located along Chennault Lane and proximate to the western base boundary fence. Five of these residences are located within 200 feet of the proposed construction corridor along the western base boundary fence and could experience temporary noise levels as high as 80 dBA DNL during construction. However, these impacts would be temporary (i.e., less than one month of construction proximate to the housing area), only occur to on-base housing, would occur during daytime hours, and would cease after the completion of vegetation removal and driving lane construction.

3.5.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

Noise impacts under Project 9, Alternative 2, would be similar to those described for Project 9, Alternative 1. The removal of vegetation along the base boundary fence would occur within the boundaries of Moody AFB and be temporary in nature. Construction traffic noise would be temporary, limited to existing roadways, and would not be perceptible. The only residential area that would experience a temporary noise increase includes approximately five residences located along Chennault Lane proximate to the western base boundary fence.

3.5.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

Noise impacts under Project 9, Alternative 1, would be similar to those described for Project 9, Alternative 3. The removal of vegetation along the base boundary fence would occur within the boundaries of Moody AFB and be temporary in nature. Construction traffic noise would be temporary, limited to existing roadways, and would not be perceptible. The only residential area that would experience a temporary noise increase includes approximately five residences located along Chennault Lane proximate to the western base boundary fence.

3.5.2.25 Project 9, No Action Alternative

Under the No Action Alternative, there would be no construction activities associated with vegetation removal and development of a driving lane along the western base boundary fence. The noise environment would remain unchanged. Therefore, there would be no impacts from noise.

3.5.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

Noise impacts under Project 10, Alternative 1, would be similar to those described for Project 1, Alternative 1, but would occur at different locations throughout Main Base. The demolition of 11

buildings would occur within the boundaries of Moody AFB and be temporary in nature. Noise from demolition activities would not impact any off-base sensitive noise receptors. Construction traffic noise would be temporary, limited to existing roadways, and would not be perceptible.

3.5.2.27 Project 10, No Action Alternative

Under the No Action Alternative, there would be no construction activities associated with vegetation removal and development of a driving lane along the western base boundary fence. The noise environment would remain unchanged. Therefore, there would be no impacts from noise.

3.5.2.28 Cumulative Actions and Other Considerations

Noise from the demolition, renovation, and construction activities associated with the proposed projects composing the Proposed Action in combination with other proposed construction projects on Moody AFB would have temporary noise impacts that would end when the construction or demolition activities end. There are no sensitive receptors proximate to these proposed construction projects on Moody AFB that would be affected by these temporary increases in the noise environment. On the base, noise levels from all the proposed projects would be similar to or less than the ambient noise levels from aircraft operations and small-arms range use during ground training operations.

The proposed F-35A beddown at Moody AFB has the potential to substantially alter the noise environment on and off Moody AFB. The proposed change from primarily A-10 aircraft operations to primarily F-35A aircraft operations would likely increase noise from aircraft operations during takeoffs and landings. However, under a separate NEPA analysis, DAF would model the anticipated changes to the noise environment from the proposed F-35A operations, would assess the potential impacts from any changes, and recommend measures to reduce noise impacts on sensitive noise receptors, if any.

3.6 Air Quality and Greenhouse Gases

Detailed information on air quality regulations and general conformity is provided in **Appendix C**.

3.6.1 Affected Environment

The regional climate of south-central Georgia, where Moody AFB is located, is classified as humid subtropical and is characterized by hot, humid summers and no distinct dry season (rainfall occurs year round). Summers are hot and muggy with frequent thunderstorms. Winters are mild with precipitation, although frosts are not uncommon. In Valdosta, Georgia (nearest city to Moody AFB), the warmest month in the region is July, with average high and low temperatures of 91.4 degrees Fahrenheit (°F) and 71.1°F, respectively. January is the coldest month, with an average high temperature of 61.9°F and average low temperature of 38.8°F. The wettest month by average precipitation is June, with an average of 8 inches of rain. The driest

months are October through December, with an average of 3.2 inches of precipitation per month (Weatherbase 2024).

Moody AFB, in Lowndes and Lanier counties, Georgia, is located within the Southwest Georgia Intrastate Air Quality Control Region (40 CFR § 81.238), which serves as the ROI for this air quality analysis.

The Georgia Environmental Protection Division (GEPD) Air Protection Branch has adopted the federal National Ambient Air Quality Standards (NAAQS) (**Table 3-6**), thereby requiring the use of the standards within Georgia (Part 1 of Chapter 9 of Title 12 of the Official Code of Georgia Annotated). The GEPD administers the air permit program and is responsible for issuance of permits to construct, modify, or operate stationary air emissions sources. Moody AFB operates under a synthetic minor air permit issued by the GEPD for construction and operation of stationary air emissions sources.

The US Environmental Protection Agency (USEPA) designates areas as having air quality better than (attainment) the NAAQS, worse than (nonattainment) the NAAQS, and unclassifiable (see **Appendix C**). Per the Air Force Civil Engineer Center (AFCEC), both Lowndes and Lanier counties are in attainment for all criteria pollutants. As a result, the General Conformity Rule (see **Appendix C**) does not apply, and a General Conformity Applicability Analysis is not required.

Greenhouse Gases. Like many locations in the country, climate trends within the southeastern US could be adversely affected by greenhouse gases (GHGs). Throughout this region, heat waves are becoming more common, and tropical storms and hurricanes have become more intense. Higher water levels are eroding beaches, submerging lowlands, exacerbating coastal flooding, and increasing the salinity of estuaries and aquifers. Warmer air can also increase the formation of ground-level ozone (O_3), a key component of smog. O_3 aggravates lung diseases such as asthma and increases the risk of premature death from heart or lung disease There is also risk of severe droughts becoming more intense, and this will increase the risk of wildfires. Rising temperatures and the resulting increase in evaporation could accelerate the rate at which soils dry out. Thus, naturally occurring droughts in Georgia could be more severe (USEPA 2016).

GHGs are gases, occurring from natural processes and human activities, that trap heat in the atmosphere. Natural sources of GHGs include land use, such as through deforestation, land clearing for agriculture, and degradation of soils. The largest source of GHGs from human activities in the US is from burning fossil fuels for electricity, heat, and transportation. Combustion of fossil fuels (coal, oil, natural gas) primarily generate three main GHGs: carbon dioxide (CO_2) methane (CH_4), and nitrous oxide (N_2O). These three GHGs alone represent more than 97 percent of the US total GHG emissions (USEPA 2024). The total CO_2 emissions (in million metric tons of energy-related CO_2) generated by Georgia in 2021 was reported to be 124.1. Total state CO_2 emissions include CO_2 emissions from direct fuel use across all sectors, including residential, commercial, industrial, and transportation, as well as primary fuels consumed for electricity generation. In 2022, natural gas accounted for 47 percent of Georgia's

Table 3-6. National Ambient Air Quality Standards

Pollutant	Standard Value[7]		Standard Type
Carbon Monoxide (CO)			
8-hour average	9 ppm	(10 mg/m^3)	Primary
1-hour average	35 ppm	(40 mg/m^3)	Primary
Nitrogen Dioxide (NO_2)			
Annual arithmetic mean	0.053 ppm	(100 µg/m^3)	Primary and Secondary
1-hour average[1]	0.100 ppm	(188 µg/m^3)	Primary
2015 Ozone (O_3)			
8-hour average[2,3]	0.070 ppm	(137 µg/m^3)	Primary and Secondary
2008 Ozone (O_3)			
8-hour average	0.075 ppm	-	Primary and Secondary
1997 Ozone (O_3)			
8-hour average	0.08 ppm	-	Primary and Secondary
Lead (Pb)			
3-month average[4]		0.15 µg/m^3	Primary and Secondary
Particulate ≤10 Micrometers (PM_{10})			
24-hour average[5]		150 µg/m^3	Primary and Secondary
Particulate ≤2.5 Micrometers ($PM_{2.5}$)			
Annual arithmetic mean[5]		9 µg/m^3	Primary
Annual arithmetic mean[5]		15 µg/m^3	Secondary
24-hour average[5]		35 µg/m^3	Primary and Secondary
Sulfur Dioxide (SO_2)			
1-hour average[6]	0.075 ppm	(196 µg/m^3)	Primary
3-hour average[6]	0.5 ppm	(1,300 µg/m^3)	Secondary

Source: US Environmental Protection Agency (USEPA) 2018, 2020
ppm – part(s) per million; **mg/m^3** – milligram(s) per cubic meter; **µg/m^3** – microgram(s) per cubic meter
Notes:

1 In February 2010, the USEPA established a new 1-hour standard for NO_2 at a level of 0.100 ppm, based on the 3-year average of the 98th percentile of the yearly distribution concentration, to supplement the then-existing annual standard.

2 In October 2015, the USEPA revised the level of the 8-hour standard to 0.070 ppm, based on the annual fourth-highest daily maximum concentration, averaged over 3 years; the regulation became effective on 28 December 2015. The previous (2008) standard of 0.075 ppm remains in effect for some areas. A 1-hour standard no longer exists.

3 Annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years.

4. In November 2008, USEPA revised the primary lead standard to 0.15 µg/m^3. USEPA revised the averaging time to a rolling 3-month average.

5 In October 2006, USEPA revised the level of the 24-hour $PM_{2.5}$ standard to 35 µg/m^3 and retained the level of the annual $PM_{2.5}$ standard at 15 µg/m^3. In 2012, USEPA split standards for primary and secondary annual $PM_{2.5}$. All are averaged over 3 years, with the 24-hour average determined at the 98th percentile for the 24-hour standard. USEPA retained the 24-hour primary standard and revoked the annual primary standard for PM_{10}.

6 In 2012, the USEPA retained a secondary 3-hour standard, which is not to be exceeded more than once per year. In June 2010, USEPA established a new 1-hour SO_2 standard at a level of 75 ppb, based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations.

7 Parenthetical value is an approximately equivalent concentration for NO_2, O_3, and SO_2.

total electricity net generation, and nuclear power accounted for 27 percent. Coal accounted for about 13 percent and renewable energy, including hydroelectric power and small-scale solar, accounted for nearly 13 percent (US Energy Information Administration 2021).

GHGs are gases, occurring from natural processes and human activities, that trap heat in the atmosphere. Natural sources of GHGs include land use, such as through deforestation, land clearing for agriculture, and degradation of soils. The largest source of GHGs from human activities in the US is from burning fossil fuels for electricity, heat, and transportation. Combustion of fossil fuels (coal, oil, natural gas) primarily generate three main GHGs: carbon dioxide (CO_2) methane (CH_4), and nitrous oxide (N_2O). These three GHGs alone represent more than 97 percent of the US total GHG emissions (USEPA 2024). The total CO_2 emissions (in million metric tons of energy-related CO_2) generated by Georgia in 2021 was reported to be 124.1. Total state CO_2 emissions include CO_2 emissions from direct fuel use across all sectors, including residential, commercial, industrial, and transportation, as well as primary fuels consumed for electricity generation. In 2022, natural gas accounted for 47 percent of Georgia's total electricity net generation, and nuclear power accounted for 27 percent. Coal accounted for about 13 percent and renewable energy, including hydroelectric power and small-scale solar, accounted for nearly 13 percent (US Energy Information Administration 2021).

As a part of the Inflation Reduction Act, the Climate Pollution Reduction Grant Program provides states, local governments, territories, and tribes with funds to develop and implement plans to mitigate climate impacts through the reduction of GHG emissions and other harmful air pollutants. Georgia developed the Peach State Voluntary Emission Reduction Plan, which identifies Georgia's highest-priority state and local GHG reduction measures (GEPD 2024).

3.6.2 Environmental Consequences

Lowndes and Lanier counties are designated as attainment (or unclassifiable) for all criteria pollutants. As such, the General Conformity Rule is not applicable to emissions from the Proposed Action and is not addressed in this air quality analysis.

Based on guidance in Chapter 4 of the *Air Force Air Quality EIAP Guide*, *Volume II – Advanced Assessments*, estimated criteria pollutant emissions from the Proposed Action were compared against the insignificance indicator of 250 tons per year (tpy; 25 tpy for lead). Prevention of Significant Deterioration (PSD) major source permitting threshold for actions occurring in areas that are in attainment for all criteria pollutants (US Air Force 2020). These "Insignificance Indicators" were used in the analysis to provide an indication of the significance of potential impacts on air quality based on current ambient air quality relative to the NAAQS. These insignificance indicators do not define a significant impact; rather, they provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for a criteria pollutant indicates that the action would not cause or contribute to emissions that would exceed one or more NAAQS.

For GHG emissions evaluation, the PSD threshold of 75,000 tpy of CO_2 equivalents (CO_2e), or 68,039 metric tons per year (mton/year) was used as an insignificance indicator to evaluate air

quality impacts in all areas. A GHG emissions evaluation establishes the quantity of speciated GHGs and CO_2e, determines if an action's emissions are insignificant, and provides a relative significance comparison. Actions with a net change in GHG (i.e., CO_2e) emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Actions with GHG emissions above the insignificance indicator (threshold) are only considered potentially significant and require further assessment to determine if the action poses a significant impact (AFCEC Compliance Technical Support Branch 2023).

ACAM version 5.0.23a was used to estimate the total direct and indirect emissions from the Proposed Action projects. The projects mainly include construction (that includes new construction, additions, and renovations), demolition of buildings, and asphalt paving of parking lots or roads. Project criteria pollutant emissions estimated using ACAM would primarily be associated with earth disturbance, operation of diesel-fuel construction equipment and vehicles hauling materials, worker trips on the site, and paving and architectural coating applications. CO_2 emissions would be mainly from fuel combustion from equipment and worker vehicles during construction, demolition, and renovation activities. Operational emissions are estimated for comfort heating (e.g., boilers and heaters), which would come into effect once construction ends, and the facility is operational.

For all construction projects, reasonable precautions to reduce fugitive dust (PM_{10}) during demolition, building construction, grading, and land clearing would typically be followed. These precautions may include regular spraying of water or approved chemical dust suppressants on exposed soil and on unpaved roads; proper soil stockpiling methods, including installation of windbreaks around soil storage piles; and replacement of ground cover. Additional measures, such as use of efficient grading practices, proper use of equipment per manufacturer's instructions, and lower engine idling times would further reduce combustion emissions. Such measures, if implemented, would reduce dust and other pollutant emissions to levels far below those estimated.

Even though the project alternatives would be implemented over a five-year period, to be conservative, and following AFCEC policy, all construction activities are assumed to occur within a single calendar year in 2025. Operational emissions are assumed to start in 2026 after construction ends and would occur indefinitely (represents "steady state" emissions). Moderate changes in the types and number of equipment used is not expected to substantially change the emissions estimates in any meaningful way.

ACAM model assumptions, ACAM detail emissions calculations, and ACAM summary results are provided in **Appendix D**.

3.6.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

Table 3-7 presents estimated emissions from construction activities associated with Project 1, Alternative 1. There would be temporary and long-term, minor, adverse impacts on air quality from the proposed construction activities.

An anticipated increase in construction emissions would be associated with fugitive dust from grading and trenching activities for pavement construction, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. These emissions would be temporary, occurring only for the duration of construction. Estimated emissions from construction emissions would be well below the insignificance indicator for all criteria pollutants and GHGs. Therefore, impact on air quality would be insignificant. All reasonable precautions to reduce fugitive dust (PM_{10}) during construction, grading, and land clearing would be followed, potentially resulting in further reduction in estimated emissions.

Anticipated increase in operational emissions would be due to an increase in heating square footage at the newly constructed facility and addition of a new standby diesel generator. Operational emissions would be expected to continue indefinitely after the construction phase ends. As seen in **Table 3-7**, operational emissions would be negligible relative to the indicator value and as a result, impact on air quality would be insignificant.

The total net change in GHG emissions from Project 1, Alternative 1, would account for less than 0.00078714 percent of the state annual CO_2e emissions and less than 0.00002053 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-7. Estimated Air Emissions for Project 1, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	3.005	1.817	2.246	0.004	6.787	0.064	0.000	0.007	439.368
Operational	0.039	0.628	0.524	0.008	0.051	0.051	0.000	0.000	729.256
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent; **N/A** – not applicable

[1] Estimated ACAM output results (see Appendix D)

3.6.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

Table 3-8 presents estimated emissions from construction activities associated with Project 1, Alternative 2. Similar to Project 1, Alternative 1, there would be temporary and long-term, minor adverse impacts on air quality from the proposed construction activities.

The area proposed for construction of additional parking under Project 1, Alternative 2, is slightly more than for Project 1, Alternative 1. Emissions generated from earth-moving and paving activities for pavement construction are a function of the size of the construction area. As a result, criteria pollutant emissions, especially PM_{10}, are nominally (approximately 0.5 tpy) higher than those estimated for Project 1, Alternative 1. Estimated emissions for all pollutants would be well below insignificance indicator levels. Therefore, there would be insignificant

impact on air quality. Estimated operational emissions would be the same as for Project 1, Alternative 1, and impact on air quality would be insignificant.

The total net change in GHG emissions from Project 1, Alternative 2, would account for less than 0.00080547 percent of the state annual CO_2e emissions and less than 0.00002101 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-8. Estimated Air Emissions for Project 1, Alternative 2

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	3.016	1.911	2.378	0.004	7.294	0.067	0.000	0.008	466.617
Operational	0.039	0.628	0.524	0.008	0.051	0.051	0.000	0.000	729.256
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.3 Project 1, No Action Alternative

Under the No Action Alternative, the squadron operations facility would not be constructed. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

3.6.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

Table 3-9 presents estimated emissions from construction activities associated with Project 2, Alternative 1. There would be temporary and long-term, minor, adverse impacts on air quality from the proposed construction activities.

Estimated GHG and criteria pollutant emissions would be generated from the proposed construction of the new training facility and the construction of concrete pads around the AFTF and for truck driving. Estimated emissions would be well below the insignificance indicator values for all criteria pollutants and GHGs. Therefore, impacts on air quality would be insignificant. There would be operational emissions generated due to a small increase in heating square footage at the newly constructed facility. As seen in **Table 3-9,** the emissions increase from operational activities would be nominal relative to the indicator value and therefore impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 2, Alternative 1, would account for less than 0.00038153 percent of the state annual CO_2e emissions and less than 0.00000995 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-9. Estimated Air Emissions for Project 2, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.354	2.046	2.695	0.004	0.631	0.068	0.000	0.011	526.568
Operational	0.002	0.033	0.028	0.000	0.003	0.003	0.000	0.000	39.762
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

Table 3-10 presents estimated emissions from construction activities associated with Project 2, Alternative 2. Estimated construction and operational emissions for all pollutants and GHGs would be well below the insignificance indicator values, and therefore there would be temporary and long-term, minor, adverse impacts on air quality from the proposed construction activities.

The area proposed for construction of concrete pads under Project 1, Alternative 2, is less than for Project 1, Alternative 1. Consequently, estimated construction emissions would be slightly lower for all pollutants compared to those estimated for Project 2, Alternative 1. New building heating square footage would remain unchanged; therefore, operational emissions and its impact on air quality would be the same as for Project 2, Alternative 1.

The total net change in GHG emissions from Project 2, Alternative 2, would account for less than 0.00027664 percent of the state annual CO_2e emissions and less than 0.00000721 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-10. Estimated Air Emissions for Project 2, Alternative 2

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.288	1.473	1.931	0.003	0.611	0.050	0.000	0.007	370.875
Operational	0.002	0.033	0.028	0.000	0.003	0.003	0.000	0.000	39.762
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.6 Project 2, No Action Alternative

Under the No Action Alternative, the proposed AFTF improvements would not be constructed. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

3.6.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

Table 3-11 presents estimated emissions from construction activities associated with Project 3, Alternative 1. There would be temporary and long-term, minor, adverse impacts on air quality from the proposed construction activities.

Potential temporary impacts would result from anticipated increases in construction emissions associated mainly with operation of diesel-fuel construction equipment and vehicles hauling materials, and worker commutes. There would be long-term, minor, adverse impacts to air quality from operational activities due to the slight increase in heating square footage from newly constructed buildings. Estimated emissions for construction and operational emissions are well under the insignificant indicator values for all pollutants and GHGs. As a result, impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 3, Alternative 1, would account for less than 0.00007660 percent of the state annual CO_2e emissions and less than 0.00000200 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-11. Estimated Air Emissions for Project 3, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.083	0.469	0.601	0.001	0.124	0.019	0.000	0.001	100.1
Operational	0.001	0.011	0.009	0.000	0.001	0.001	0.000	0.000	13.6
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.8 Project 3, No Action Alternative

Under the No Action Alternative, the proposed overwatch positions would not be constructed. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

3.6.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

Table 3-12 presents estimated emissions from construction activities associated with Project 4, Alternative 1. There would be temporary and long-term, minor, adverse impacts on air quality from the proposed construction activities.

Construction would be primarily associated with the operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes and architectural coating. Estimated construction emissions are well under the insignificant indicator values for all pollutants and GHGs. As a result, impact on air quality would be insignificant.

There would be an increase in emissions from the proposed addition of a new standby diesel generator. Also, there would be a net decrease in heating square footage area because heating area removed due to the proposed demolition exceeds heating the area proposed to be added for newly constructed facilities. The increase in emissions from the new standby diesel generator combined with the net decrease in heating area emissions would result in a negligible net increase in total annual operational emissions for all criteria pollutants. Estimated net GHG emissions would decrease marginally (indicated with a “minus” sign in **Table 3-12**), but it would not result in a significant beneficial impact on air quality.

The total net change in GHG emissions from Project 4, Alternative 1, would account for less than 0.00016780 percent of the state annual CO_2e emissions and less than 0.00000438 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-12. Estimated Air Emissions for Project 4, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.785	1.093	1.368	0.002	1.055	0.039	0.000	0.004	251.094
Operational	0.005	0.019	0.012	0.005	0.005	0.005	0.000	0.000	-2.022
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

Table 3-13 presents estimated emissions from construction activities associated with Project 4, Alternative 2. There would be temporary and long-term, minor, adverse impacts on air quality from the proposed construction activities.

The area proposed for demolition of buildings under Project 4, Alternative 2, would be less than for Project 4, Alternative 1. Consequently, construction emissions generated from fuel

combustion equipment and vehicles would be lower for all pollutants compared to those estimated for Project 4, Alternative 1. Estimated net GHG operational emissions would decrease marginally (indicated with a "minus" sign in **Table 3-13**) and at such low emissions, there would be negligible beneficial impact on air quality.

The total net change in GHG emissions from Project 4, Alternative 2, would account for less than 0.00015258 percent of the state annual CO_2e emissions and less than 0.00000398 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-13. Estimated Air Emissions for Project 4, Alternative 2

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.721	1.059	1.345	0.002	0.775	0.038	0.000	0.003	233.041
Operational	0.005	0.016	0.009	0.005	0.004	0.004	0.000	0.000	-6.551
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.11 Project 4, No Action Alternative

Under the No Action Alternative, the proposed consolidated AGE facility would not be constructed. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

3.6.2.12 Project 5, Alternative 1: Burma Road Realignment

Table 3-14 presents estimated emissions from construction activities associated with Project 5, Alternative 2. There would be temporary, minor, adverse impacts on air quality from the proposed construction activities.

Under Project 5, Alternative 1, the proposed clearing of trees and the construction of a new road would mainly result in increases in fugitive dust (PM_{10}) emissions associated with grading and trenching activities. Construction activity emissions would be temporary, lasting only for the duration of construction. All reasonable precautions to reduce fugitive dust (PM_{10}) during construction, grading, and land clearing would be followed, potentially resulting in further reduction in estimated emissions. The estimated emissions for each pollutant would be less than its respective insignificance indicator. Therefore, impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 5, Alternative 1, would account for less than 0.00011722 percent of the state annual CO_2e emissions and less than 0.00000306 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered to be too small on a regional and national scale for further analysis.

Table 3-14. Estimated Air Emissions for Project 5, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.089	0.748	0.961	0.001	8.637	0.028	0.000	0.003	173.990
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.13 Project 5, No Action Alternative

Under the No Action Alternative, Burma Road would not be realigned. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

3.6.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

Table 3-15 presents estimated emissions from construction activities associated with Project 6, Alternative 1. There would be temporary, minor, adverse impacts on air quality from the proposed construction activities.

Under Project 6, Alternative 1, there would be construction of a POV parking lot, installation of electric charging stations, and trenching of electric utilities. Potential impacts would result from anticipated increases in temporary construction emissions associated with fugitive dust from grading and trenching activities, operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes, and asphalt paving operations. Construction activity emissions would be temporary, lasting only for the duration of construction. All reasonable precautions to reduce fugitive dust (PM_{10}) during construction, grading, and land clearing would be followed, potentially resulting in further reduction in estimated emissions. Estimated criteria air pollutant emissions and GHGs would be minor, therefore, impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 6, Alternative 1, would account for less than 0.00011217 percent of the state's annual CO_2e emissions and less than 0.00000293 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

3.6.2.15 Project 6, No Action Alternative

Under the No Action Alternative, the proposed parking lot would not be constructed. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

Table 3-15. Estimated Air Emissions for Project 6, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.089	0.744	1.007	0.002	0.451	0.030	0.000	0.002	166.493
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

Table 3-16 presents estimated emissions from construction activities associated with Project 7, Alternative 1. There would be temporary, minor, adverse impacts on air quality from the proposed construction activities.

Potential impacts would result from anticipated increases in temporary construction emissions associated with fugitive dust from grading and trenching activities, operation of diesel-fuel construction equipment and vehicles hauling materials, and worker commutes. Construction activity emissions would be temporary, lasting only for the duration of construction. All reasonable precautions to reduce fugitive dust (PM_{10}) during construction, grading, and land clearing would be followed, potentially resulting in further reduction in estimated emissions. Estimated criteria air pollutant emissions and GHGs would be minor, therefore, impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 7, Alternative 1, would account for less than 0.00005955 percent of the state annual CO_2e emissions and less than 0.00000155 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-16. Estimated Air Emissions for Project 7, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.049	0.426	0.536	0.001	0.457	0.017	0.000	0.001	88.399
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.17 Project 7, No Action Alternative

Under the No Action Alternative, the proposed airfield stormwater repairs would not occur. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

3.6.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

Table 3-17 presents estimated emissions from construction activities associated with Project 8, Alternative 1. There would be temporary, minor adverse impacts on air quality from the proposed construction activities.

Under Project 8, Alternative 1, there would be repairs to Stone Road and the Mission Lake water barrier. Potential impacts would result from anticipated increases in temporary construction emissions associated mainly with fugitive dust from trenching activities. Construction activity emissions would be temporary, lasting only for the duration of construction. All reasonable precautions to reduce fugitive dust (PM_{10}) during construction, grading, and land clearing would be followed, potentially resulting in further reduction in estimated emissions. Estimated criteria air pollutant emissions and GHGs would be well below indicator values, therefore, impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 8, Alternative 1, would account for less than 0.00005594 percent of the state annual CO_2e emissions and less than 0.00000146 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-17. Estimated Air Emissions for Project 8, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**Pb**	**NH_3**	**CO_2e**
Construction	0.038	0.318	0.465	0.001	0.729	0.011	0.000	0.001	83.033
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

Table 3-18 presents estimated emissions from construction activities associated with Project 8, Alternative 2. There would be temporary, minor, adverse impacts on air quality from the proposed construction activities.

Under Project 8, Alternative 2, the net area proposed for road widening of Stone Road would be reduced slightly compared to Project 8, Alternative 1, therefore resulting in relatively minor decreases in fugitive dust (PM_{10}) emissions from trenching. Therefore, impacts on air quality under Project 8, Alternative 2, would be comparable to those discussed for Project 8, Alternative 1.

The total net change in GHG emissions from Project 8, Alternative 2, would account for less than 0.00005394 percent of the state annual CO_2e emissions and less than 0.00000141 percent

of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-18. Estimated Air Emissions for Project 8, Alternative 2

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.038	0.313	0.462	0.001	0.639	0.011	0.000	0.001	80.065
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

Table 3-19 presents estimated emissions from construction activities associated with Project 8, Alternative 3. There would be temporary, minor adverse impacts on air quality from the proposed construction activities.

The realignment of Stone Road under Project 8, Alternative 3, would result in an increase in construction emissions relative to Project 8, Alternatives 1 and 2. The increase in PM_{10} (dust) emissions would be associated with a relative increase in earth-moving activities that would be carried out for realignment of Stone Road. Emissions of CO, nitrous oxides (NO_x) and GHGs would also increase under Project 8, Alternative 3, because of increase in operation of diesel-fuel construction equipment and vehicles hauling materials, worker commutes for building of the new road, and associated land clearing. Estimated criteria air pollutant emissions and GHGs would still be well below indicator values, therefore, impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 8, Alternative 3, would account for less than 0.00021127 percent of the state annual CO_2e emissions and less than 0.00000551 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-19. Estimated Air Emissions for Project 8, Alternative 3

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.178	1.429	1.853	0.003	4.167	0.051	0.000	0.004	313.599
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.21 Project 8, No Action Alternative

Under the No Action Alternative, the proposed project would not be implemented. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

3.6.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

Table 3-20 presents estimated emissions from construction activities associated with Project 9, Alternative 1. There would be temporary, minor, adverse impacts on air quality from the proposed construction activities.

Air emissions from construction would be primarily associated with fugitive dust (PM_{10}) from grading and trenching activities to implement the construction of a driving lane and for the removal of vegetation to create a corridor along the western boundary fence. Construction activity emissions would be temporary, lasting only for the duration of construction. All reasonable precautions to reduce fugitive dust (PM_{10}) during construction, grading, and land clearing would be followed, potentially resulting in further reduction in estimated construction emissions. The estimated increase in GHG and other regulated pollutants would not exceed indicator values. Therefore, impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 9, Alternative 1, would account for less than 0.00012393 percent of the state annual CO_2e emissions and less than 0.00000323 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-20. Estimated Air Emissions for Project 9, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**Pb**	**NH_3**	**CO_2e**
Construction	0.091	0.800	1.073	0.002	11.949	0.029	0.000	0.003	183.955
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

Table 3-21 presents estimated emissions from construction activities associated with Project 9, Alternative 2. There would be temporary, minor, adverse impacts on air quality from the proposed construction activities.

Under Project 9, Alternative 2, construction of the driving lane would not take place. Also, the area proposed for vegetation clearing would be reduced relative to the vegetation clearing area proposed for Project 9, Alternative 1. For these reasons, fugitive dust (PM_{10}) emissions

generated from earth-moving activities under Project 9, Alternative 2, would be reduced by almost 9.0 tpy when compared to Project 9, Alternative 1. All reasonable precautions to reduce fugitive dust (PM_{10}) during construction, grading, and land clearing would be followed, potentially resulting in further reduction in estimated construction emissions. The estimated increase in GHG and other regulated pollutants would be well below indicator values. Therefore, impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 9, Alternative 2, would account for less than 0.00006714 percent of the state annual CO_2e emissions and less than 0.00000175 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-21. Estimated Air Emissions for Project 9, Alternative 2

Activity	Emissions (tpy)[1]								
	VOC	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**Pb**	**NH_3**	**CO_2e**
Construction	0.050	0.447	0.550	0.001	3.006	0.018	0.000	0.001	99.666
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

Table 3-22 presents estimated emissions from construction activities associated with Project 9, Alternative 3. Impacts on air quality under Project 9, Alternative 3, would be comparable to those outlined for Project 9, Alternative 2.

While there would be minor increases in fugitive dust (PM_{10}) and other pollutants compared to Project 9, Alternative 2, the estimated total emissions would not exceed indicator values. Therefore, impacts on air quality would be insignificant.

The total net change in GHG emissions from Project 9, Alternative 3, would account for less than 0.00011211 percent of the state annual CO_2e emissions and less than 0.00000292 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

3.6.2.25 Project 9, No Action Alternative

Under the No Action Alternative, the proposed vegetation clearing along the western base boundary fence would not occur. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

Table 3-22. Estimated Air Emissions for Project 9, Alternative 3

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.083	0.757	0.909	0.001	4.492	0.030	0.000	0.002	166.404
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

Table 3-23 presents estimated emissions from construction activities associated with Project 10, Alternative 1. There would be temporary, minor adverse impacts and long-term, negligible beneficial impacts on air quality from the proposed construction activities.

Under Project 10, Alternative 1, air emissions from construction would be mainly associated with operation of diesel-fuel construction equipment for demolition activity, vehicles hauling materials, and worker commutes. The estimated increase in GHG and other regulated pollutants would be well below indicator values. Therefore, impacts on air quality would be insignificant.

Operational emissions would occur because there would be a net decrease (indicated with a "minus" sign in **Table 3-23**) in heated space due to the proposed demolition of 11 buildings. No increases in long-term emissions are anticipated.

The total net change in GHG emissions from Project 10, Alternative 1, would account for less than 0.00001976 percent of the state annual CO_2e emissions and less than 0.00000052 percent of US annual CO_2e emissions. As a result, the emissions of CO_2e are considered too small on a regional and national scale for further analysis.

Table 3-23. Estimated Air Emissions for Project 10, Alternative 1

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	0.034	0.291	0.426	0.001	0.038	0.010	0.000	0.001	64.531
Operational	-0.002	-0.029	-0.025	0.000	-0.002	-0.002	0.000	0.000	-35.209
Insignificance Indicator	250	250	250	250	250	250	25	250	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	No	No

tpy – tons per year; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent

[1] Estimated ACAM output results (see Appendix D)

3.6.2.27 Project 10, No Action Alternative

Under the No Action Alternative, the proposed demolition of buildings would not occur. No additional emissions would be generated; as a result, existing conditions would remain unchanged. No air quality impacts would be anticipated.

3.6.2.28 Cumulative Actions and Other Considerations

Any of the Proposed Action projects, in addition to the reasonably foreseeable future actions listed in **Table 3-3,** may result in additional impacts on air quality. Many of the Moody AFB proposed future actions listed in **Table 3-3** are construction projects. With the addition of ongoing and proposed construction, renovation, and demolition projects at Moody AFB, local air quality may be impacted as fugitive dust and other criteria pollutant emissions may increase; however, these increases would be localized and temporary. Thus, the potential incremental impact on air quality would be negligible, and the impact on air quality would not be significant. Also, emissions from construction projects can be well mitigated by following standard best practices for fugitive dust mitigation and emissions control. Such measures would significantly reduce particulate dust and other pollutants if several projects occur simultaneously.

Any of the 10 Proposed Action projects, in addition to the longer-term construction projects listed in **Table 3-3**, may result in further impacts to air quality. However, they would be temporary and would last only until construction ends and would be mitigated. Each new future action would be assessed for air quality impacts independently. Any incremental emissions that would be generated from construction of reasonably foreseeable actions would be compared against PSD insignificance indicators independently and would not be combined with emissions that may be generated by the Proposed Action.

Long-term emissions from proposed project worst-case alternatives independently or combined (**Table 3-24**) would be negligible; thus, it would not add to any longer-term emissions that would be generated by reasonably foreseeable actions.

Table 3-24. Estimated Air Emissions for All 10 Proposed Projects Combined

Activity	Emissions (tpy)[1]								
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	Pb	NH_3	CO_2e
Construction	4.769	9.957	12.900	0.020	34.803	0.360	0.000	0.037	2,335
Insignificance Indicator	250	250	250	250	250	250	25	N/A	75,000
Exceeds Indicator Level?	No	No	No	No	No	No	No	N/A	N/A

tpy – tons per year worst-case alternative; **VOC** – volatile organic compound; **NO_x** – nitrogen oxides; **CO** – carbon monoxide; **SO_x** – sulfur oxides; **PM_{10}** – particulate matter less than 10 microns; **$PM_{2.5}$** – particulate matter less than 2.5 microns; **Pb** – lead; **NH_3** – ammonia; **CO_2e** – carbon dioxide equivalent; **N/A** – not applicable
a. Estimated ACAM output results (see Appendix D)

3.7 Soils

See **Appendix C-4** for the definition of this resource.

3.7.1 Affected Environment

Soil units on the Moody AFB Main Base are shown on **Figure 3-4.** A total of 17 soil units underlies the proposed projects on Main Base (**Table 3-25**).

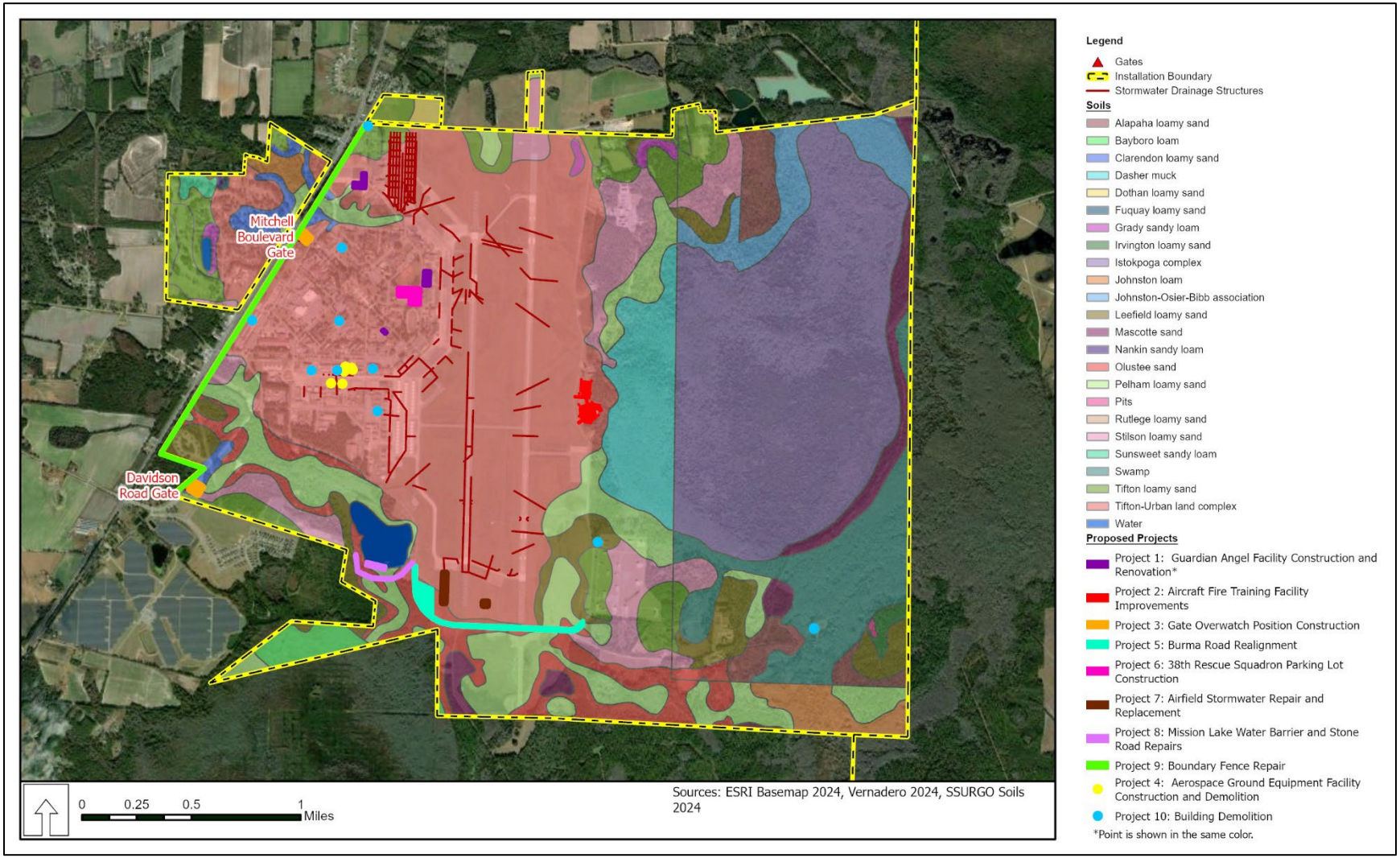


Figure 3-4. Soil Units on Moody Air Force Base Main Base

Table 3-25. Soil Units at the Proposed Projects on Moody Air Force Base Main Base

Soil Map Unit	Soil Description	Proposed Project	Area (acres)
Clarendon loamy sand	Moderately well drained, nearly level soil, found on 0 to 3 percent slopes, but dominantly less than 2 percent slopes.	Project 3	1.31
		Project 9	1.00
Leefield loamy sand	Somewhat poorly drained, nearly level soil on low uplands with 0 to 2 percent slopes.	Project 5	0.00
		Project 8	0.08
		Project 9	0.43
		Project 10	0.01
Olustee sand	Poorly drained, nearly level soil on low uplands with 0 to 2 percent slops, but with most slopes less than 1 percent,	Project 5	9.21
		Project 7	0.22
		Project 8	1.25
		Project 9	0.46
Pelham loamy sand	Poorly drained, nearly level soil found on broad flats and in depressions and drainages, and with 0 to 2 percent slopes, with most slopes being less than 1 percent.	Project 1	0.06
		Project 5	0.83
		Project 8	0.69
		Project 9	0.52
Stilson loamy sand	Deep, moderately drained soil on low uplands, ranging from 0 to 2 percent slopes.	Project 5	0.25
		Project 9	0.57
Swamp	Poorly drained soil found in depressional areas with slopes of less than 2 percent.	Project 10	0.01
Tifton loamy sand, 0 to 2 percent slopes	Deep, well-drained soil found in uplands	Project 9	0.16
		Project 10	0.00
Tifton loamy sand, 2 to 5 percent slopes	Deep, well-drained soil found on ridgetops and side slopes on the Coastal Plain uplands	Project 9	0.82
Tifton-Urban land complex	Complex of Tifton soils and Urban land that could not be separated at a scale for mapping and is found on smooth slopes.	Project 1	2.91
		Project 2	6.25
		Project 3	0.88
		Project 4	0.66
		Project 5	0.64
		Project 6	3.16
		Project 7	0.07
		Project 8	0.10
		Project 9	2.58
		Project 10	0.33

Source: US Department of Agriculture 1979

The Farmland Protection Policy Act (7 USC Section 4201 et seq.) protects important farmland categorized as prime farmland, unique farmland, and farmland of statewide or local importance. The purpose of the Farmland Protection Policy Act is to minimize the extent that federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. Although some of the soil types on Moody AFB are designated as prime or unique farmland soils, construction for national defense purposes and construction within an existing right-of-way purchased on or before 4 August 1984 are activities not subject to the Farmland Protection Policy Act. The Proposed Action would construct facilities for national defense purposes on land acquired by the DoD prior to 1984.

3.7.2 Environmental Consequences

Factors considered in determining whether implementing an alternative may have a significant adverse impact on soils include the extent or degree to which implementation of an alternative would do the following:

- Result in substantial soil erosion or the loss of topsoil, or
- Expose people or structures to potential substantial adverse effects, involving construction of facilities on inappropriate soil types.

3.7.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

The construction of a new squadron operations facility, parking areas, and building additions would have short- and long-term, minor, adverse impacts on soils. The primary short-term effects would occur during construction activities when vegetation is cleared and approximately 2.93 acres of soil is bare; however, even though soils have been previously disturbed in some areas, effects are expected to be moderate due to the removal of existing vegetation covering soils in the proposed project area. Removal of vegetation for construction would increase surface runoff and the potential for increased sediment transport in stormwaters. In the long term, increased impermeable surfaces could increase surface-water runoff indirectly impacting soils through erosion in downgradient areas. However, appropriate sediment and erosion controls would be implemented and maintained prior to and throughout all construction phases to minimize these effects. Examples of erosion and sediment control best management practices (BMPs) include soil erosion control mats, silt fences, straw bales, diversion ditches, riprap channels, water bars, water spreaders, and sediment basins. Disturbed soils would be revegetated following all construction and renovation activities to reduce the likelihood of long-term soil erosion.

3.7.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

Impacts on soils from construction and renovation activities under Project 1, Alternative 2, would be similar to those described for Project 1, Alternative 1. Approximately 3.51 acres of soils would be disturbed during construction. BMPs and disturbed soil revegetation would be implemented to minimize soil erosion during and following construction activities.

3.7.2.3 Project 1, No Action Alternative

There would be no soil disturbance under the No Action Alternative and no impacts on soils.

3.7.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

Impacts on soils from construction of the AFTF improvements and truck driving training would be similar to those described for Project 1, Alternative 1. Approximately 9.87 acres of soils

would be disturbed during construction. BMPs and revegetation of disturbed soils would be implemented to minimize soil erosion during and following construction activities.

3.7.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

Impacts on soils from construction of the AFTF improvements would be similar to those described for Project 1, Alternative 1. Approximately 6.87 acres of soils would be disturbed during construction. BMPs and disturbed soil revegetation would be implemented to minimize soil erosion during and following construction activities.

3.7.2.6 Project 2, No Action Alternative

There would be no soil disturbance from construction activities under the No Action Alternative and no impacts on soils.

3.7.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

Impacts on soils from construction of the gate overwatch positions at the Davidson Road and Mitchell Boulevard Gates would be similar to those described for Project 1, Alternative 1. Approximately 0.12 acre of soils would be disturbed during construction. BMPs and disturbed soil revegetation would be implemented to minimize soil erosion during and following construction activities.

3.7.2.8 Project 3, No Action Alternative

There would be no soil disturbance from construction activities under the No Action Alternative and no impacts on soils.

3.7.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

Impacts on soils from construction of AGE consolidation facilities would be similar to those described for Project 1, Alternative 1. Approximately 2.36 acres of soils would be disturbed during construction. BMPs and revegetation of disturbed soils would be implemented to minimize soil erosion during and following construction activities.

3.7.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

Impacts on soils from construction of AGE consolidation facilities would be similar to those described for Project 1, Alternative 1. Approximately 1.99 acres of soils would be disturbed during construction. BMPs and revegetation of disturbed soils would be implemented to minimize soil erosion during and following construction activities.

3.7.2.11 Project 4, No Action Alternative

There would be no soil disturbance from construction activities under the No Action Alternative and no impacts on soils.

3.7.2.12 Project 5, Alternative 1: Burma Road Realignment

Impacts on soils from the realignment of Burma Road and removal of trees in the CZ would be similar to those described for Project 1, Alternative 1. Approximately 7.63 acres of soils would be disturbed during construction. BMPs and revegetation of disturbed soils would be implemented to minimize soil erosion during and following construction activities. If permeable pavement would be utilized for the surfacing of Burma Road, the volume of stormwater runoff would be further reduced, decreasing the potential for soil erosion adjacent to the roadway.

3.7.2.13 Project 5, No Action Alternative

There would be no soil disturbance from road realignment and tree removal activities under the No Action Alternative and no impacts on soils.

3.7.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

Impacts on soils from the construction of a parking to support the 38 RQS would be similar to those described for Project 1, Alternative 1. Approximately 0.48 acre of soils would be disturbed during construction. BMPs and disturbed soil revegetation would be implemented to minimize soil erosion during and following construction activities. If permeable pavement would be used for surfacing the parking lot, the volume of stormwater runoff would be further reduced, decreasing the potential for soil erosion adjacent to the parking area.

3.7.2.15 Project 6, No Action Alternative

There would be no soil disturbance from the parking lot construction under the No Action Alternative and no impacts on soils.

3.7.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

Short-term impacts on soils from the excavation and repair of belowground stormwater features and removal of the two aboveground concrete structures would be similar to those described for Project 1, Alternative 1. Approximately 0.33 acre of soils would be disturbed during construction. BMPs and disturbed soil revegetation would be implemented to minimize soil erosion during and following construction activities. There would be long-term, negligible, beneficial impacts on soils due to a reduction in soil erosion from soil slumping and failure at the belowground stormwater features that require repair.

3.7.2.17 Project 7, No Action Alternative

There would be no soil disturbance from repairs of belowground stormwater structures and removal of two aboveground concrete stormwater features under the No Action Alternative. Therefore, there would be no impacts on soils.

3.7.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

Impacts on soils from the repairs of the Mission Lake water barrier and the Stone Road shoulders would be similar to those described for Project 1, Alternative 1. Approximately 0.83 acre of soils would be disturbed during construction. BMPs and revegetation of disturbed soils would be implemented to minimize soil erosion during and following construction activities.

3.7.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

Impacts on soils from the repair of the Mission Lake water barrier and the Stone Road shoulders would be similar to those described for Project 1, Alternative 1. Approximately 0.69 acre of soils would be disturbed during construction. BMPs and disturbed soil revegetation would be implemented to minimize soil erosion during and following construction activities.

3.7.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

Impacts on soils from the repair of the Mission Lake water barrier and realignment of Stone Road would be similar to those described for Project 1, Alternative 1. Approximately 3.70 acres of soils would be disturbed during construction. BMPs and disturbed soil revegetation would be implemented to minimize soil erosion during and following construction activities.

3.7.2.21 Project 8, No Action Alternative

There would be no direct soil disturbance the repair of the Mission Lake water barrier and Stone Road shoulder repairs under the No Action Alternative. However, if the Mission Lake water barrier were to fail, although it is unlikely that it would be a catastrophic failure, slow deterioration of the water barrier could cause uncontrolled releases from Mission Lake, eroding soils through channeling and gullies at the outfall. This continual erosion would have long-term, minor, adverse impacts on soils.

3.7.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

Impacts on soils from the removal of vegetation on both sides of the Moody AFB boundary fence and construction of a driving lane would be similar to those described for Project 1, Alternative 1. Approximately 3.70 acres of soils would be disturbed during construction. BMPs and disturbed soil revegetation would be implemented to minimize soil erosion during and following construction activities.

3.7.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

The removal of the aboveground woody vegetation (i.e., trees and shrubs) on both sides of the western base boundary fence would have short-term, negligible adverse impacts on soils. There would be some very limited ground disturbance for vehicular and equipment access to clear the aboveground vegetation, which could expose some surface soils to erosion. However, the

effects on soils would be negligible due to the limited amount of ground disturbance, and all disturbed soils would be allowed to revegetate with herbaceous plant species following woody vegetation removal activities.

3.7.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

Impacts on soils from the removal of vegetation on both sides of the Moody AFB boundary fence would be similar to those described for Project 9, Alternative 2. BMPs and disturbed soil revegetation would be implemented to minimize soil erosion during and following construction activities.

3.7.2.25 Project 9, No Action Alternative

There would be no soil disturbance from vegetation removal and the construction of a driving lane under the No Action Alternative. Therefore, there would be no impacts on soils.

3.7.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

Short-term impacts on soils from the demolition of 11 buildings would be similar to those described for Project 1, Alternative 1. BMPs and revegetation of disturbed soils would be implemented to minimize soil erosion during and following demolition activities. There would be a reduction in impermeable surfaces following demolition providing a long-term, negligible, beneficial impact on soils through reduced stormwater runoff and erosion.

3.7.2.27 Project 10, No Action Alternative

There would be no soil disturbance from building demolition under the No Action Alternative. Therefore, there would be no impacts on soils.

3.7.2.28 Cumulative Actions and Other Considerations

The Proposed Action in combination with other projects proposed at Moody AFB as well as the road repair and maintenance projects ongoing and proposed off base would have a long-term, minor, cumulative impact on soils from soil disturbance during construction activities and increased impermeable surfaces. Increased runoff rates during stormwater events could increase soil erosion and sediment transport. However, all projects proposed at Moody AFB would be subject to BMPs as described by the projects' Stormwater Pollution Prevention Plan (SWPPP), which would be developed for each project prior to construction, and would greatly reduce the likelihood of soil erosion and loss.

3.8 Water Resources

See **Appendix C-5** for the definition of this resource.

3.8.1 Affected Environment

Moody AFB is located within the Suwannee River Basin, which discharges to the northeastern Gulf of Mexico (Moody AFB 2024). Major drainages in the basin that affect Moody AFB include the Withlacoochee River to the west and the Alapaha River to the east. A major feature of the Suwannee River basin is the Grand Bay-Banks Lake wetland complex, which is partially within the Moody AFB boundary. The 1,255-acre Banks Lake is the only major body of water within the wetland complex. Shiner Pond, which is located in the central-northern boundary of the Moody AFB, is another, smaller, open-water feature, covering 65 acres. The wetland system is primarily recharged by precipitation falling within the catchment basin, although the bays may receive a portion of their recharge water from adjacent shallow groundwater sources. Recharge by precipitation occurs mainly from December through March, when rainfall is typically heavy, and evapotranspiration is low. Heavy rainfall from tropical weather systems, typically occurring in early fall, can also result in significant recharge to the Grand Bay wetland complex. Water flow through the Grand Bay Lake wetland complex is generally southeastern and southward although the northern portion drains to the northeast (Moody AFB 2024).

Stormwater from the Main Base area is discharged by a series of drainage ditches and underground stormwater conveyances. Five major storm drain outfalls occur along Burma Road, with water from these outfalls draining into Mission Lake. Stormwater from the northwestern portion of the airfield forms the headwaters of Beatty Branch, eventually draining through Cat Creek to the Withlacoochee River. Overall, there are about 6,166 acres of wetlands located within the boundary of Moody AFB, with the majority of these within the Grand Bay-Banks Lake wetland complex (Moody AFB 2024).

Mission Lake is an approximatively 30-acre human-made lake located on Main Base that is primarily used for recreational activities, such as boating and fishing. Mission Lake is a component of the stormwater system at Moody AFB and in part, receives water from a network of drop inlets, underground storm sewers, and aboveground ditches and swales. Drainage from Mission Lake flows to the Grand Bay Watershed (Moody AFB 2024).

Wetlands have been generally mapped at Moody AFB (**Figure 3-5**). In January 2024, a wetland delineation was conducted in the Proposed Action area to determine if there were any potentially jurisdictional waters of the US, including wetlands (USACE 2010, Environmental Laboratory 1987). Based on the findings of the wetland delineation, approximatively 4.63 acres of potentially regulated wetlands and surface waters, occur in the Proposed Action areas (**Appendix B**). The delineation was submitted to and reviewed by the USACE to be considered a delineation of waters of the US. The verification of the jurisdictional determination by USACE was provided on 27 June 2024 (File Number SAS-2024-00413).

A significant portion of the Moody AFB and Grand Bay Range is located within the 100-year (1 percent annual exceedance probability) floodplain (**Figure 3-6**). The 100-year floodplain on Main Base is located east of the airfield and extends into the Grand Bay Range and Grand Bay Wildlife Management Area (WMA). The Federal Emergency Management Agency has not mapped the 500-year (0.2 percent annual exceedance probability) floodplain for Moody AFB.

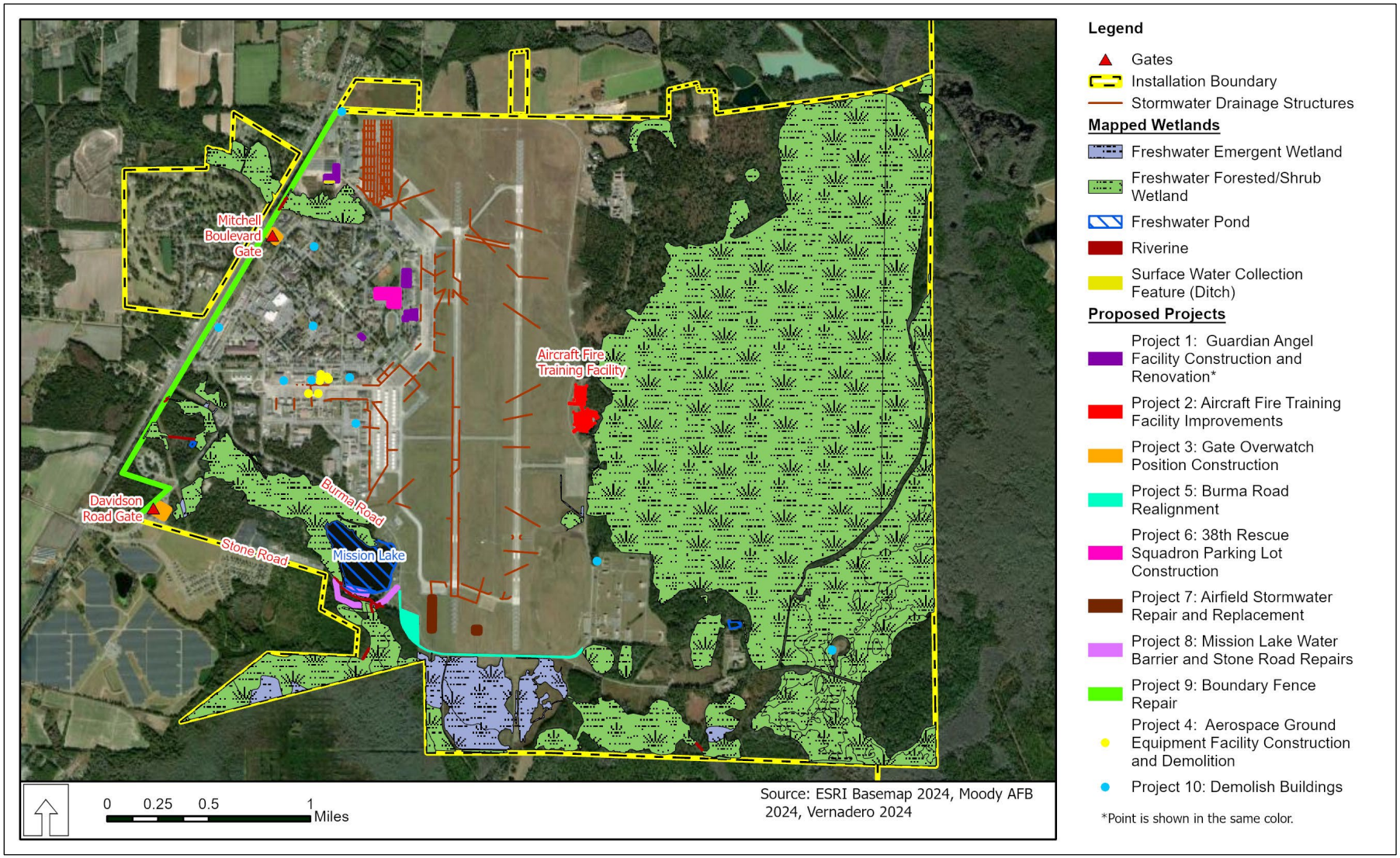


Figure 3-5. Wetlands at Moody Air Force Base Main Base

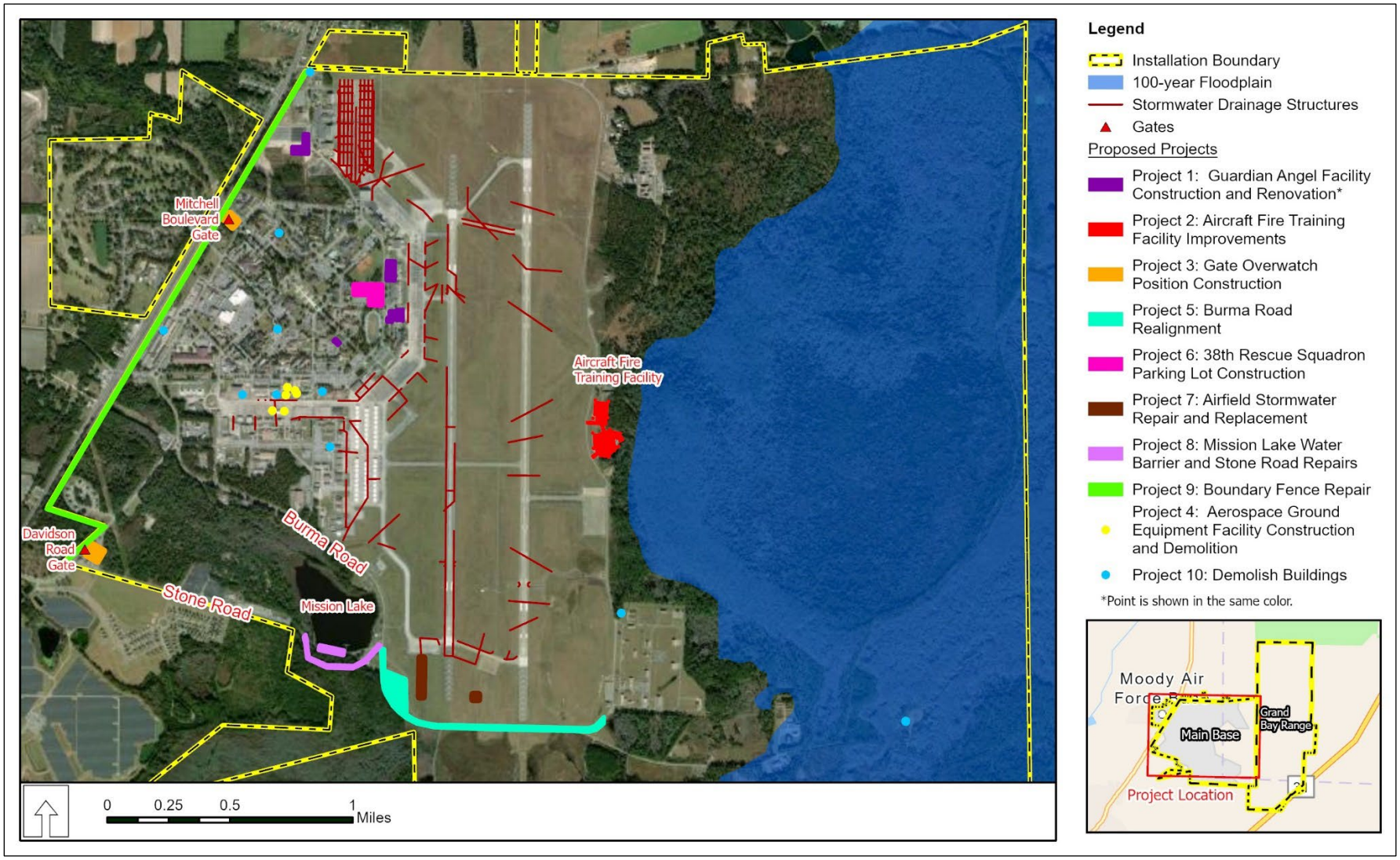


Figure 3-6. 100-Year Floodplain at Moody Air Force Main Base

Groundwater near Moody AFB occurs within two major water-bearing zones, the surficial aquifer system and the Floridan aquifer system. The surficial aquifer is generally 10 to 20 feet below the ground surface and is composed of fine to coarse sands, gravels, silt, clayey silt, and clays. Water quality is generally good, and yields are usually less than 50 gallons per minute. The Floridan aquifer is the primary water-bearing system in the area. The Floridan aquifer generally provides a good quality and quantity of water for almost all local commercial, industrial, domestic, irrigation, and municipal use. The Floridan aquifer is typically encountered at depth of 150 feet and is usually under artesian conditions. Water analyses have confirmed that several metals, barium, cadmium, copper, iron, manganese, and zinc occur at recordable levels (Moody AFB 2024). Shallow groundwater contaminants have been detected at several Environmental Restoration Program (ERP) sites located throughout Main Base. These ERP sites include groundwater contaminants such as volatile organic compounds, semivolatile organic compounds, trichloroethene, and metals. Groundwater monitoring and remediation activities are ongoing at these active ERP sites where groundwater contaminants are present. See **Section 3.12** for more detail on ERP sites and associated groundwater restrictions relevant to the proposed facility and infrastructure projects.

3.8.2 Environmental Consequences

Evaluation criteria for potential impacts on water resources are based on water availability, quality, and use; existence of floodplains; and associated regulations. Adverse impacts on water resources would occur if the Proposed Action were to do any of the following:

- Reduce water availability or supply to existing users.
- Cause overdrafts of groundwater basins.
- Exceed safe annual yield of water supply sources.
- Affect water quality adversely.
- Endanger public health by creating or worsening health hazard conditions.
- Violate established laws or regulations adopted to protect water resources.

Potential impacts related to flood hazards can be significant if such actions are proposed in areas with high probabilities of flooding; however, all impacts can be mitigated through the use of design features to minimize the effects of flooding.

3.8.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

The proposed squadron operations facility construction would have long-term, minor, adverse impacts on water resources. Construction activities would disturb soils, potentially transporting sediments and other material in stormwater into the wetlands located south of the construction area, and subsequently into Beatty Branch and associated wetlands. Stormwater could also transport hazardous materials used during the construction activities, such as petroleum, oil, and lubricants (POLs) used in construction equipment. POLs have the potential to impact both surface water and groundwater quality. Furthermore, the increase in impervious surface areas would cause greater runoff potential. However, since 1999, development of the surrounding area resulted in portions of the wetlands to be replaced by culverted conveyance, minimizing

the impacts on surface water runoff volume from impervious surfaces and accommodating the potentially increased runoff. Further, facility designs would implement green infrastructure and low-impact development (GI/LID) tools to reduce stormwater runoff in compliance with Section 438 of the Energy Independence and Security Act (EISA), reducing impacts on surface water from stormwater runoff.

Individual projects disturbing more than 1 acre would be required to comply with National Pollutant Discharge Elimination System (NPDES) General Permit as well as Georgia NPDES (i.e., the delegated authority to issue NPDES permits) and Lowndes County Land Disturbance Permit for construction activities. Therefore, the squadron operations facility construction and renovation would implement BMPs to reduce impacts on water quality as identified in a SWPPP.

3.8.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

The construction of the squadron operations facility at the south site would have long-term, minor, adverse impacts on water resources, including impacts on potentially jurisdictional wetlands. Impacts on water resources under Project 1, Alterative 2, would comparatively be greater than Project 1, Alternative 1, due to a larger impermeable surface area following construction with the potential for increased surface water runoff. The construction activities would occur adjacent to a potentially jurisdictional freshwater emergent wetland surface-water collection feature. However, BMPs implemented during construction activities would avoid indirect impacts on these potentially jurisdictional waters of the US. Facility designs would implement GI/LID tools in compliance with Section 438 of the EISA, reducing impacts on surface water from stormwater runoff.

3.8.2.3 Project 1, No Action Alternative

Under the No Action Alternative, there would be no squadron operations facility construction and renovation. Therefore, there would be no impacts on water resources.

3.8.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

The modernization of the existing AFTF by constructing a new 10,000-square-foot training facility, a 6-acre concrete pad around the AFTF, and a 3-acre pad for truck driving training would have long-term, minor, adverse impacts on water resources. Construction activities that disturb surface soils could transport sediments and other material into the 100-year floodplain located east of the construction area. Stormwater could also transport hazardous materials used during the construction activities, such as POLs used in construction equipment, which have the potential to impact both surface-water and groundwater quality. There would be an increase of 9 acres (approximately 392,040 square feet) of impervious surface area following the modernization of the AFTF. The increased impervious area would cause greater runoff potential. However, this increased impervious surface impact would be minimized with the implementation of low-impact development techniques and stormwater discharge management. The proposed training facility would be designed to implement GI/LID tools in compliance with

Section 438 of the EISA, reducing impacts on surface-water quality and quantity. As an individual project disturbing more than 1 acre, Project 2, Alternative 1 would be required to comply with NPDES General Permit as well as Georgia NPDES and Lowndes County Land Disturbance Permit for construction activities and implement BMPs identified in a SWPPP.

3.8.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

The modernization of the AFTF would have similar impacts on water resources as described for Project 2, Alternative 1. Although no truck driving pad would be constructed under Project 2, Alternative 2, the increase in impervious surfaces from the construction of a pad around the AFTF would have long-term, minor, adverse impacts on water resources. The proposed training facility would be designed to implement GI/LID tools in compliance with Section 438 of the EISA, reducing impacts on surface-water quality and quantity. This project would also comply with NPDES General Permit as well as Georgia NPDES and Lowndes County Land Disturbance Permit for construction activities, and would implement BMPs identified in a SWPPP.

3.8.2.6 Project 2, No Action Alternative

Under No Action Alternative, there would be no construction of new facilities or renovation of existing facilities. Therefore, there would be no impacts on water resources.

3.8.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

The construction of a two overwatch position buildings at Moody AFB gates would have long-term, negligible, adverse impacts on water resources. Construction activities that disturb surface soils, which could transport sediments and other material into the stormwater drainage system, and stormwater can also transport hazardous materials used during the construction activities, such as POLs used in construction equipment. There would be an increase of approximately 1,250 square feet of impervious surface area following the construction of the overwatch building. The increased impervious surface would cause a minimal increase in runoff potential. This increased impervious surface impacts would be minimized with the implementation of a low-impact development techniques and stormwater discharge management.

3.8.2.8 Project 3, No Action Alternative

Under the No Action Alternative, there would be no construction of overwatch positions at Moody AFB gates. Therefore, there would be no impacts on water resources.

3.8.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

The demolition of Buildings 732, 752, 755, and 756 and replacement with a new consolidated AGE facility would have similar impacts on water resources as described for Project 1, Alternative 1, as there would be an increase in impermeable surfaces following construction. The proposed new building space would be designed to implement GI/LID tools in compliance

with Section 438 of the EISA, reducing impacts on surface-water quality and quantity. There would be long-term, minor, adverse impacts on water resources at Moody AFB.

3.8.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

The demolition of Buildings 732 and 756, modification of Building 755, renovation of Building 752, and the construction of a new parts-support section would have similar impacts on water resources as Project 1, Alternative 1, as there would be an increase in impermeable surfaces following construction. There would be long-term, minor, adverse impacts on water resources at Moody AFB.

3.8.2.11 Project 4, No Action Alternative

Under the No Action Alternative, there would be no consolidated AGE facility constructed. Therefore, there would be no impacts on water resources.

3.8.2.12 Project 5, Alternative 1: Burma Road Realignment

The realignment and paving of approximatively 6,000 linear feet of Burma Road would have long-term, minor, adverse impacts on water resources. Construction activities that disturb surface soils could transport sediments and other material into the wetlands located west and southwest of the construction area. Stormwater could also transport hazardous materials used during construction activities, such as POLs used in construction equipment. However, BMPs would be implemented to reduce impacts on water quality from construction activities. An increase in water surface runoff would occur from a slightly larger impermeable surface area following the Burma Road realignment and tree removal activities. If the option to use permeable pavement were selected, the amount of impermeable surface area would not change substantially and there would be no long-term impacts on water resources.

3.8.2.13 Project 5, No Action Alternative

Under the No Action Alternative, there would be no realignment of Burma Road. Therefore, there would be no impacts on water resources.

3.8.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

The construction of a new parking lot would have long-term, minor, adverse impacts on water resources. Construction activities could disturb surface soils, which would transport sediment and other material into the stormwater drainage system. Stormwater can also transport hazardous materials used during construction activities, such POLs used in construction equipment. POLs have the potential to impact both surface-water and groundwater quality. However, BMPs would be implemented during construction to reduce the impacts on water quality. The increased impervious surface would cause greater runoff potential. However, if the option to pave the parking lot with permeable asphalt were to be selected, then the long-term impacts from surface water runoff from impermeable surfaces would be reduced.

3.8.2.15 Project 6, No Action Alternative

Under the No Action Alternative, there would be no construction of a new parking lot in support of the 38 RQS. Therefore, there would be no impacts on water resources.

3.8.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

The airfield stormwater system repair and replacement would have long-term, minor beneficial impacts on water resources. Construction activities that disturb soils such as the repair and replacement of belowground stormwater conveyance structures could negatively impact water quality through sediment transport in stormwater and transport of POLs from construction equipment. However, BMPs implemented as part of the project's SWPPP would reduce these impacts. In the long term, repairs to degrading stormwater structures would reduce sediment erosion into structures during rain events and reduce sedimentation into water bodies.

3.8.2.17 Project 7, No Action Alternative

Under the No Action Alternative, there would be no airfield stormwater drainage system repair and replacement at Moody AFB. Therefore, there would be no impacts on water resources.

3.8.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

The repairs to the Mission Lake water barrier and Stone Road would have long-term, minor direct, adverse impacts and long-term, indirect, beneficial impacts on water resources. The installation of riprap at the toe of the slope on the northern portion of the water barrier would directly place an estimated 3,500 cubic yards of riprap into the Mission Lake waters. The installation of 20 feet of riprap at the toe of the slope on the southern portion of the water barrier would place an estimated additional 3,500 cubic yards of riprap into a portion of the Mission Lake outfall channel and into adjacent wetlands. This fill material would permanently impact 0.48 acre of potentially jurisdictional waters of the US. To reduce these impacts, Moody AFB would obtain a CWA Section 404/401 permit from the USACE and GDNR, comply with all permit requirements, and implement any associated wetland mitigation measures, such as purchasing mitigation credits through an approved wetland mitigation bank. Through the CWA Section 404/401 permitting process, including implementation of required surface water mitigation measures, impacts on potentially jurisdictional waters of the US would be reduced.

Stone Road shoulder repairs would overlap with the fill material for the water barrier repairs. Construction activities would disturb surface soils that could transport sediments and other material into the wetlands located west and southwest of the construction area. Stormwater could also transport hazardous materials used during the construction activities, such as POLs used in construction equipment. However, impacts on water quality from construction activities would be reduced through the use of BMPs during construction as described in the project's SWPPP.

Benefits to water quality would be achieved in the long term through the repair of the Mission Lake water barrier and the associated reduction in risk of the water barrier failure. Although a catastrophic failure of the water barrier would be unlikely, the barrier could slowly erode, leading to soil erosion and sediment transport into adjacent water bodies, including wetlands.

3.8.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

Impacts on water resources would be the same as described for Project 8, Alternative 1. The repairs to the Mission Lake water barrier and Stone Road would have long-term, minor, direct, adverse impacts and long-term, indirect, beneficial impacts on water resources. There would be 0.48 acre of direct impacts on waters of the US, and a CWA Section 404/401 permit would be required; Moody AFB would implement all required mitigation measures as specified in the permit, such as purchasing mitigation credits through an approved mitigation bank.

3.8.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

Impacts on water resources would be similar to those described for Project 8, Alternative 1. The repairs to the Mission Lake water barrier and Stone Road would have long-term, minor, direct, adverse impacts and long-term, indirect, beneficial impacts on water resources. The realignment of Stone Road and repairs to the Mission Lake water barrier would directly impact 0.76 acre of potentially jurisdictional waters of the US, including 0.48 acre of surface waters at the Mission Lake water barrier and 0.28 acre of freshwater forested/shrub wetland and perennial stream. Moody AFB would obtain a CWA Section 404/401 permit from the USACE and GDNR, comply with all permit requirements, and implement any associated mitigation measures, such as purchasing mitigation credits through an approved mitigation bank. Through the CWA Section 404/401 permitting process impacts on waters of the US would be reduced.

Additionally, the realignment of Stone Road would remove approximatively 1.6 acres of forested area and replace that area with the realigned Stone Road. The greater impermeable area associated with the realigned Stone Road would impact water resources through increased stormwater runoff velocity and the potential for associated sedimentation of adjacent water bodies including wetlands.

As described for Project 8, Alternative 1, the repairs to Mission Lake water barrier would provide a long-term beneficial impact by reducing the risk of the water barrier failure and associated soil erosion and uncontrolled water runoff.

3.8.2.21 Project 8, No Action Alternative

Under the No Action Alternative, there would be no repairs to Stone Road and the Mission Lake water barrier. Therefore, there would be no impacts on water resources.

3.8.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

The removal of approximately 3.4 acres of vegetation along 10,000 linear feet of the western base boundary fence and the creation of a driving lane would have long-term, minor, adverse

impacts on water resources. The creation of a driving lane within the 16-foot-wide corridor would result in potential surface runoff increase. Construction activities disturbing surface soils could transport sediments and other material into Beatty Branch and associated wetlands. Stormwater could also transport hazardous materials used during the construction activities, such as POLs used in construction equipment. However, the project would be required to comply with the NPDES General Permit as well as Georgia NPDES (i.e., the delegated authority to issue NPDES permits) and Lowndes County Land Disturbance Permit for construction activities and implement BMPs identified in a SWPPP.

The construction of a driving lane, including the placement of a culvert for the crossing of Beatty Branch, would permanently impact 0.26 acre of waters of the US, including freshwater forested/shrub wetlands and riverine features. To reduce these impacts, Moody AFB would obtain a CWA Section 404/401 permit from the USACE and GDNR, comply with all permit requirements, and implement any associated mitigation measures, such as purchasing mitigation credits through an approved mitigation bank. Through the CWA Section 404/401 permitting process impacts on waters of the US would be reduced.

3.8.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

The removal of an approximate 1.7 acres of aboveground vegetation along 10,000 linear feet on the western base boundary fence would have no impacts on water resources. Ground disturbance would be minimized during vegetation clearance activities, and no belowground vegetation (i.e., stumps) would be removed. No impacts on waters of the US would occur.

3.8.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

The removal of an approximate 3.4 acres of vegetation along 10,000 linear feet on the western base boundary fence would have no impacts on water resources. Ground disturbance would be minimized during vegetation clearance activities, and no belowground vegetation (i.e., stumps) would be removed. No impacts on waters of the US would occur.

3.8.2.25 Project 9, No Action Alternative

Under the No Action Alternative, there would be no vegetation clearing and no creation of a 16-foot-wide corridor and driving lane along the Moody AFB boundary fence. Therefore, there would be no impacts on water resources.

3.8.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

The demolition of 11 buildings would have no substantial impacts on water resources. Construction activities could disturb surface soils, which would transport sediment and other material into the stormwater drainage system and nearby wetlands. Stormwater can also transport hazardous materials used during construction activities, such as POLs that can contaminate surface water and groundwater. However, BMPs would be implemented during

demolition activities to reduce these construction-related impacts. There would be a long-term decrease in impermeable surface area with the demolition of the 11 buildings. Therefore, there would be no long-term impacts on water resources.

3.8.2.27 Project 10, No Action Alternative

Under the No Action Alternative, the buildings would not be demolished. Therefore, there would be no impacts on water resources.

3.8.2.28 Cumulative Actions and Other Considerations

The Proposed Action, in combination with other proposed projects on Moody AFB and the off-base highway maintenance projects, would cumulatively adversely impact surface-water and groundwater quality from sedimentation and transport of POLs from construction equipment in stormwater. However, these proposed projects composing the Proposed Action in combination with other reasonably foreseeable construction projects on Moody AFB would all be subject to the Moody AFB SWPPPs, including the implementation of BMPs to protect surface water. However, following the completion of these various proposed construction projects at Moody AFB, there would be more impervious surface area, increasing the rate of stormwater discharge into Beatty Branch, Mission Lake outfall channel, and surrounding wetlands, during rain events. Therefore, the Proposed Action in combination with other proposed construction projects on Moody AFB would have long-term, minor, adverse cumulative impacts on water resources.

3.9 Biological Resources

See **Appendix C-6** for the definition of this resource.

3.9.1 Affected Environment

The information presented in this section was gathered from Moody AFB's Integrated Natural Resources Management Plan (Moody AFB 2024). The status of federal listed species was validated using the USFWS Information for Planning and Consultation system (USFWS 2024a).

Vegetation. Moody AFB and the Grand Bay Range are located within the Outer Coastal Plain Mixed Province of the Lowland Ecoregion (Bailey 1995). The province is dominated by temperate evergreen forests and laurel forests. Historically, the vegetation consisted of upland area dominated by longleaf pine forests mixed with slashed pines, with mesic longleaf pine savannas located on Main Base, and wet-mesic longleaf pine savannas and mixed-pine savannas in the Grand Bay Range. The current vegetation at Moody AFB is primarily the result of the management practices and actions taken during the construction of the base during the 1940s. Currently, the unimproved areas of Moody AFB and Grand Bay Range include several distinct natural communities and ecosystems that are the results of human activities. Natural communities on Moody AFB and Grand Bay Range include upland pine forests, pine flatwoods, and extensive areas composed of various wetland communities. A vast proportion of the upland habitat has been converted to the Loblolly Pine Plantation community type, replacing the traditionally present longleaf or longleaf/slash pine flatwood forests. The primary key ecological

feature at Moody AFB is the area contained in wetlands which covers approximatively 6,166 acres, or nearly 60 percent of the Grand Bay Range area.

Fish and Wildlife. Moody AFB and the Grand Bay Range are within the lower coastal plains and flatwoods section of the Southern Coastal Plain ecoregion (Bailey 1995), which supports a diverse complex of habitat which in turn supports a high diversity of faunal species. These habitats can be simplified into two main types: Upland Forests community type and the Carolina Bay Swamp Complex. Common fish and wildlife species found on Moody AFB are listed in **Table 3-26.**

Table 3-26. Representative Wildlife Species Occurring on Moody Air Force Base

Common Name	Scientific Name
Mammals	
Virginia Opossum	*Didelphis virginiana*
Raccoon	*Procyon lotor*
Striped Skunk	*Mephitis mephitis*
Gray Fox	*Urocyon cinereoargenteus*
Eastern Gray Squirrel	*Sciurus carolinensis*
Eastern Fox Squirrel	*Sciurus niger*
Eastern Cottontail Rabbit	*Sylvilagus floridanus*
White-Tailed Deer	*Odocoileus virginianus*
Beaver	*Castor canadensis*
Round-Tailed Muskrat	*Neofiber alleni*
Bobcat	*Lynx rufus*
Golden Mouse	*Ochrothomys nuttalli*
Birds	
Northern Bobwhite Quail	*Colinus virginianus*
Red-Shouldered Hawk	*Buteo lineatus*
Yellow-Billed Cuckoo	*Coccyzus americanus*
Ruby-Throated Hummingbird	*Archilocus colubris*
Downy Woodpecker	*Dryobates pubescens*
Red-Bellied Woodpecker	*Melanerpes carolinus*
Red-Headed Woodpecker	*Melanerpes erythrocephalus*
Northern-Flicker	*Colaptes aurates*
Pileated Woodpecker	*Drycopus pileatus*
Yellow-Bellied Sapsucker	*Sphryaphicus varius*
American Crow	*Corvus brachyrhynchos*
Carolina Chickadee	*Poecile carolinensis*
Tufted Titmouse	*Baeolophus bicolor*
Brown-Headed Nuthatch	*Sitta pusilla*
Carolina Wren	*Thryothonis ludovicianus*
Blue-Gray Gnatcatcher	*Polioptila caerulea*
Ruby-Crowned Kinglet	*Regulus calendula*
White-Eyed Vireo	*Vireo griseus*
Red-Eyed Vireo	*Vireo olivaceus*
Northern Parula	*Setophaga americana*
Common Grackle	*Quiscalus quiscula*
Summer Tanager	*Piranga rubra*

Common Name	Scientific Name
Eastern Towhee	*Pipilo erythrophthalmus*
Wild Turkey	*Meleagris gallopavo*
White-Throated Sparrow	*Zonotrichia albicollis*
Prothonotary Warbler	*Protonotaria citrea*
Hooded Warbler	*Setophaga citrina*
Swainson's Warbler	*Limnothylpis swainsonii*
Common Yellowthroat	*Geothlypis trichas*
Gray Catbird	*Dumetella carolinensis*
Northern Cardinal	*Cardinalis cardinalis*
Indigo Bunting	*Passerina cyanea*
Blue Jay	*Cyanocitta cristata*
Brown Thrasher	*Toxostoma rufum*
Wood Duck	*Aix sponsa*
Belted Kingfisher	*Megaceryle alcyon*
Eastern Kingbird	*Tyrannus tyrannus*
Reptiles	
Eastern Fence Lizard	*Sceloporus undulatus*
Five-Lined Skink	*Plestiodon inexpectatus*
Timber Rattlesnake	*Crotalus horridus*
Florida Cottonmouth	*Agkistrodon* conanti
Southern Black Racer	*Coluberconstrictor priapus*
Common Rainbow Snake	*Farancia erytrogramma erytrogramma*
Gopher Tortoise	*Gopherus polyphemus*
Eastern Box Turtle	*Terrapene carolina*
American Alligator	*Alligator mississippiensis*
Amphibians	
Spotted Salamander	*Ambystoma maculatum*
Green Treefrog	*Dryophytes cinerea*
Little Grass Frog	*Pseudacris ocularis*
Squirrel Treefrog	*Dryophytes squirellus*
Eastern Spadefoot Toad	*Scaphiopus holbrookii*
Southern Toad	*Anaxyrus terrestris*
American Bullfrog	*Lithobates catesbeianus*
Pig Frog	*Rana grylio*
Fish	
Warmouth	*Lepomis gulosus*
Redbreast Sunfish	*Lepomis auritus*
Redfin Pickerel	*Esox americanus*
Yellow Bullhead	*Ameiurus natalis*
Bowfin	Amia calva
Largemouth Bass	*Microchirus salmoides*

Invasive Species. An invasive species survey was recently conducted on 380 acres on Main Base. A targeted survey was also conducted along several roads, ditches, and power-line rights of ways. Chinese privet (*Ligustrum sinense*), Chinese tallow (*Triadica sebifera*), chinaberry tree (*Melia azedarach* L.), wisteria (*Wisteria* sp.), Japanese climbing fern (*Lygodium japonicum*), tungoil tree (*Vernicia fordii*), and mimosa (*Mimosa* sp.) were documented at Moody AFB. Most of the forest land has not been surveyed at Moody AFB, and exotic invasive vegetative species are mostly treated on a case-by-case basis as they are discovered. The primary aquatic

invasive plant species at Moody AFB is hyacinth (*Eichhornia crassipes*). Both chemical and mechanical approaches are used to control and limit the spread of those species (Moody AFB 2024). Only one animal species, the feral hog (*Sus scrofa*), is considered invasive at Moody AFB. Feral hogs were first detected on base in 2005. Currently, the US Department of Agriculture's Wildlife Services biologist, in conjunction with hunters, are removing feral hogs on both Main Base and Grand Bay Range (Moody AFB 2024).

Threatened and Endangered Species. The Moody AFB Integrated Natural Resources Management Plan (Moody AFB 2024), USFWS Information for Planning and Consultation System (USFWS 2024a), and the Georgia Rare Element Natural Data Portal were reviewed for the most up-to-date information concerning federally and state threatened and endangered species on Moody AFB Main Base. The USFWS Information for Planning and Consultation database search identified three threatened, one proposed endangered, one candidate, and one experimental, nonessential species that could occur on Moody AFB:

- Eastern indigo snake (*Drymarchon couperi*) – Threatened
- Wood stork (*Mycteria americana*) – Threatened
- Tricolored bat (*Perimyotis subflavus*) – Proposed Endangered
- Suwannee alligator snapping turtle (SAST; *Macrochelys suwanniensis*) –Threatened
- Monarch butterfly (*Danaus plexippus*) – Candidate
- Whooping crane (*Grus americana*) – Experimental, Nonessential

Five species are listed as threatened or endangered on the state level:

- Gopher tortoise (*Gopherus polyphemus*) – Threatened
- Eastern indigo snake – Threatened
- SAST – Threatened
- Bald eagle (*Haliaeetus leucocephalus*) – Threatened
- Round-tailed muskrat (*Neofiber alleni*) – Threatened

There is no designated critical habitat for any listed species on Moody AFB (USFWS 2024a). The approved Moody AFB Integrated Natural Resources Management Plan benefits federally listed species and precludes the designation of critical habitat on Moody AFB lands (see **Appendix C, Section C-6,** for more information).

Gopher tortoises are known to occur on Moody AFB (**Figure 3-7**). The gopher tortoise, a keystone species, and the federally threatened eastern indigo snake are known to coexist throughout their range. The gopher tortoise occurs from the coastal plain from South Carolina and westward to eastern Louisiana. This species is characteristic of the rapidly disappearing longleaf pine and wiregrass communities, which includes sandhill dry flatwoods and turkey oak scrub. The eastern indigo snake's range extends from peninsular Florida to southeastern Georgia, where it inhabits the pine flatwoods, hardwood forests, moist hammocks, and areas that surround cypress swamps. Importantly, the eastern indigo snake is known to use the burrow of gopher tortoises as refugia, hence the importance of this particular tortoise as a species of concern at Moody AFB.

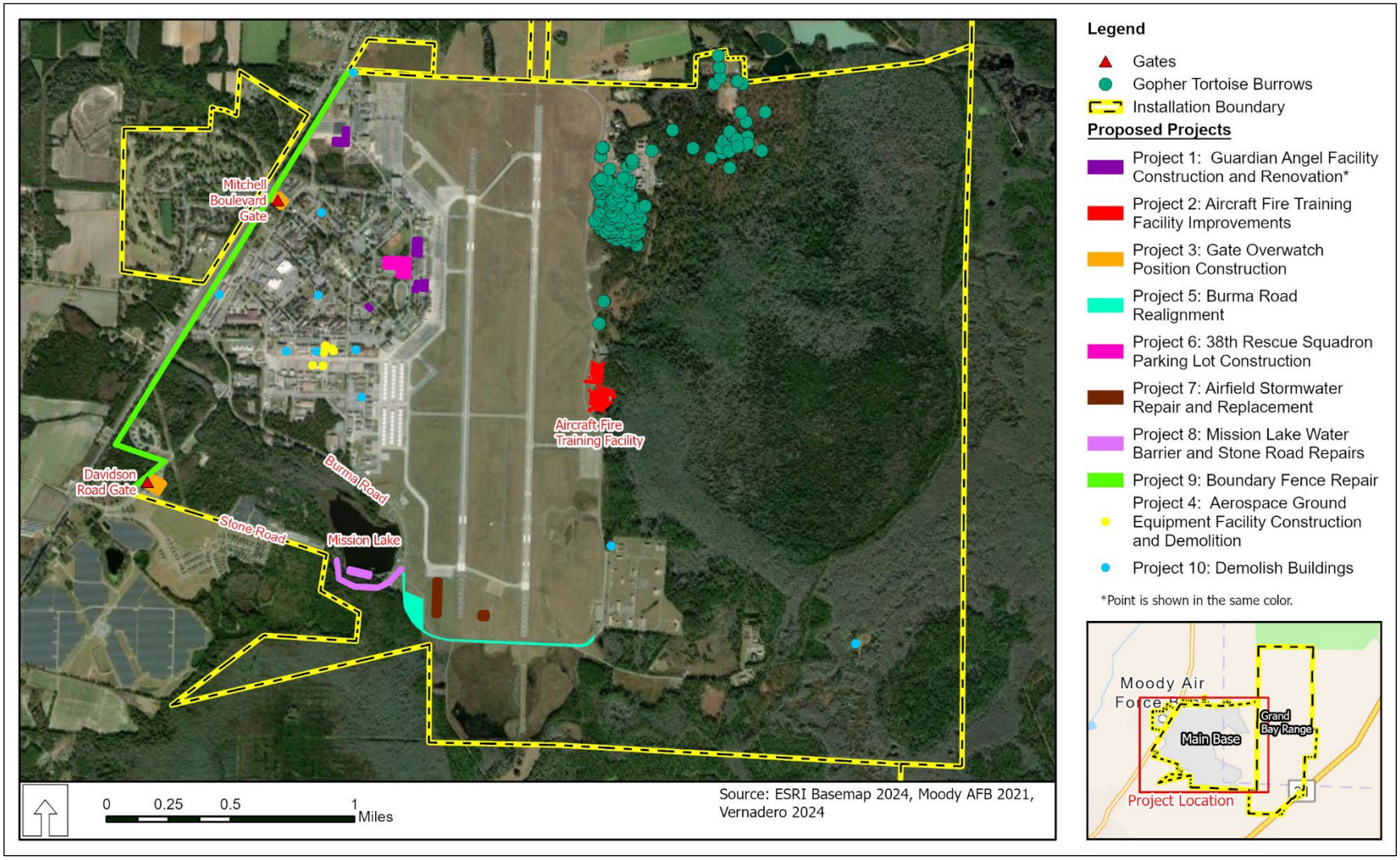


Figure 3-7. Gopher Tortoise Active and Inactive Burrow Locations at Moody Air Force Base Main Base

3.9.2 Environmental Consequences

To evaluate the potential impacts on the biological resources, the level of impact on biological resources is based on the following:

- Importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource
- Proportion of the resource that would be affected relative to its occurrence in the region
- Sensitivity of the resource to the proposed activities
- Duration of potential ecological ramifications

The impacts on biological resources are adverse if species or habitats of high concern are negatively affected over relatively large areas. Impacts are also considered adverse if disturbances cause reductions in population size or distribution of a species of high concern.

As a requirement under the ESA, federal agencies must provide documentation that ensures that agency actions do not adversely affect the existence of any threatened or endangered species. The ESA requires that all federal agencies avoid “taking” threatened or endangered species (which includes jeopardizing threatened or endangered species habitat). Section 7 of the ESA establishes a consultation process with USFWS that ends with USFWS' concurrence or a determination of the risk of jeopardy from a federal agency project. The DAF has determined that the Proposed Action may affect, but is not likely to adversely affect, the indigo snake and would have no effects on any other federally listed species. Further, the Proposed Action would not jeopardize the continued existence of the tricolored bat or the SAST. In accordance with Section 7 of the ESA, the DAF initiated informal consultation with the USFWS on 13 November 2024. The USFWS concurrence with DAF’s determinations was received on 29 January 2025 (**Appendix A**).

3.9.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

The construction of both a new squadron operations facility and the addition of a paved area would have short-term, minor, adverse impacts on biological resources. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during construction. However, no breeding habitat for any species would be lost due to the construction activities. The use of BMPs would ensure that construction activities do not adversely impact aquatic species in wetlands located south of the proposed project area, and subsequently in Beatty Branch. There is no habitat supporting any federally or state listed species in the proposed squadron operation facility building footprint. Therefore, the construction of a new squadron operation facility and its associated additional pavement at Moody AFB would have no effect on any federally or state listed species.

3.9.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

Impacts on biological resources would be the same as described for Project 1, Alternative 1. Only short-term, minor, adverse impacts on biological resources would occur. The construction of a new squadron operation facility and its associated additional pavement at Moody AFB would have no effect on any federally or state listed species.

3.9.2.3 Project 1, No Action Alternative

Under the No Action Alternative, there would be no construction of a new squadron operation facility and associated additional pavement at Moody AFB. Therefore, there would be no impacts on biological resources.

3.9.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

The modernization and construction of a new training facility and a 6-acre concrete pad around the AFTF would have short-term, minor, adverse impacts on biological resources. Direct impacts on vegetation and wildlife would occur from the conversion of turf grasses into a concrete pad. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during construction. No breeding habitat for any species would be lost due to the concrete pad construction. The use of BMPs would ensure that construction activities do not adversely impact species in wetlands located east of the proposed project area.

Known gopher tortoise burrows and gopher tortoise habitat are located proximate to the AFTF; however, there is no known habitat supporting any federally listed species, including the gopher tortoise and indigo snake in the AFTF improvement footprint (Moody AFB 2024). However, because of the proximity to burrows and occupied habitat, there is a chance that the gopher tortoise could be present at the project area, and because eastern indigo snakes are associated with gopher tortoise habitat, there is also the potential for indigo snake occurrence. Further, surveys have verified the presence of these species on Moody AFB, although the eastern indigo snake has not been officially sighted since 1996. Therefore, species-specific surveys would be conducted by a qualified biologist prior to the start of any construction-related activities. If a gopher tortoise or an indigo snake were to be detected during surveys, Moody AFB would coordinate with GDNR and USFWS to relocate captured tortoises and indigo snakes outside of the construction zone. No other federally or state listed species would occur in the proposed project area. Therefore, Project 2, Alternative 1, may affect but is not likely to adversely affect the eastern indigo snake and would have no effect on all other federally listed species.

3.9.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

Impacts on biological resources would be similar to those described for Project 2, Alternative 1, but would involve a slightly smaller area of ground disturbance. Only short-term, negligible,

adverse impacts on biological resources would occur. Project 2, Alternative 2, may affect but is not likely to adversely affect the eastern indigo snake and would have no effect on all other federally listed species.

3.9.2.6 Project 2, No Action Alternative

Under the No Action Alternative, there would be no improvements to the AFTF at Moody AFB. Therefore, there would be no impacts on biological resources.

3.9.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

The construction of a two-story overwatch building at Moody AFB gates would have short-term, negligible, adverse impacts on biological resources. Direct impacts on vegetation and wildlife would occur from the conversion of turf grasses into two-story overwatch buildings at the Davidson Road and Mitchell Boulevard gates. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during construction. No breeding habitat for any species would be lost due to the construction activities. There is no habitat supporting any federally or state listed species in the proposed buildings footprints. Therefore, the construction of a two-story overwatch buildings at Moody AFB gates would have no effect on any federally listed species.

3.9.2.8 Project 3, No Action Alternative

Under the No Action Alternative, there would be no construction of overwatch positions at Moody AFB gates. Therefore, there would be no impacts on biological resources.

3.9.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

The demolition of Buildings 732, 752, 755, 756, and the construction of a new AGE facility would have short-term, negligible, adverse impacts on biological resources. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during construction. No breeding habitat for any species would be lost due to the construction of a new AGE facility. There is no habitat supporting any federally listed species in the footprint of the proposed new AGE facility. Tricolored bats do not typically utilize buildings for roosting in the Tricolored Bat Year-Round Active Zone 2 (USFWS 2024b), which includes Moody AFB. To ensure that tricolored bats are not present in human-made structures that would be demolished under Project 4, Alternative 1, a qualified biologist would inspect all structures for the presence of tricolored bats before demolition activities. Therefore, the demolition of buildings would not affect the tricolored bat.

3.9.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

Impacts on biological resources would be the same as described for Project 4, Alternative 1. Only short-term, negligible, adverse impacts on biological resources would occur. The construction of a new AGE facility would have no effect on any federally listed species.

3.9.2.11 Project 4, No Action Alternative

Under the No Action Alternative, there would be no construction of a new AGE facility at Moody AFB. Therefore, there would be no impacts on biological resources.

3.9.2.12 Project 5, Alternative 1: Burma Road Realignment

The realignment and repaving of Burma Road would have long-term, minor impacts on biological resources. Direct impacts on vegetation and wildlife would occur from the conversion of 4.6 acres of forested area, primarily dominated by loblolly pines, into a paved road and turf area. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during construction. Loss of breeding habitat for some relatively common reptile and bird species would occur due to the conversion of a forested area into an open, partially paved area. The use of BMPs during construction would ensure that construction activities do not adversely impact aquatic species in the Mission Lake outfall channel and wetlands located west of the construction area.

There is no habitat supporting any federally or state listed species in the Burma Road realignment footprint. Therefore, realignment of the Burma Road at Moody AFB would have no effect on any federally listed species. However, there is a possibility that the tricolored bat could utilize trees at Moody AFB for roosting. Therefore, tree removal would not occur from 1 May to 15 July to avoid the tricolored bat pup season (USFWS 2024b). With the seasonal restrictions on tree removal activities, Project 5, Alternative 1, would not jeopardize the continued existence of the tricolored bat.

3.9.2.13 Project 5, No Action Alternative

Under the No Action Alternative, there would be no realignment of Burma Road. Therefore, there would be no impacts on biological resources.

3.9.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

The construction of a parking lot to support the 38 RQS operation would have short-term, negligible, adverse impacts on biological resources. Direct impacts on vegetation and wildlife would occur from the conversion of turf grasses to a paved parking area. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during construction. No breeding habitat for any species would be lost due to the parking lot construction. There is no habitat supporting any federally listed species in the footprint of the proposed parking lot. Therefore, the construction of a parking lot would have no effect on any listed species.

3.9.2.15 Project 6, No Action Alternative

Under the No Action Alternative, there would be no parking lot construction in support of the 38 RQS operation at Moody AFB. Therefore, there would be no impacts on biological resources.

3.9.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

The airfield stormwater repair and replacement would have short-term, negligible, adverse impacts on biological resources. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during construction. No breeding habitat for any species would be lost due to the airfield stormwater repair and replacement lot construction. The use of BMPs would ensure construction activities do not adversely impact aquatic species in the wetlands directly south of the airfield stormwater repair and replacement area. There is no habitat supporting any federally listed species in the footprint of the proposed airfield stormwater repair and replacement. Therefore, the airfield stormwater repair and replacement would have no effect on any listed species.

3.9.2.17 Project 7, No Action Alternative

Under the No Action Alternative, there would be no airfield stormwater system repair and replacement. Therefore, there would be no impacts on biological resources.

3.9.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

The Mission Lake water barrier and Stone Road repair would have long-term, minor, adverse impacts on biological resources. Direct impacts on vegetation and wildlife and aquatic habitats would occur from the installation of riprap at the toe of each slope on either side of Stone Road. The construction of shoulders along Stone Road at Mission Lake would result in the loss of both wetlands and aquatic habitat. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during construction. However, the use of BMPs would ensure construction activities do not adversely impact aquatic species in Mission Lake and Mission Lake outfall channel.

Although the threatened SAST has never been detected on Main Base, including in Mission Lake, there is marginally suitable habitat in Mission Lake for the SAST. Therefore, its occurrence in the proposed project area would be highly unlikely, especially along the developed edge of Mission Lake at the existing water barrier composed of riprap and Stone Road. Noise and equipment movement from proposed construction activities such as the placement of riprap along the banks and within open-water areas of Mission Lake would further deter any SASTs from being present in the project area during construction activities. BMPs would be used to ensure construction activities do not substantially increase water turbidity in Mission Lake. Therefore, the Mission Lake water barrier and Stone Road repair may affect but is not likely to adversely affect the SAST.

3.9.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

Impacts on biological resources would be the similar to those described in Project 8, Alternative 1, but would have a smaller area of aquatic impacts. Long-term, minor, adverse impacts on biological resources would occur. As described for Project 8, Alternative 1, it is highly unlikely that SAST would be present in Mission Lake proximate to the proposed construction project activities. Noise and equipment movement would further deter the SAST from being present in the project area during construction. BMPs would be used to ensure construction activities do not substantially increase water turbidity in Mission Lake. Therefore, the Mission Lake water barrier and Stone Road repair may affect but is not likely to adversely affect the SAST.

3.9.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

Although similar in nature, adverse impacts on biological resources would be slightly greater than for Project 8, Alternatives 1 and 2. In addition to the repair of Mission Lake water barrier, the realignment of an estimated 1,800 linear feet of Stone Road would result in the removal of approximatively 1.6 acres of trees south of the Mission Lake outfall channel. This would result in the permanent loss of breeding and foraging habitat for some relatively common reptile and bird species; this would occur due to the conversion of forested area and wetlands into an open, partially paved area.

There is a possibility that the tricolored bat could utilize trees at Moody AFB for roosting. Therefore, tree removal would not occur from 1 May to 15 July, to avoid the tricolored bat pup season (USFWS 2024b). With the seasonal restrictions on tree removal activities, Project 8, Alternative 3, would not jeopardize the continued existence of the tricolored bat. Additionally, as described for Project 8, Alternative 1, it is highly unlikely that SAST would be present in Mission Lake proximate to the proposed construction project activities. Noise and equipment movement would further deter the SAST from being present in the project area during construction. BMPs would be used to ensure construction activities do not substantially increase water turbidity in Mission Lake. Therefore, the Mission Lake water barrier and Stone Road repair may affect but is not likely to adversely affect the SAST.

3.9.2.21 Project 8, No Action Alternative

Under the No Action Alternative, there would be no Mission Lake water barrier and Stone Road repairs at Moody AFB. Therefore, there would be no impacts on biological resources.

3.9.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

The removal of woody vegetation, creating a cleared corridor, and subsequent construction of a driving lane would have long-term, minor, adverse impacts on biological resources. Direct impacts on vegetation and wildlife would occur from the conversion of forested area, turf grasses, and wetlands to a driving lane. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in

the project area during construction. Breeding habitat would be lost due to the removal of vegetation. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during construction. The use of BMPs would ensure construction activities do not adversely impact aquatic species in Beatty Branch and associated wetlands.

There is a possibility that the tricolored bat could utilize trees at Moody AFB for roosting. Therefore, under Project 9, Alternative 1, tree removal would not occur from 1 May to 15 July, to avoid tricolored bat pup season (USFWS 2024b). With the seasonal restrictions on tree removal activities, Project 9, Alternative 1 would not jeopardize the continued existence of the tricolored bat.

Although the threatened SAST has never been detected on Main Base, including in Beatty Branch, there is marginally suitable habitat in Beatty Branch for the SAST. Therefore, its occurrence in the proposed project area would be highly unlikely, especially adjacent to the Moody AFB boundary fence where the proposed placement of a culvert in Beatty Branch and construction of a driving lane would occur. Noise and equipment movement from proposed construction activities such as tree removal and culvert placement would further deter any SASTs from being present in the project area during construction activities. BMPs would be used to ensure construction activities do not substantially increase water turbidity in Beatty Branch. Therefore, the placement of a culvert in Beatty Branch may affect but is not likely to adversely affect the SAST.

3.9.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

Although impacts on vegetation and wildlife would be the same as described in Project 9, Alternative 1, the surface area impacted by woody vegetation removal would be half the size and no driving lane would be constructed. Long-term, minor, adverse impacts on biological resources would occur. The boundary fence repair and woody vegetation clearing would have no effect on any listed species. However, there is a possibility that the tricolored bat could utilize trees at Moody AFB for roosting. Therefore, tree removal would not occur from 1 May to 15 July, to avoid the tricolored bat pup season (USFWS 2024b). With the seasonal restrictions on tree removal activities, Project 9, Alternative 2, would not jeopardize the continued existence of the tricolored bat.

3.9.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

Although no driving lane would be constructed, and only aboveground woody vegetation would be removed, impacts on vegetation and wildlife would be the same as described as in Project 9, Alternative 1. Long-term, minor, adverse impacts on biological resources would occur. The boundary fence repair and vegetation clearance would have no effect on any listed species. However, there is a possibility that the tricolored bat could utilize trees at Moody AFB for roosting. Therefore, tree removal would not occur from 1 May to 15 July, to avoid tricolored bat

pup season (USFWS 2024b). With the seasonal restrictions on tree removal activities, Project 9, Alternative 3, would not jeopardize the continued existence of the tricolored bat.

3.9.2.25 Project 9, No Action Alternative

Under the No Action Alternative, there would be no boundary fence repair and vegetation clearance at Moody AFB. Therefore, there would be no impacts on biological resources.

3.9.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

The demolition of 11 buildings would have short-term, negligible, adverse impacts on biological resources. Noise from construction equipment and equipment movement could indirectly disturb some relatively common reptile and bird species present in the project area during buildings demolition. No breeding habitat for any species would be lost due to buildings demolition.

There is no habitat supporting any federally listed species in the footprint of the 11 buildings to be demolished. Therefore, the demolition of 11 buildings at Moody AFB would have no effect on any listed species. Tricolored bats do not typically utilize buildings for roosting in Tricolored Bat Year-Round Active Zone 2 (USFWS 2024b), which includes Moody AFB. To ensure that tricolored bats are not present in human-made structures that would be demolished under Project 10, Alternative 1, a qualified biologist would inspect all structures for the presence of tricolored bats before demolition activities. Therefore, the demolition of buildings would not affect the tricolored bat.

3.9.2.27 Project 10, No Action Alternative

Under the No Action Alternative, there would be no building demolition at Moody AFB. Therefore, there would be no impacts on biological resources.

3.9.2.28 Cumulative Actions and Other Considerations

The Proposed Action, in combination with reasonably foreseeable future actions on and off Moody AFB including the off-base road maintenance projects, would potentially result in long-term, minor, cumulative adverse impacts on vegetation and wildlife due to a direct loss of vegetation from construction activities and loss of habitat from the removal of trees and other vegetation. However, no sensitive plant or wildlife resources would be impacted as a result of the Proposed Action or other proposed projects. All noise impacts from proposed construction projects would be short term. Habitat loss would be minimal and would impact primarily common wildlife species. Any potential effects on federally listed species from other reasonably foreseeable projects on Moody AFB would be evaluated under Section 7 of the ESA. Therefore, there would be no cumulative effects on any federally listed species as all proposed projects on Moody AFB would fully comply with the requirements of the ESA.

3.10 Cultural Resources

The Proposed Action is considered an undertaking for the purposes of Section 106. The area of potential effect (APE) for this undertaking consists of a 100-foot buffer around the limits of

disturbance for each of the seven discontinuous projects and alternatives described in **Chapter 2.0**. The DAF initiated consultation with the Georgia SHPO on 18 November 2024 in accordance with Section 106 and requested concurrence with the APE. Concurrence from the SHPO on the DAF's determinations of the APE and no historic properties affected were received on 9 and 10 December 2024, and 24 March 2025. Copies of relevant Section 106 correspondence are provided in **Appendix A**.

The DAF has completed government-to-government consultation with Native American tribes having historic, cultural, and religious ties to Moody AFB. Copies of relevant government-to-government correspondence are included in **Appendix A.**

See **Appendix C-7** for the definition of this resource.

3.10.1 Affected Environment

Moody AFB was established in early 1942 as the wartime Moody Field Advanced Pilot Training School. Previous archaeological investigations at Moody AFB have located 61 archaeological sites and 63 isolated finds (DAF 2024; see **Appendix C-7** for detailed discussion). The physical areas included within the expanded ground training areas were all investigated under the installation's comprehensive 1996 archaeological survey (Grover et al. 1996), and many of these areas were revisited in a 2021-2022 resurvey (Reynolds et al. 2022). No archaeological sites have been identified within the footprint of the proposed project construction areas or within 100 feet of the 10 proposed project areas composing the Proposed Action. Moody AFB has two NRHP-eligible archaeological sites and four sites that require additional testing. Sites 9LW63 and 9LW71 are both prehistoric artifact scatters located on the Main Base east of the runway (DAF 2024). Both are outside of the footprint of the proposed projects APEs. The four sites requiring testing (i.e., 9LW230, 9LW231, 9LW235, and 9LW237) are all located at the Grassy Pond geographically separated unit (GSU) and therefore have no potential to be affected by the proposed project.

Numerous comprehensive surveys of World War II- and Cold War-era buildings and structures at Moody AFB have been undertaken since 1997 (**Table 3-27**; see **Appendix C-7**). No intact historic districts have been identified. Only two structures have been determined to be eligible for inclusion in the NRHP. Facility 618, constructed in 1941, is a steel water tower with a 200,000-gallon capacity. It was determined to be eligible for inclusion in the NRHP in 1999 (DAF 2024). Building 110 is a chapel built in 1971. Significant for its midcentury modern architectural design, the chapel was determined to be eligible for inclusion in the NRHP in May 2017. Both have lost integrity of setting due to the historic and ongoing construction and demolition within the main cantonment. Both eligible buildings are outside of the proposed projects' APEs.

No traditional cultural properties have been identified on Moody AFB through previous consultation efforts. No federally recognized tribes have identified traditional cultural properties (**Appendix C-7**).

Based on the location of the projects, the coverage of previous archaeological surveys, and lack of issues raised by tribes, the DAF has determined that the proposed project areas APEs

contain no identified archaeological sites eligible for listing on the NRHP, historic districts, cemeteries, sacred sites, traditional cultural properties, or other tribal resources.

Table 3-27. Summary of Cultural Resource Investigations on Moody Air Force Base

Reference	Investigation	Results
Archaeological Surveys		
Wright 1985	350 acres of Grand Bay Range focused on high-probability areas	Four sites identified; one site (9LN4) recommended for testing.
National Park Service 1986	Preliminary cultural resource reconnaissance of Moody AFB and Grassy Pond Recreation Area	One site recorded and determined not eligible for the NRHP.
Grover et al. 1996	Survey of Grand Bay Ordnance Range and Moody AFB, total 3,600 acres	21 sites and 39 isolated finds recorded. Five sites considered potentially eligible (9LW62, 9LW52, 9LW67, 9LN17, and 9LW71); remainder determined not eligible.
Morgan 1998	Survey of Southwest Land Gift (49.5 acres)	Two sites recorded and determined not eligible for NRHP.
Jones et al. 1999	Phase II Testing of Site 9LW71	Sites 9LW70 and 9LW71 determined to be one consolidated site (9LW71); site 9LW71 determined eligible for NRHP.
Warhop et al. 2007	Phase II Testing of 9LN17	Site determined not eligible for NRHP.
Warhop et al. 2010	Phase II Testing of 9LW63	Site 9LW63 determined eligible for NRHP.
Warhop and Raymer 2010	Testing of Site 9LW67	Inconclusive; additional testing recommended.
Lindemuth and Somers 2011	Survey of Personnel Recovery Campus	No sites identified.
Schneider et al. 2013	Phase II Testing of Sites 9LW52 and 9LW67	Sites determined not eligible for NRHP.
Lowrey 2017	Survey of 106.1 Acres of New Southwest Land Purchase	Two isolated finds identified; not eligible for the NRHP.
Reynolds et al. 2022	Phase I Archaeological Survey of 3,119 Acres	Seven of 11 sites relocated; Site 9LW63 remained eligible. A total of 40 new sites recorded; 36 not eligible; additional testing recommended at 9LW230, 9LW231, 9LW235, and 9LW237 (all located at Grassy Pond GSU).
Architectural Studies		
Patterson et al. 1997	Context of Cold War Material Culture; Baseline Inventory of 137 Buildings	No buildings eligible for NRHP for Cold War significance.

Reference	Investigation	Results
Moody AFB 1996-1997 (see ICRMP, Air Force 2022)	Consultation for Buildings 701, 609, and 621	Buildings determined not eligible for the NRHP.
Messick et al. 1999	Evaluation of 223 Buildings, including Cold War Assets	Water Tower (Facility 618) eligible for NRHP; remaining buildings not eligible.
Hersch 2011	Evaluation of 42 Cold War-Era Resources	Resources not eligible for the NRHP.
Scherer 2015	Evaluation of Buildings 1500 and 1501	Buildings not eligible for NRHP.
Amec Foster Wheeler Environment and Infrastructure Inc. 2016	Evaluation of Buildings 325, 328, 621, 658, 704, 753, 785, and 901	Buildings not eligible for NRHP.
Reed et al. 2017	Reevaluation of 210 Cold War-Era Facilities 45 Years or Older, including Cantonment, Grand Bay Weapons Range, Grassy Pond Annex, and NEXRAD Radar Site	Base Chapel (Building 110) eligible for NRHP; no intact districts present; all other buildings not eligible.

AFB – Air Force Base; **NRHP** – National Register of Historic Places; **GSU** – geographically separated unit, **ICRMP** – Integrated Cultural Resources Management Plan

3.10.2 Environmental Consequences

Section 106 of the NHPA requires all federal agencies to assess the effects of their undertakings on historic properties and seek to avoid, minimize, or mitigate adverse effects on those properties [36 CFR 800.1(a)]. The APE is defined as the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16[d]). Adverse impacts on cultural resources could include altering characteristics of the resource that make it eligible for listing in the NRHP. Such impacts could include introducing visual or audible elements that are out of character with the property or its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate enforceable restrictions or conditions to ensure preservation of the property’s historic significance. For the purposes of this EA, an effect is considered adverse if it would alter the integrity of a NRHP-listed or -eligible resource or if it has the potential to adversely affect traditional cultural properties and the practices associated with the property. For the proposed projects and alternatives described below, should inadvertent discovery of archaeological deposits be made during construction, the DAF will follow standard operating procedures for Discoveries of Archaeological Resources and Native American Graves Protection and Repatriation Act (NAGPRA) Cultural Items as detailed in the Moody AFB Integrated Cultural Resources Management Plan (DAF 2024:15). DAF requested concurrence from the SHPO on their no effect to historic properties determination on 18 November 2024. Concurrence from the SHPO on the DAF’s determination was received on 9 and 10 December 2024, and 24 March 2025 (**Appendix A**).

3.10.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

Project 1, Alternative 1, would not result in adverse effects historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified (Grover et al. 1996; Reynolds et al. 2022). The closest recorded archaeological site is Site 9LN245, located approximately 800 feet from the proposed project area. Recorded by Reynolds et al. (2022), it was determined to not be eligible for the NRHP. Moody AFB's two NRHP-eligible sites, 9LW63 and 9LW71, are located east of the runway and are not proximate to Project 1, Alternative 1. Therefore, Project 1, Alternative 1, would not physically affect any NRHP-eligible archaeological sites.

The two NRHP-eligible architectural resources (Facility 618 and Building 110) are located within Main Base. Neither building would be physically altered for Project 1, Alternative 1. The nearest Project 1 activities, which would include renovations and additions to Buildings 556, 663, 606, 607, and 609, would occur more than 800 feet from the two NRHP-eligible resources. Of the buildings slated for renovation, Buildings 556 and 609 were both constructed in 1941 and are therefore more than 50 years of age. Building 609 was determined to be ineligible in 1997 (see Appendix B in Messick 1999), and Building 556 was determined to be ineligible in 1999 (Messick 1999). Buildings 606, 607, and 663 were constructed in 2005, 2005, and 2000, respectively, and do not require evaluation at this time. Therefore, Project 1, Alternative 1, would have no effect on the two NRHP-eligible buildings.

3.10.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

Project 1, Alternative 2, would not result in adverse effects to historic properties. The potential effects to archaeological and architectural resources would be the same as described for Project 1, Alternative 1.

3.10.2.3 Project 1, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction or ground-disturbing activities.

3.10.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

Project 2, Alternative 1, would not result in adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources, and no NRHP-eligible sites were identified (Grover et al. 1996; Reynolds et al. 2022). The closest recorded archaeological site is Site 9LW72, located 1,000 feet from the AFTF; this site has been determined to be ineligible (Grover et al. 1996). Moody AFB's two NRHP-eligible sites, 9LW63 and 9LW71, are located more than 2,300 feet from the AFTF. Therefore, Project 2, Alternative 1, would not physically affect any NRHP-eligible archaeological sites.

The two NRHP-eligible architectural resources (Facility 618 and Building 110) at Moody AFB are located within Main Base on the west side of the runway. Neither building would be physically altered by Project 2, Alternative 1. The new construction associated with the proposed project would be approximately 4,000 feet to the east and would not be visible from either resource. Therefore, Project 2, Alternative 1, would have no effect on the two NRHP eligible buildings.

3.10.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

Project 2, Alternative 2 would not result in adverse effects to historic properties. The potential effects to archaeological and architectural resources would be the same as described for Project 2, Alternative 1.

3.10.2.6 Project 2, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction or ground-disturbing activities.

3.10.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

Project 3, Alternative 1, would not result in adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified (Grover et al. 1996; Reynolds et al. 2022). The closest recorded archaeological site to either construction area is Site 9LW73, located 500 feet northwest of the Davidson Road Gate. This site was determined to be ineligible in 1998 (Morgan 1998). The installation's two NRHP-eligible sites, 9LW63 and 9LW71, are on the east side of the runways and are not proximate to the proposed project. Therefore, Project 3, Alternative 1, will not physically affect any NRHP-eligible archaeological sites.

The two NRHP-eligible architectural resources (Facility 618 and Building 110) are located within Main Base. Neither building would be physically altered for Project 3, Alternative 1. At its closest point, the overwatch positions would be approximately 2,000 feet to the east of the Mitchell Boulevard Gate construction area. Therefore, Project 3, Alternative 1, would have no effect on the two NRHP-eligible buildings.

3.10.2.8 Project 3, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction, ground-disturbing activities, or increased training actions.

3.10.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

Project 4, Alternative 1, would not result in adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological

resources, and no NRHP-eligible sites were identified within Main Base due to a high degree of previous disturbance and presence of impervious surfaces (Grover et al. 1996; Reynolds et al. 2022). The installation's two NRHP-eligible sites, 9LW63 and 9LW71, are on the east side of the runways and are not in proximity to the project. Therefore, Project 4, Alternative 1, would not physically affect any NRHP-eligible archaeological sites.

The project includes demolition of Buildings 732, 752, 755, and 756. Buildings 732 and 752 were constructed in 1997 and 1994, respectively. Neither building is 50 years old or will become 50 years old during the course of the proposed project and, therefore, do not require evaluation. Building 755 was constructed in 1962 and was previously determined ineligible (Hersch 2011). Building 756 was constructed in 1977 and has not yet been evaluated and could potentially turn 50 years old before the Project 4, Alternative 1, is completed. Therefore, Moody AFB will complete an evaluation prior to the proposed building demolition.

The two NRHP-eligible architectural resources (Facility 618 and Building 110) would not be physically altered for Project 4, Alternative 1. At its closest point, the proposed new construction would be approximately 1,300 feet southeast of the water tower (Facility 618). Therefore, Project 4, Alternative 1, will have no effect on the two NRHP-eligible buildings.

3.10.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

Project 4, Alternative 2, would not result in adverse effects to historic properties. The proposed construction areas have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified within the cantonment area due to a high degree of previous disturbance and presence of impervious surfaces (Grover et al. 1996; Reynolds et al. 2022). The two NRHP-eligible sites, 9LW63 and 9LW71, are on the east side of the runways and are not proximate to the project. Therefore, Project 4, Alternative 2, would not physically affect any NRHP-eligible archaeological sites.

This alternative would include demolition of Building 755 only and construction of an adjacent shop. Building 755 was constructed in 1962 and was previously determined to be ineligible for the NRHP (Hersch 2011). The two NRHP-eligible architectural resources (Facility 618 and Building 110) would not be physically altered for Project 4, Alternative 2. At its closest point, new construction associated with the proposed project would be approximately 1,300 feet southeast of the water tower (Facility 618). Therefore, Project 4, Alternative 2, would have no effect on the two NRHP-eligible buildings.

3.10.2.11 Project 4, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction, ground-disturbing activities, or increased personnel activities.

3.10.2.12 Project 5, Alternative 1: Burma Road Realignment

Project 5, Alternative 1, would not result in adverse effects to historic properties. The proposed construction areas have been previously surveyed for archaeological resources, and no NRHP-

eligible sites were identified within the construction footprint or within 100 feet (Grover et al. 1996; Reynolds et al. 2022). The nearest site to the proposed Burma Road realignment construction area is Site 9LW225, located approximately 275 feet to the southeast. This site was determined to be ineligible for the NRHP (Reynolds et al. 2022). The installation's two NRHP-eligible sites, 9LW63 and 9LW71, are also not within potential disturbance areas. Site 9LW63 is located more than 500 feet to the east and would not be physically impacted. Therefore, Project 5, Alternative 1, would not physically affect any NRHP-eligible archaeological sites.

Moody AFB's only two NRHP-eligible architectural resources (Facility 618 and Building 110) would not be physically altered by the project. In addition, the eligible buildings are approximately 1 mile north of any proposed construction activities. Therefore, Project 5, Alternative 1, would have no effect on the two NRHP-eligible buildings.

3.10.2.13 Project 5, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction, ground-disturbing activities, or increased personnel activities.

3.10.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

Project 6, Alternative 1, would not result in adverse effects to historic properties. The proposed construction area for the parking lot has been previously surveyed for archaeological resources and no sites were identified within the construction footprint or within 100 feet (Grover et al. 1996; Reynolds et al. 2022). Moody AFB's two NRHP-eligible sites, 9LW63 and 9LW71, are both located on the east side of the runway and are not proximate to the proposed construction area. Therefore, Project 6, Alternative 1, would not physically affect any NRHP-eligible archaeological sites.

The only two NRHP-eligible architectural resources (Facility 618 and Building 110) would not be physically altered by the proposed project. Building 110 is located approximately 350 feet to the west of the proposed parking lot and Facility 618 is located approximately 1,000 feet south. As noted in previous architectural surveys, the installation has an evolving built environment with newer construction proximate to both NRHP-eligible buildings. Construction of the parking lot has no potential to result in an adverse visual effect. Therefore, Project 6, Alternative 1, would have no effect on the two NRHP-eligible buildings.

3.10.2.15 Project 6, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction, ground-disturbing activities, or increased personnel activities.

3.10.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

Project 7, Alternative 1, would not result in adverse effects to historic properties. The drainage improvement areas include areas where subsurface structures would be repaired or replaced within their existing footprint. Two small aboveground components would be demolished in the

southern part of the airfield. All areas proposed for ground disturbance have been previously surveyed for archaeological sites. No sites were identified within the construction footprint of the drainage areas or within 100 feet (Grover et al. 1996; Reynolds et al. 2022). The two NRHP-eligible sites, 9LW63 and 9LW71, are both located on the east side of the runway and are more than 500 feet from any proposed ground disturbance or construction areas. Therefore, Project 7, Alternative 1, would not physically affect any NRHP-eligible archaeological sites.

The two NRHP-eligible architectural resources (Facility 618 and Building 110) would not be physically altered by the project. Facility 618 is the closest resource to the drainage improvement areas and is located approximately 350 feet to the northwest. As noted in previous architectural surveys, the installation has an evolving built environment with newer construction proximate to both NRHP-eligible buildings. Therefore, Project 7, Alternative 1, would have no effect on the two NRHP-eligible resources.

3.10.2.17 Project 7, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction or ground-disturbing activities.

3.10.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

Project 8, Alternative 1, would not result in adverse effects to historic properties. The proposed Mission Lake water barrier and Stone Road repairs are in areas that have been previously surveyed for archaeological sites. No sites were identified within the construction footprint within 100 feet (Grover et al. 1996; Reynolds et al. 2022). The nearest archaeological site is 9LW87, approximately 900 feet to the south. This site is located off Moody AFB property and was determined to be ineligible for the NRHP (Hendryx et al. 2005). The two NRHP-eligible sites, 9LW63 and 9LW71, are both located on the east side of the runway and more than 4,000 feet east from any proposed ground disturbance or construction areas. Therefore, Project 8, Alternative 1, would not physically affect any NRHP-eligible archaeological sites.

The two NRHP-eligible architectural resources (Facility 618 and Building 110) would not be physically altered by the project, and both are located beyond the visibility of the proposed project. Therefore, Project 8, Alternative 1, would have no effect on the two NRHP-eligible resources.

3.10.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

Project 8, Alternative 2, would not result in adverse effects to historic properties. The potential effects to historic properties would be the same as described for Project 8, Alternative 1.

3.10.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

Project 8, Alternative 3 would not result in adverse effects to historic properties. The potential effects to historic properties would be the same as described for Project 8, Alternative 1.

3.10.2.21 Project 8, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction or ground-disturbing activities.

3.10.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

Project 9, Alternative 1 would not result in adverse effects to historic properties. The proposed construction areas for this alternative have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified (Grover et al. 1996; Reynolds et al. 2022). The closest recorded archaeological site to any part of the construction area is Site 9LW220, located in a wooded area approximately 50 feet east of the southern fence line. Recorded by Reynolds et al. (2022), it was determined to be ineligible for the NRHP. Site 9LW245, also recorded by Reynolds et al. (2022), is located within 200 feet of the northern portion of the fence line, but it is on the west side of Bemiss Road. It was also determined to be ineligible for the NRHP. The installation's two NRHP-eligible sites, 9LW63 and 9LW71, are on the east side of the runways and are not proximate to the project. Therefore, Project 9, Alternative 1, would not physically affect any NRHP-eligible archaeological sites.

The two NRHP-eligible architectural resources (Facility 618 and Building 110) would not be physically altered for Project 9, Alternative 1. At its closest point, vegetation removal and driving lane construction would be approximately 2,500 feet east of the proposed project area. Therefore, Project 9, Alternative 1, would have no effect on the two NRHP-eligible buildings.

3.10.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

Project 9, Alternative 2, would not result in adverse effects to historic properties. The potential effects to historic properties would be the same as described for Project 9, Alternative 1.

3.10.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

Project 9, Alternative 3, would not result in adverse effects to historic properties. The potential effects to historic properties would be the same as described for Project 9, Alternative 1.

3.10.2.25 Project 9, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction or ground-disturbing activities.

3.10.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

Project 10, Alternative 1, would not result in adverse effects to historic properties. The proposed demolition areas have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified due to a high degree of previous disturbance and presence of impervious surfaces (Grover et al. 1996; Reynolds et al. 2022). The two NRHP-eligible sites, 9LW63 and 9LW71, are on the east side of the runways and are not proximate to the project.

One small building (Building 1145) is located approximately 500 feet to the southeast of Site 9LW71; however, no demolition activities would occur within or near the eligible site. Therefore, Project 10, Alternative 1, would not physically affect any NRHP-eligible archaeological sites.

The project includes demolition of Buildings 153, 200, 656, 707, 720, 760, 762, 763, 798, 961, and 1145. All the buildings except for 961 were constructed in 1981 or later (see **Table 2-2**). None are presently 50 years of age and will not be 50 years of age prior to the completion of the project. Most buildings are also small (less than 500 square feet) support buildings. These buildings do not require evaluation at this time and would not be affected by the project. Building 961 was constructed in 1963; this is a small structure (less than 300 square feet) that was near 50 years of age during the Messick (1999) survey. It was not identified as a historic property and, therefore, is not eligible for the NRHP.

The two NRHP-eligible architectural resources (Facility 618 and Building 110) would not be physically altered for Project 10, Alternative 1. No demolition activities would occur within 900 feet of either eligible resource. Therefore, Project 10, Alternative 1, would have no effect on the two NRHP-eligible buildings.

3.10.2.27 Project 10, No Action Alternative

Under the No Action Alternative, there would be no effect on any cultural resources because there would be no construction, ground-disturbing activities, or clearance of vegetation.

3.10.2.28 Cumulative Actions and Other Considerations

There would be no reasonably foreseeable impacts on cultural resources from the proposed construction, renovation, repair, and demolition of facilities and infrastructure at Moody AFB. All reasonably foreseeable projects proposed on Moody AFB would be subject to Section 106 of the NHPA, and each proposed project would be evaluated to ensure no adverse effects on historic properties. Impacts on cultural resources from proposed highway maintenance projects off-base could occur; however, the maintenance projects are proposed within existing highway rights-of-way in previously disturbed areas making impacts on cultural resources unlikely.

3.11 Infrastructure

See **Appendix C-8 f**or the definition of this resource.

3.11.1 Affected Environment

Electrical System. Electricity is provided to Moody AFB via two 115-kilovolt feeders that supply power from Georgia Transmission-owned substations located off the base. A single, three-phase, 12-megavolt-ampere transformer steps the voltage down from 115 kilovolts to 12,470 volts for distribution throughout the base via five primary circuits. These circuits are sized so that each can assume at least one additional circuit load. With some load shed, three circuits can assume the load of all five circuits even in the most heavily loaded season (Moody AFB 2015b).

Although there are two connections to the grid, the lone transformer acts as a single point of failure for the base. Backup generation capacity is available for mission-critical buildings for three to seven days, and some of the larger buildings utilize generators for load shedding. It is estimated that in case of failure, a backup transformer would be in place in less than six hours.

Overall, the electrical distribution system is in good condition. The majority of the distribution is underground (Moody AFB 2015b).

Natural Gas System. Natural gas at Moody AFB is supplied through a contract managed by the Defense Energy Support Center and is distributed through approximately 10.6 miles of gas line on the Main Base. In addition, when high regional demand reduces the availability of natural gas, a propane-air mix system is utilized to meet the thermal energy demands of the base (Moody AFB 2015b).

Family housing gas distribution was privatized in 2004 and has approximately 5 miles of natural gas line. The facilities east of the flight line are currently served by individual propane tanks as there is no natural gas connection.

Gas is supplied to Moody AFB through the utility's regulator and metering station via an 8-inch-diameter buried polyvinyl chloride (PVC) line. System pressure is maintained at about 120 pounds per square inch in winter and summer. The Main Base consumes approximately 27.16 million thousand cubic feet annually, based on average consumption for fiscal years 2012 and 2013. Peak average consumption of approximately 7.98 million thousand cubic feet per month occurs in December, January, and February, and the average base gas demand of approximately 2.23 million thousand cubic feet per month occurs in June through September (Moody AFB 2015b).

Approximately 90 percent of the main lines in the Administrative Area are polyethylene plastic and in excellent condition. An engineering condition assessment conducted in the early 2000s verified that the gas mains on the base are in adequate condition. The small remaining sections of steel pipe are planned to be replaced by polyethylene pipe in upcoming projects (Moody AFB 2015b).

Liquid Fuel. Moody AFB's existing petroleum distribution system was developed to accommodate multiple flying missions, and since construction it has accommodated a variety of training and combat aircraft. JP-8 fuel storage consists of four steel aboveground storage tanks (ASTs) for jet fuel that total more than 945,000 gallons and were constructed in 1953, then upgraded for operational and environmental needs in 2006. A 5,000-gallon JP-8 tank was also built in 1977. The fill-stand system consists of four 600-gallon-per-minute pumps; four 600-gallon-per-minute filter separators; a combination of aboveground and underground piping; and pantograph issue points with isolation valves and ground prover systems. A JP-8 100 injector system was removed in early 2014.

The military service station was demolished and replaced with a modern four-tank/four-fuel (motor gasoline, E-85, diesel, and biodiesel) facility. The Army/Air Force Exchange Service

fueling station has three 12,000-gallon unleaded underground storage tanks (USTs) with six dual dispensing units (Moody AFB 2015b).

Potable Water System. The abundant aquifer water supply is available year round and is currently accessed via three main wells operating at less than 50 percent capacity (estimated) and six secondary wells throughout the base. The well water is made safe as a potable source by Moody AFB's nanofiltration plant, which removes organic carbon to eliminate the formation of trihalomethanes. Moody AFB can currently supply a maximum of approximately 750,000 gallons per day from the aquifer to meet peak demands. Moody AFB's estimated peak demand is approximately 230,000 gallons per day, and average demand is 200,000 gallons per day. Nonpotable water byproducts of the filtration process are utilized for site irrigation, lowering the site's demand for potable water.

The water storage capacity of 11.4 million gallons and the Main Base's distribution network of 10- and 12-inch-diameter pipes are adequate to meet existing needs and accommodate significant future growth. The original water distribution system was constructed in the 1950s. Throughout the history of the base, portions of the original system have been replaced; however, some of the water lines still in use were installed in the 1970s or earlier. The distribution pipe is generally in adequate condition (Moody AFB 2015b).

Wastewater System. The wastewater treatment facility and infrastructure were initially installed in the 1940s, and the facility underwent significant upgrades in 1995, 2012, and 2023. The upgrades increased the capacity of the system to 750,000 gallons per day, with additional space available in the facility for future capacity expansion if required. A project included the addition of a lift station. The wastewater treatment plant had a significant upgrade in 2023 to install an ammonia polisher and a sulfuric acid injection facility to meet new permit effluent limits. A NPDES permit was issued for the facility, allowing effluent discharge at an average rate of 0.75 million gallons per day with a maximum of 1.125 million gallons per day, equivalent to the capacity of the plant. The current demand is approximately 180,000 gallons per day; therefore, the wastewater system is capable of fully supporting the current mission of assigned units, organizations, and tenants with no workarounds, and offers additional capacity to meet potential future mission requirements (Moody AFB 2015b).

There are approximately 131,500 linear feet of sewer lines, composed mostly of cast-iron, PVC, and asbestos cement and supported by 27 lift stations. Wastewater collection infrastructure is in good condition; however, because all collection lines utilize a single lift station in the northwest portion of the base (near Building 207), the system could suffer significant disruption if that station were to go offline. After treatment, the wastewater is discharged into Beatty Branch.

A few facilities on the base are still using on-site wastewater treatment systems. There are two functional septic tanks at Moody AFB located at Building 1720 at the south end of the airfield and at Building 1501, a communications receiver building to the east of the airfield runways. There are eight wastewater collection tanks at Moody AFB that are associated primarily with industrial facilities (Moody AFB 2015b).

Solid Waste Management. The Evergreen Municipal Solid Waste Landfill, located in Lowndes County, is utilized by Moody AFB for disposal of municipal solid waste, which includes household refuse. This landfill receives an average of 1,223 tons per day and has a projected life expectancy of 45 years (GEPD 2022). In addition, the Atkinson County Landfill and the Fitzgerald Landfill located in Ben Hill County, Georgia, are permitted to accept construction debris. Construction debris includes waste building materials and rubble resulting from construction activities. These landfills also accept tree trimmings and wood debris. The average daily tonnage and life expectancy for the Atkinson County Construction and Debris Landfill is 113 tons per day for 1 year, and for the Fitzgerald Construction and Demolition Landfill is 4.17 tons per day for 15 years (GEPD 2022).

Communications System. Moody AFB meets all radio frequency requirements for all very-high-frequency and high-frequency bands. Tactical land mobile radio, air-to-ground, point-to-point, navigational aid systems, nontactical land mobile radio, and long-haul communications: all are capable of supporting the current mission of assigned units, organizations, and tenants with minimal workarounds (Moody AFB 2015b).

Moody AFB has expanded the use of fiber-optic cable significantly, including a connection to the range. New buildings have voice-over-internet-protocol (VoIP) systems, nonclassified Internet protocol router networks (known as NIPRNet) for all workstations, and mass notification systems. Bandwidth on the secret internet protocol router network (i.e., SIPRNET) is being expanded, and voice-over-secure-internet-protocol (VoSIP) systems are being installed. Uptime for the communications systems hovers right around 98 to 99 percent. The Communications Squadron is continually building infrastructure to improve connectivity throughout the installation. There is sufficient capacity in the main communications hub for further expansion of the network (Moody AFB 2015b).

Transportation. The area surrounding Moody AFB is rural. The primary access road to Moody AFB is Georgia State Route 125, which runs south to the city of Valdosta and connects to Interstate 75 (**Figure 3-8**). There are approximately 39 miles of roads on Moody AFB laid out in a wagon wheel design bounded by Robbins Road, Savannah Street, and Georgia Street. The existing training areas are serviced by secondary and tertiary roadways within the installation. These access roads have limited use and are free from congestion. There are no major road capacity issues on roadways on or adjacent to Moody AFB (Moody AFB 2015b).

There are four operational entry control facilities at Moody AFB (**Figure 3-8**). The Davidson Road Gate, which is located at the south end of the base, is accessible by Davidson Road from State Route 125 and is used by base personnel, visitors, and commercial vehicles. The Davidson Road Gate receives the majority of noncommercial and nonvisitor traffic, as most personnel live south of Moody AFB. The secondary public point of entry is the Mitchell Boulevard Gate, located to the north at the intersection of Mitchell Boulevard and State Route 125. The Robbins Road Gate is only open from 4:00 p.m. to 6:00 p.m. weekdays, and the Cemetery Gate is used only for special events, such as the air show. A fifth gate, the Contractor’s Gate, is east on Hightower Road, and is used on a limited basis to allow contractor

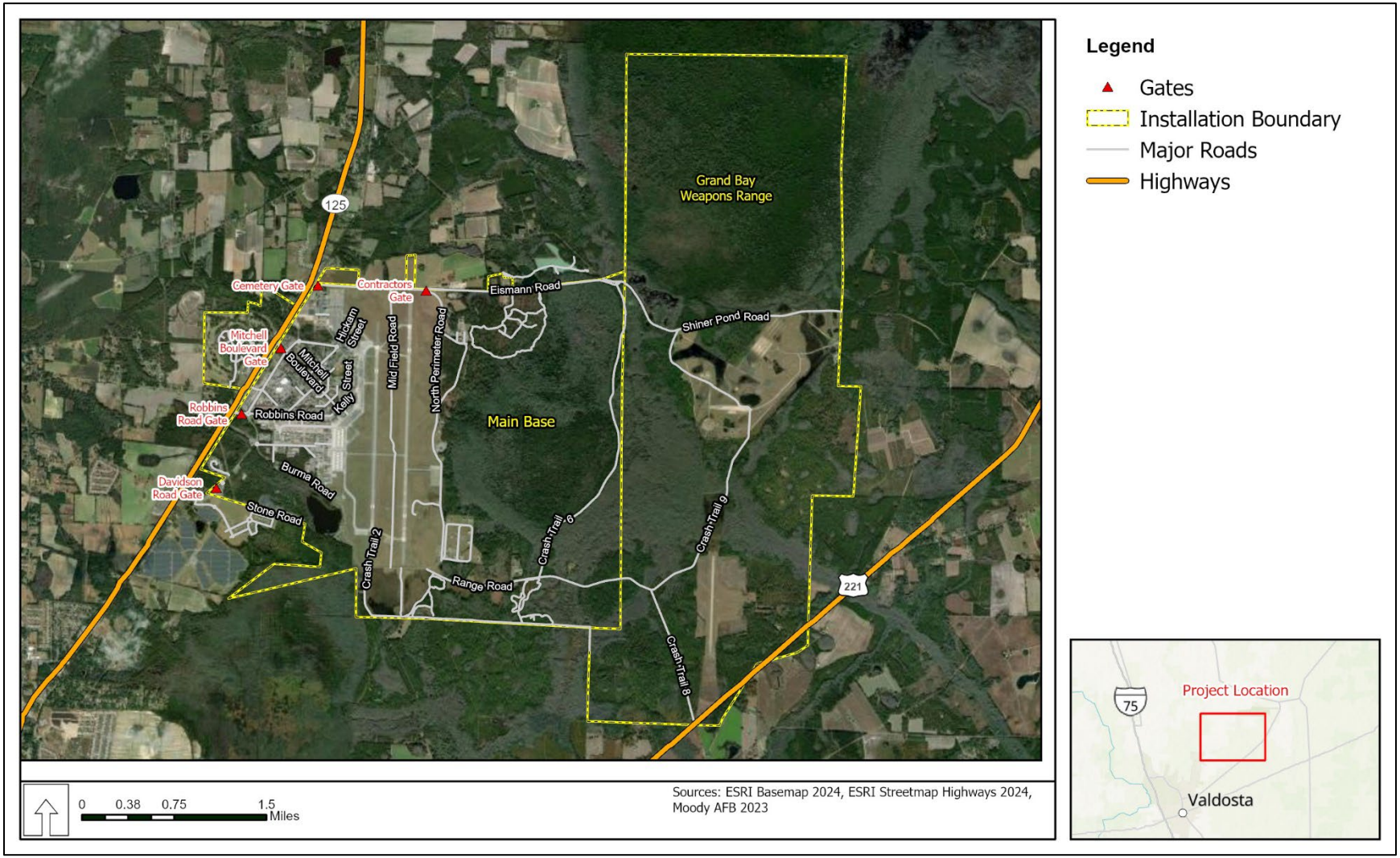


Figure 3-8. Transportation Network at Moody Air Force Base, Georgia

vehicles access to the east side of the airfield. Traffic flow at the gates is adequate, with some congestion during the a.m. and p.m. peak traffic periods (Moody AFB 2015b).

3.11.2 Environmental Consequences

Impacts on infrastructure from the Proposed Action are evaluated for their potential to disrupt or improve existing levels of service in the ROI, as well as generate additional requirements for energy or water consumption, and for impacts on resources such as sanitary sewer systems. The Proposed Action would result in an adverse impact to utilities or services if the project required more than the existing infrastructure could provide or required services in conflict with adopted plans and policies for the area. The effects on transportation and traffic would be considered significant if an alternative resulted in (1) a substantial increase in on- or off-base traffic or (2) substantial congestion on or around Moody AFB.

3.11.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

The construction of a squadron operations facility, building additions, and building renovations would have short-term, negligible, adverse impacts on transportation and utilities. There would be no modification or change in use of Moody AFB's electric, natural gas, communication distribution, or water and wastewater systems. However, short-term utility interruptions could occur as electric, water, sewer, gas, and communication lines are brought to the 38 RQS facility. There would be no long-term change in Moody AFB's solid waste management. Some debris and other solid waste would be generated during construction activities; however, construction debris would be disposed of at the Evergreen Landfill, Atkinson County Landfill, or the Fitzgerald Landfill. The construction and use of consolidated squadron operations facility would not modify these systems or place additional strain on their capacity.

There would be increased vehicle traffic at the Moody AFB gates during construction activities. This would include POVs used by construction workers, and trucks hauling materials and equipment. This impact on vehicle traffic at the Moody AFB gates would be limited to the period of construction and would cease at the end of construction activities.

3.11.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

The impacts on infrastructure, including transportation, would be similar to those described for Project 1, Alternative 1, because a 38 RQS operations facility would be constructed at different location but using similar equipment and materials. There would be short-term, negligible, adverse impacts on transportation and utilities.

3.11.2.3 Project 1, No Action Alternative

Under the No Action Alternative, there would be no construction of a consolidated 38 RQS operations facility. Therefore, there would be no impacts on infrastructure at Moody AFB

3.11.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

The impacts on infrastructure, including transportation, would be similar to those described for Project 1, Alternative 1, because additional paved areas and new facilities would be constructed using similar equipment and materials. However, there would be a shorter construction timeline and less construction debris generated for disposal in regional landfills than Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on transportation and utilities.

3.11.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

The impacts on infrastructure, including transportation, would be similar to those described for Project 2, Alternative 1, but with a slightly shorter construction time period without the construction of a truck driving pad. There would be short-term, negligible, adverse impacts on transportation and utilities.

3.11.2.6 Project 2, No Action Alternative

Under the No Action Alternative, there would be no construction of AFTF improvements. Therefore, there would be no impacts on infrastructure at Moody AFB.

3.11.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

The impacts on infrastructure, including transportation, would be similar to those described for Project 1, Alternative 1, because additional new facilities would be constructed using similar equipment and materials. However, there would be less construction debris generated for disposal in regional landfills than Project 1, Alternative 1, because no existing facilities would be renovated or demolished, and the overwatch position facilities are smaller in size. There would be short-term, negligible, adverse impacts on transportation and utilities.

3.11.2.8 Project 3, No Action Alternative

Under the No Action Alternative, there would be no construction of gate overwatch positions. Therefore, there would be no impacts on infrastructure at Moody AFB.

3.11.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

The impacts on infrastructure, including transportation, would be similar to those described for Project 1, Alternative 1, because additional new facilities would be constructed using similar equipment and materials. However, there would be more construction debris generated for disposal in regional landfills than Project 1, Alternative 1, because more buildings would be demolished to construct the consolidated AGE facility. There would be short-term, negligible, adverse impacts on transportation and utilities.

3.11.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

The impacts on infrastructure, including transportation, would be similar to those described for Project 4, Alternative 1, because additional new facilities would be constructed using similar equipment and materials. However, less building demolition would occur generating slightly less materials to be transported and disposed of in regional landfills. There would be short-term, negligible, adverse impacts on transportation and utilities.

3.11.2.11 Project 4, No Action Alternative

Under the No Action Alternative, there would be no construction of a consolidated AGE facility. Therefore, there would be no impacts on infrastructure at Moody AFB.

3.11.2.12 Project 5, Alternative 1: Burma Road Realignment

The construction of the Burma Road realignment and tree removal would have short-term, negligible, adverse impacts on transportation and no impacts on utilities. There would be no modification or change in use of Moody AFB's electric, natural gas, communication distribution, or water and wastewater systems. There would be no long-term change in Moody AFB's solid waste management. Debris from the road removal would be generated during construction activities; however, construction debris would be disposed of at the Evergreen Landfill, Atkinson County Landfill, or the Fitzgerald Landfill. Trees removed from the CZ would be processed off the site, used for lumber or mulch, and most of the woody material would not end up in a landfill.

There would be increased vehicle traffic at the Moody AFB gates during construction activities. This would include POVs used by construction workers, and trucks hauling materials and equipment. This impact on vehicle traffic at the Moody AFB gates would be limited to the period of construction and would cease at the end of construction activities.

3.11.2.13 Project 5, No Action Alternative

Under the No Action Alternative, there would be no realignment of Burma Road and removal of trees in the CZ. Therefore, there would be no impacts on infrastructure at Moody AFB.

3.11.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

The construction of a new parking lot to support the 38 RQS, including 10 electric charging stations for POVs, would have short-term, negligible, adverse impacts on transportation and utilities. There would be no modification or change in use of Moody AFB's natural gas, communication distribution, solid waste, or water and wastewater systems. However, short-term utility interruptions could occur as electric lines are brought to the 10 electric charging stations. The electrical use by electric POVs at the 10 electric charging stations would not have any impact on the electrical grid or availability at Moody AFB as there is adequate supply and distribution to support this additional use.

There would be increased vehicle traffic at the Moody AFB gates during construction activities. This would include POVs used by construction workers, and trucks hauling materials and equipment. This impact on vehicle traffic at the Moody AFB gates would be limited to the period of construction and would cease at the end of construction activities.

3.11.2.15 Project 6, No Action Alternative

Under the No Action Alternative, there would be no new parking lot construction to support the 38 RQS. Therefore, there would be no impacts on infrastructure at Moody AFB.

3.11.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

The repairs to the airfield stormwater system would have short-term, negligible, adverse impacts on transportation; long-term, minor, beneficial impacts on the stormwater system; and no impacts on utilities. There would be no modification or change in use of Moody AFB's electric, natural gas, communication distribution, or water and wastewater systems. The repairs to belowground stormwater structures would improve stormwater flow throughout the airfield.

There would be no long-term change in Moody AFB's solid waste management. Debris from the removal of belowground culverts and drainage features and the removal of the two concrete structures in the CZ would be generated during construction activities; however, construction debris would be disposed of at the Evergreen Landfill, Atkinson County Landfill, or the Fitzgerald Landfill.

There would be increased vehicle traffic at the Moody AFB gates during construction activities. This would include POVs used by construction workers, and trucks hauling materials and equipment. This impact on vehicle traffic at the Moody AFB gates would be limited to the period of construction and would cease at the end of construction activities.

3.11.2.17 Project 7, No Action Alternative

There would be no repairs to the belowground stormwater structures at the airfield under the Proposed Action. Therefore, there would be no impacts on infrastructure at Moody AFB.

3.11.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

The impacts on infrastructure, including transportation, would be similar to those described for Project 5, Alternative 1, because repairs to the Mission Lake water barrier and Stone Road would occur using similar equipment and materials. However, the construction debris to be disposed of would consist entirely of road materials such as concrete and asphalt. There would be short-term, negligible, adverse impacts on transportation and no impacts on other infrastructure.

3.11.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

The impacts on infrastructure, including transportation, would be similar to those described for Project 8, Alternative 1, because repairs to the Mission Lake water barrier and Stone Road would occur using similar equipment and materials. However, less road material construction debris would be generated and transported to local landfills. There would be short-term, negligible, adverse impacts on transportation and no impacts on other infrastructure.

3.11.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

The impacts on infrastructure, including transportation, would be similar to those described for Project 8, Alternative 1, because repairs to the Mission Lake water barrier and Stone Road would occur using similar equipment and materials. However, less road material construction debris would be generated and transported to local landfills. There would be short-term, negligible, adverse impacts on transportation and no impacts on other infrastructure.

3.11.2.21 Project 8, No Action Alternative

There would be no repairs to the Mission Lake water barrier and Stone Road under the No Action Alternative. Without the repairs, the Mission Lake water barrier would degrade and further damage to Stone Road would occur. The portion of Stone Road that crosses the Mission Lake water barrier would become too unsafe for vehicular travel and be closed. Therefore, the No Action Alternative would have a long-term, minor, adverse impact on transportation at Moody AFB and no impact on other infrastructure.

3.11.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

The impacts on infrastructure, including transportation, would be similar to those described for Project 5, Alternative 1, because the removal of woody vegetation and construction of a driving lane along the western base boundary fence would occur using similar equipment and materials. Trees removed from the boundary fence line would be processed off the site and used for mulch or lumber. There would be less construction debris disposed of at local landfills than under Project 5, Alternative 1. There would be short-term, negligible, adverse impacts on transportation and no impacts on other infrastructure.

3.11.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

The impacts on infrastructure, including transportation, would be similar to those described for Project 9, Alternative 1, because the removal of woody vegetation would occur using similar equipment and materials. However, without the construction of a driving lane and removal of half as much woody vegetation, the length of construction activities and associated impacts on the base transportation network would be shorter. There would be short-term, negligible, adverse impacts on transportation and no impacts on other infrastructure.

3.11.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

The impacts on infrastructure, including transportation, would be similar to those described for Project 9, Alternative 1, because the removal of woody vegetation would occur using similar equipment and materials. However, without the construction of a driving lane, the length of construction activities and associated impacts on the base transportation network would be shorter. There would be short-term, negligible, adverse impacts on transportation and no impacts on other infrastructure.

3.11.2.25 Project 9, No Action Alternative

Under the Proposed Action, there would be no vegetation clearance or construction of a driving lane along the western base boundary fence. Therefore, there would be no impacts on infrastructure at Moody AFB.

3.11.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

The impacts on infrastructure, including transportation, would be similar to those described for Project 1, Alternative 1, because the demolition of 11 buildings would occur at different locations but using similar equipment and materials. There would be short-term, negligible, adverse impacts on transportation and utilities.

3.11.2.27 Project 10, No Action Alternative

Under the No Action Alternative, there would be no demolition of the 11 buildings on Moody AFB. Therefore, there would be no impacts on transportation or utilities.

3.11.2.28 Cumulative Actions and Other Considerations

Construction and demolition activities associated with the 10 proposed projects composing the Proposed Action, in combination with other reasonably foreseeable infrastructure construction projects at Moody AFB as well as off-base proposed transportation maintenance projects, would have short-term, minor, cumulative adverse impacts on transportation and other utilities, including solid waste management. Assuming the Proposed Action and the other proposed construction projects at Moody AFB occur simultaneously, there would be an increase in POV and construction equipment traffic at Moody AFB gates. Typically, construction worker commutes occur at times that are earlier than both the morning and afternoon commute times, reducing some of the potential adverse impacts this vehicular traffic would have at the Moody AFB gates. When these construction activities cease, so would the associated increase in vehicular traffic.

Additionally, these construction projects would generate construction and demolition debris that would adversely impact solid waste management. The local landfills that accept construction and demolition materials have the capacity to handle any excess debris that cannot be reused on the base for other projects. Regardless, the large volume of additional debris material brought to the landfill would have a short-term, cumulative impact on landfill management.

All other base infrastructure has adequate capacity to handle the proposed projects, and there would not be any long-term cumulative impacts on heating and cooling systems, electrical systems, communication systems, potable water and wastewater systems, or stormwater systems.

3.12 Hazardous Materials and Wastes, Environmental Restoration Program, and Toxic Substances

See **Appendix C-9** for the definition of this resource.

3.12.1 Affected Environment

Hazardous Materials. Hazardous and toxic material procurements at Moody AFB are approved and tracked by the Moody AFB 23d Civil Engineer Squadron, Installation Management Flight, Environmental Management Element (CES/CEIE), which has overall management responsibility for the installation environmental program. The Bioenvironmental Engineering Element of Preventative Medicine Flight provides support from a strictly health perspective and participates in the Hazardous Materials Management Process (US Air Force 2016).

The Hazardous Materials Management Program includes a network of safety, environmental, and logistics experts working with hazardous materials managers, unit environmental coordinators, and other hazardous materials users to ensure safe and compliant hazardous materials management throughout the base. A contracted hazardous material pharmacy (HAZMART) ensures that only the smallest quantities of hazardous materials necessary to accomplish the mission are purchased and used. HAZMART is located at 4393 Georgia Street.

The 23d CES/CEIE maintains the Hazardous Waste Management Plan (US Air Force 2016) as directed by AFMAN 32-7002, *Environmental Compliance and Pollution Prevention,* and complies with 40 CFR 260 to 272. This plan prescribes the roles and responsibilities of all members of the Hazardous Materials Management Program with respect to the waste stream inventory, Waste Analysis Plan, hazardous waste management procedures, training, emergency response, and pollution prevention. The Hazardous Waste Management Plan establishes the procedures to comply with applicable federal, state, and local standards for solid waste and hazardous waste management. The plan outlines procedures for transport, storage, and disposal of hazardous wastes. Hazardous materials and petroleum products such as fuels, flammable solvents, paints, corrosives, pesticides, deicing fluid, refrigerants, and cleaners are used throughout Moody AFB for various functions, including aircraft maintenance, aircraft ground equipment maintenance, and ground vehicle, communications infrastructure, and facilities maintenance. Hazardous materials at Moody AFB are managed by the HAZMART. The Enterprise Environmental, Safety, and Occupational Health Management Information System tracks acquisition and inventory control of hazardous materials for units based at Moody AFB.

Hazardous Waste. Hazardous wastes generated at Moody AFB include flammable solvents, contaminated fuels and lubricants, paint/coating, stripping chemicals, oils, paint-related materials, mixed solid waste, and other miscellaneous wastes. Certain types of hazardous wastes are subject to special management provisions intended to ease the management burden

and facilitate the recycling of such materials. These are called “universal wastes,” and their associated regulatory requirements are specified in 40 CFR 273. Types of waste currently covered under the universal waste regulations include fluorescent light tubes, hazardous waste batteries, hazardous waste thermostats, hazardous waste lamps, and aerosol cans.

Facilities at Moody AFB generate varying amounts of hazardous waste as a large-quantity generator as defined by the USEPA (40 CFR 260.10). Moody AFB operates 74 satellite accumulation points where up to 55 gallons of “total regulated hazardous wastes” or up to 1-quart of “acutely hazardous wastes” are accumulated. The installation operates one 90-day central accumulation point, where hazardous waste accumulates before being transported off-installation for ultimate disposal (US Air Force 2016). Four of the facilities in the ROI contain satellite accumulation points (Buildings 606, 609, 663, and 755).

An inventory of ASTs and USTs is maintained at Moody AFB and includes the location, contents, capacity, containment measures, status, and installation dates (US Air Force 2016). Management of all oil handling, storage, and transfer activities on Moody AFB and for oil pollution prevention both on and off Moody AFB is conducted following the requirements of the *23d Wing Integrated Contingency Plan* (Moody AFB 2020). The inventory of ASTs and USTs was evaluated relative to the proposed projects, and a used oil storage tank and a small oil/water separator tank are located between Buildings 755 and 805, and Buildings 756 and 805, respectively. Neither of these tanks would be impacted or modified by the proposed projects.

Environmental Restoration Program/Military Munitions Response Program. Moody AFB began its ERP in 1982 with environmental assessment and restoration activities; today Moody AFB has 31 closed ERP sites and 1 closed Military Munitions Response Program site, none of which required remediation. An additional 11 ERP sites have ongoing corrective action and have Land Use Controls associated with them.

Five ERP sites overlap with the proposed projects (**Figure 3-9** and **Table 3-28**).

Toxic Substances. Toxic substances might pose a risk to human health but are not regulated as contaminants under the hazardous waste statutes. Included in this category are asbestos-containing materials (ACM), lead-based paint (LBP), radon, and polychlorinated biphenyls (PCBs). Asbestos has not been used in construction materials since 1989, and lead has not been used as an additive to paint and pigment since 1978. Only buildings older than these dates have the potential to contain ACM and LBP; this includes Buildings 556, 609, 755, 756, and 961 for both ACM and LBP, and Buildings 707, 720, 760, and 763 for ACM only. Building 720 is a metal shed on a concrete slab; because of the type of construction, there are no ACM concerns with this building. Building 756 was sampled for ACM in 2007, and one of the sampled materials contained asbestos. The remaining buildings have not been tested for ACM or LBP.

Moody AFB is in radon zone 3, which is the lowest USEPA level with expected radon levels at or below 2 picocuries per liter (pCi/L); radon is not a toxic substance of concern at facilities at Moody AFB. Moody AFB has been considered PCB free since 1991 (US Air Force 1991). Therefore, the impacts of PCBs are not considered further.

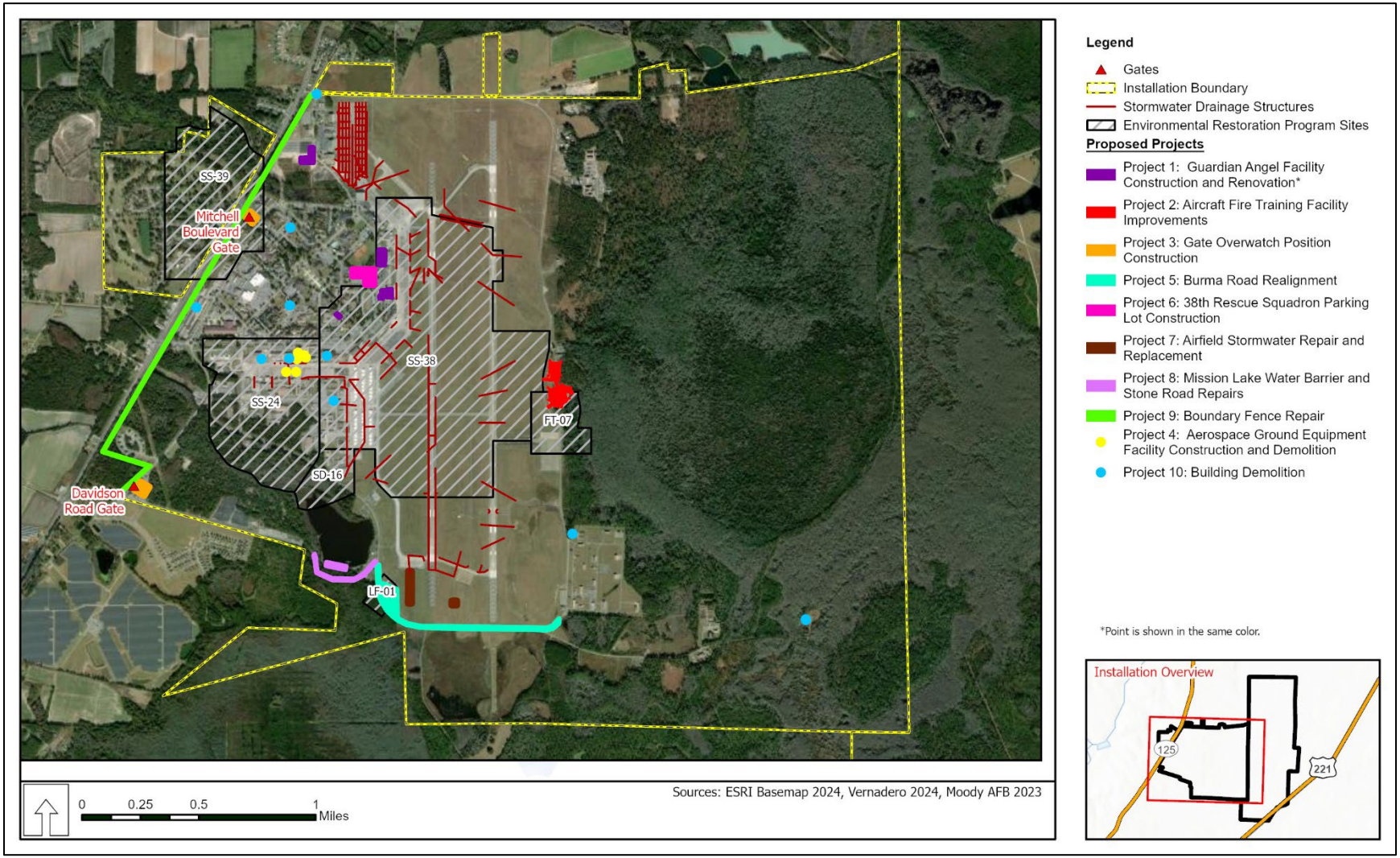


Figure 3-9. Environmental Restoration Program Sites Proximate to the Proposed Projects at Moody Air Force Base

Table 3-28. Environmental Restoration Program Sites Associated with the Proposed Action

Site Identification	Site Description	Land Use Controls	Overlapping Proposed Projects
FT-07, Former Fire Training Area	FT-07 groundwater is divided into two areas, designated as Areas 1 and 2. Area 2 includes two treatment locations, A and B. The primary contaminants in Area 1 are benzene and trichloroethylene (TCE), and the primary contaminants in Area 2 are TCE, cis-1,1-dichloroethene (DCE), and associated biodegradation products. Groundwater monitoring is ongoing at this site.	Land disturbance is restricted and groundwater use is prohibited.	Project 2
LF-01, Burma Road Landfill	LF-01 was the main sanitary landfill for Moody AFB from 1941 to 1946. From 1946 to 1951, Moody AFB and the landfill were closed. In 1951, when Moody AFB was reactivated, the landfill was reopened until 1953, when it was closed permanently. The LF-01 site contains groundwater impacted with dissolved-phase volatile organic compounds. Corrective actions and performance-monitoring activities are ongoing.	Land disturbance is restricted and groundwater use is prohibited.	Projects 5 and 7
SS-24, Engine Maintenance Shop (Building 785)	SS-24 is an industrial area located west of the airfield and north of Mission Lake. Multiple buildings are located throughout the industrial area that house Moody AFB operations. Ground surfaces are mostly paved, although the southern portion of the SS-24 site consists of wetlands located to the northeast of Mission Lake. Historically, the industrial area contained 11 sites that were identified as having used or stored hazardous chemicals and/or fuels. The primary constituents of concern) detected in groundwater have historically been trichloroethene TCE and DCE; however, dissolved-phase tetrachloroethene (PCE), 1,1-DCE, vinyl chloride, carbon tetrachloride, and benzene have also frequently been detected at concentrations above USEPA drinking water maximum contaminant levels. Groundwater has been treated and monitored and in situ enhanced bioremediation injections may resume if warranted.	Groundwater use is prohibited.	Projects 4 and 10
SS-38, Flightline Area (Apron A/B)	SS-38 site historically encompassed approximately 560 acres including most of the flightline support facilities, associated taxiways, and the areas extending to the east across the runways towards the Former Fire Training Area (FT-07) site and Grand Bay Swamp. With the inclusion of the former SD-16 site (which encompassed approximately 31-acres, including the Hush House areas and the Flightline storm drain outfall), the SS-38 site now covers approximately 591 acres and extends further to the south across Burma Road towards Mission Lake. Groundwater at the combined SS-38 site is impacted with chlorinated volatile organic compounds and in situ enhanced bioremediation was implemented at both sites. Corrective actions and monitoring are ongoing.	Groundwater use is prohibited.	Projects 1 and 10

Site Identification	Site Description	Land Use Controls	Overlapping Proposed Projects
SS-39, Golf Course Area Plume	SS-39 is located predominantly within a residential and golf course area on the northwest side of Bemiss Road. The chlorinated hydrocarbon groundwater plume associated with the SS-39 site was originally identified during investigation activities for a benzene plume at the former Base Exchange Service Station at Moody AFB. Upon further evaluation, the benzene and chlorinated contaminant plumes were confirmed to be unrelated, and the source of the chlorinated compounds detected in groundwater was attributed to historical operations at the former Radar Approach Control facility. However, based on the current distribution of TCE in groundwater, there were likely surface spills and releases from unidentified locations along historical sanitary and sewer lines that have since been replaced. Groundwater monitoring and remediation activities are ongoing.	Groundwater use is prohibited.	Projects 3 and 9

Sources: Tepa/ARCADIS 2022, 2023a, 2023b, 2023c; ARCADIS 2018
TCE – trichloroethylene; **DCE** – cis-1,1-dichloroethene; **AFB** – Air Force Base; **PCE** – dissolved-phase tetrachloroethene; **USEPA** – US Environmental Protection Agency

3.12.2 Environmental Consequences

Impacts on hazardous materials management would be considered adverse if the federal action resulted in noncompliance with applicable federal and state regulations or increased the amounts of hazardous waste generated or hazardous materials procured beyond current waste management procedures and capacities at the installation. Impacts on the ERP would be considered adverse if the federal action disturbed (or created) contaminated sites, resulting in negative effects on human health or the environment.

3.12.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

Hazardous Materials and Wastes. There would be a short-term, negligible, adverse impact on hazardous materials and wastes due to the construction of a new squadron operations facility. The quantity of hazardous materials such as POLs used in vehicles and equipment would increase on Moody AFB during construction. However, all hazardous materials required for construction operations would be properly tracked and maintained, and only the smallest quantities necessary to support the construction would be used. Further, all hazardous waste generated as a result of construction activities would be disposed of properly and in accordance with federal, state, and local regulations. Following the hazardous materials management and hazardous waste disposal requirements during construction activities would ensure the proper handling of hazardous materials and disposal of hazardous wastes.

Environmental Restoration Program. There is one active ERP site that overlaps the proposed squadron facility. SS-38, Flightline Area (Apron A/B) is undergoing active monitoring and corrective actions. However, impacts on SS-38 would not be expected as all contaminated soils,

groundwater, and monitoring wells would be either avoided during demolition and construction activities or prior to the disturbance of any potentially affected soils the GEPD would notified, and a construction waiver generated by the Moody AFB ERP Office, which would coordinate with the GEPD regarding the proposed project and potential impacts. Before construction begins, construction workers would be informed of the potential presence of hazardous constituents in soils or groundwater. Construction workers would also be provided material safety data sheets and descriptions of safe work practices, including the use of personal protective equipment. Should contaminated soils be removed, transported, treated, and/or disposed of, Resource Conservation and Recovery Act (RCRA) regulations would apply to the characterization, transportation, and disposal of this material. No per- and polyfluoroalkyl substances (PFAS) contamination has been identified proximate to the proposed government-owned-vehicle parking lot. If PFAS contamination is discovered, a Media Management Plan would be developed and implemented to remediate any PFAS-contaminated solid or aqueous media prior to the implementation of construction.

Toxic Substances. There is the potential for short-term, minor, adverse impacts from ACM and LBP encountered during the renovation of Buildings 556 and 609. However, ACM and LBP sampling would be conducted prior to renovation activities, and if determined to be present, ACM and LBP would be properly handled and disposed of in accordance with federal, state, and local laws during renovation activities.

3.12.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

The impacts from the construction of a new squadron operations facility would be similar to those described for Project 1, Alternative 1, but with a slightly larger area of ground disturbance and potentially the use of more hazardous materials during construction. There would be the potential for short-term, minor, adverse impacts on hazardous materials and waste generated during construction and renovation, the potential for impacts from contaminated soils and groundwater from ERP site SS-38, and the potential for short-term, minor, adverse impacts from ACM and LBP during the renovation of Buildings 556 and 609.

3.12.2.3 Project 1, No Action Alternative

The squadron operations facility would not be constructed under the No Action Alternative. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

Hazardous Materials and Wastes. Impacts would be the same as those described for Project 1, Alternative 1. There would be a short-term, negligible, adverse impact on hazardous materials and wastes with the construction AFTF improvements and truck driving training pad. There would be an increase in the quantity of hazardous materials such as POLs used in equipment during construction and the potential for an increase in hazardous wastes.

Environmental Restoration Program. There is one active ERP site, FT-07, that could be impacted during the construction of the AFTF improvements. However, impacts on site FT-07 would not be expected. Monitoring wells at FT-07, which are currently used to detect TCE from SS-38 to the west of the runway, would be avoided or relocated. All contaminated groundwater would be either avoided during construction or, prior to the disturbance of any potentially affected groundwater, the GEPD would be notified, and a construction waiver generated by the Moody AFB ERP Office. The Moody ERP Office would then coordinate with the GEPD regarding the proposed project and potential impacts. Before construction begins, construction workers would be informed of the potential presence of hazardous constituents in groundwater. Construction workers would also be provided material safety data sheets and descriptions of safe work practices, including the use of personal protective equipment. PFOA contamination has been identified proximate to proposed AFTF area. The proposed project would cap the PFOA-contaminated soils with concrete to eliminate surface exposures.

Toxic Substances. No impacts from ACM or LBP would occur as no facilities would be demolished or renovated.

3.12.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

The impacts from the construction of AFTF improvements without a truck driving pad would be similar to those described for Project 2, Alternative 1. With a smaller construction footprint, there would be less hazardous materials and waste generated during construction AFTF construction activities. The potential for impacts from contaminated groundwater from ERP site FT-07 would be the same as Project 2, Alternative 1. There would be no impacts on ACM or LBP.

3.12.2.6 Project 2, No Action Alternative

Under the No Action Alternative, there would be no construction or improvements to the AFTF or a truck driving pad. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

Hazardous Materials and Wastes. Impacts would be similar to those described for Project 1, Alternative 1. There would be a short-term, negligible, adverse impact on hazardous materials and wastes with the construction of the overwatch positions at the two gates. There would be an increase in the quantity of hazardous materials such as POLs used in equipment during construction and the potential for an increase in hazardous wastes.

Environmental Restoration Program. There is one active ERP site, SS-39, that could be impacted during the construction of overwatch position at the Mitchell Boulevard Gate. However, impacts on Site SS-39 would not be expected. All contaminated groundwater would be either avoided during construction or prior to the disturbance of any potentially affected groundwater the GEPD would be notified, and a construction waiver generated by the Moody

AFB ERP Office. The Moody ERP Office would then coordinate with the GEPD regarding the proposed project and potential impacts. Before construction begins, construction workers would be informed of the potential presence of hazardous constituents in groundwater. Construction workers would also be provided material safety data sheets and descriptions of safe work practices, including the use of personal protective equipment. No PFAS contamination has been identified proximate to proposed AFTF area. If PFAS contamination is discovered, a Media Management Plan would be developed and implemented to remediate any PFAS-contaminated solid or aqueous media prior to the implementation of demolition and construction.

Toxic Substances. No impacts from ACM or LBP would occur as no facilities would be demolished or renovated.

3.12.2.8 Project 3, No Action Alternative

Under the No Action Alternative, there would be no overwatch positions constructed at the Davidson Road or Mitchell Boulevard gates. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

Hazardous Materials and Wastes. Impacts would be similar to those described for Project 1, Alternative 1. There would be a short-term, negligible, adverse impact on hazardous materials and wastes with the construction of the consolidated AGE facility. There would be an increase in the quantity of hazardous materials such as POLs used in equipment during construction and the potential for an increase in hazardous wastes.

Environmental Restoration Program. There is one active ERP site, SS-24, that could be impacted during the construction of consolidated AGE facility. However, impacts on Site SS-24 would not be expected. Injection and monitoring wells at SS-24 would be avoided or relocated. All contaminated groundwater would be either avoided during construction or prior to the disturbance of any potentially affected groundwater the GEPD would be notified, and a construction waiver generated by the Moody AFB ERP Office. The Moody ERP Office would then coordinate with the GEPD regarding the proposed project and potential impacts. Before construction begins, construction workers would be informed of the potential presence of hazardous constituents in groundwater. Construction workers would also be provided material safety data sheets and descriptions of safe work practices, including the use of personal protective equipment. No PFAS contamination has been identified proximate to proposed AFTF area. If PFAS contamination is discovered, a Media Management Plan would be developed and implemented to remediate any PFAS-contaminated solid or aqueous media prior to the implementation of demolition and construction.

Toxic Substances. There is the potential for short-term, minor, adverse impacts from ACM and LBP encountered during the renovation of Buildings 755 and 756. ACM has been determined to be present in Building 756. ACM and LBP sampling would be conducted prior to renovation

activities, and if determined to be present, ACM and LBP would be properly handled and disposed of in accordance with federal, state, and local laws during renovation activities.

3.12.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

The impacts from the construction of a consolidated AGE facility would be the same as those described for Project 4, Alternative 1, and there would be the potential for short-term, minor, adverse impacts on hazardous materials and waste generated during construction and renovation, the potential for impacts from contaminated groundwater from ERP site SS-24, and the potential for short-term, minor, adverse impacts from ACM and LBP during the demolition of Building 756 and renovation of Building 755.

3.12.2.11 Project 4, No Action Alternative

Under the No Action Alternative, there would be no construction of a consolidated AGE facility, including no demolition or renovation of existing buildings. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.12 Project 5, Alternative 1: Burma Road Realignment

Hazardous Materials and Wastes. Impacts would be similar to those described for Project 1, Alternative 1. There would be a short-term, negligible, adverse impact on hazardous materials and wastes with the construction of Burma Road and removal of trees in the CZ. There would be an increase in the quantity of hazardous materials such as POLs used in equipment during construction and the potential for an increase in hazardous wastes.

Environmental Restoration Program. There is one active ERP site, LF-01, that could be impacted during the realignment of Burma Road and removal of trees in the CZ. However, impacts on site LF-01 would not be expected. All landfill waste has been removed from LF-01. Monitoring wells would be avoided or relocated. All contaminated groundwater would be either avoided during construction or prior to the disturbance of any potentially affected groundwater the GEPD would be notified, and a construction waiver generated by the Moody AFB ERP Office. The Moody ERP Office would then coordinate with the GEPD regarding the proposed project and potential impacts. Before construction begins, construction workers would be informed of the potential presence of hazardous constituents in groundwater. Construction workers would also be provided material safety data sheets and descriptions of safe work practices, including the use of personal protective equipment. No PFAS contamination has been identified proximate to proposed Burma Road realignment area. If PFAS contamination is discovered, a Media Management Plan would be developed and implemented to remediate any PFAS-contaminated solid or aqueous media prior to the implementation of demolition and construction.

Toxic Substances. No impacts from ACM or LBP would occur as no facilities would be demolished or renovated.

3.12.2.13 Project 5, No Action Alternative

Under the No Action Alternative, there would be no realignment of Burma Road. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

Hazardous Materials and Wastes. Impacts would be similar to those described for Project 1, Alternative 1. There would be a short-term, negligible, adverse impact on hazardous materials and wastes with the construction of a new parking lot to support the 38 RQS. There would be an increase in the quantity of hazardous materials such as POLs used in equipment during construction and the potential for an increase in hazardous wastes.

Environmental Restoration Program. There are no ERP sites located proximate to the proposed parking lot construction area. Therefore, there would be no impacts from potentially contaminated soils or groundwater, or impacts on an active ERP site. No PFAS contamination has been identified proximate to proposed 38 RQS parking lot construction area. If PFAS contamination is discovered, a Media Management Plan would be developed and implemented to remediate any PFAS-contaminated solid or aqueous media prior to the implementation of demolition and construction.

Toxic Substances. No impacts from ACM or LBP would occur as no facilities would be demolished or renovated. No PCBs would be disturbed during construction activities.

3.12.2.15 Project 6, No Action Alternative

Under the No Action Alternative, there would be no construction of a parking lot to support the 38 RQS. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

Hazardous Materials and Wastes. Impacts would be similar to those described for Project 1, Alternative 1. There would be a short-term, negligible, adverse impact on hazardous materials and wastes with the repair and replacement of belowground stormwater features and the two aboveground concrete structures. There would be an increase in the quantity of hazardous materials such as POLs used in equipment during construction and the potential for an increase in hazardous wastes.

Environmental Restoration Program. There is one active ERP site, LF-01, that partially overlaps the airfield stormwater system and could be impacted during the repair of stormwater features. However, impacts on Site LF-01 would not be expected. Existing monitoring wells would be avoided. All contaminated groundwater would be either avoided during construction or prior to the disturbance of any potentially affected groundwater the GEPD would be notified, and a construction waiver generated by the Moody AFB ERP Office. The Moody ERP Office would then coordinate with the GEPD regarding the proposed project and potential impacts. Before construction begins, construction workers would be informed of the potential presence of

hazardous constituents in groundwater. Construction workers would also be provided material safety data sheets and descriptions of safe work practices, including the use of personal protective equipment. No PFAS contamination has been identified proximate to proposed stormwater repair areas. If PFAS contamination is discovered, a Media Management Plan would be developed and implemented to remediate any PFAS-contaminated solid or aqueous media prior to the implementation of demolition and construction.

Toxic Substances. No impacts from ACM or LBP would occur as no facilities would be demolished or renovated.

3.12.2.17 Project 7, No Action Alternative

Under the No Action Alternative, there would be no repairs to stormwater features in the airfield. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

Hazardous Materials and Wastes. Impacts would be similar to those described for Project 1, Alternative 1. There would be a short-term, negligible, adverse impact on hazardous materials and wastes with the repairs to the Mission Lake water barrier and Stone Road. There would be an increase in the quantity of hazardous materials such as POLs used in equipment during construction and the potential for an increase in hazardous wastes.

Environmental Restoration Program. There are no ERP sites located proximate to the proposed Mission Lake water barrier and Stone Road repair locations. Therefore, there would be no impacts from potentially contaminated soils or groundwater, or impacts on an active ERP site. No PFAS contamination has been identified proximate to proposed water barrier and Stone Road repair locations. If PFAS contamination is discovered, a Media Management Plan would be developed and implemented to remediate any PFAS-contaminated solid or aqueous media prior to the implementation of demolition and construction.

Toxic Substances. No impacts from ACM or LBP would occur as no facilities would be demolished or renovated. No PCBs would be disturbed during construction activities.

3.12.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

The impacts from the repairs to the Mission Lake water barrier and Stone Road would be the same as those described for Project 8, Alternative 1. There would be the potential for short-term, minor, adverse impacts on hazardous materials and waste generated during construction. There are no ERP sites proximate to the project area, and no impacts from potentially contaminated soils and groundwater or impacts on ERP sites. There would be no potential impacts from ACM or LBP, as no facilities would be demolished or renovated.

3.12.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

The impacts from the repairs to the Mission Lake water barrier and realignment of Stone Road would be the same as those described for Project 8, Alternative 1. There would be the potential for short-term, minor, adverse impacts on hazardous materials and waste generated during construction. There are no ERP sites proximate to the project area and no impacts from potentially contaminated soils and groundwater or impacts on ERP sites. There would be no potential impacts on ACM or LBP, as no facilities would be demolished or renovated.

3.12.2.21 Project 8, No Action Alternative

Under the No Action Alternative, there would be no repairs to the Mission Lake water barrier or Stone Road. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

Hazardous Materials and Wastes. Impacts would be similar to those described for Project 1, Alternative 1. There would be a short-term, negligible, adverse impact on hazardous materials and wastes with the removal of vegetation and construction of a driving lane along the western base boundary fence. There would be an increase in the quantity of hazardous materials such as POLs used in equipment during tree removal and construction of a driving lane and the potential for an increase in hazardous wastes.

Environmental Restoration Program. There is one active ERP site, SS-39, that partially overlaps the western boundary fence project corridor. However, impacts on Site SS-39 would not be expected. Monitoring wells would be avoided. All contaminated groundwater would be either avoided during construction or prior to the disturbance of any potentially affected groundwater the GEPD would be notified, and a construction waiver generated by the Moody AFB ERP Office. The Moody ERP Office would then coordinate with the GEPD regarding the proposed project and potential impacts. Before construction begins, construction workers would be informed of the potential presence of hazardous constituents in groundwater. Construction workers would also be provided material safety data sheets and descriptions of safe work practices, including the use of personal protective equipment. No PFAS contamination has been identified proximate to proposed western boundary fence project area. If PFAS contamination is discovered, a Media Management Plan would be developed and implemented to remediate any PFAS-contaminated solid or aqueous media prior to the implementation of demolition and construction.

Toxic Substances. No impacts from ACM or LBP would occur as no facilities would be demolished or renovated.

3.12.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

The impacts from the vegetation removal along the western base boundary fence would be similar to those described for Project 9, Alternative 1. There would be the potential for short-term, minor, adverse impacts on hazardous materials and waste generated during construction, but the volume of hazardous materials used and hazardous waste potentially generated would be less. ERP site SS-39, which partially overlaps the project area, would be avoided, as no ground-disturbing activities would occur under this alternative. There would be no potential impacts from ACM or LBP, as no facilities would be demolished or renovated.

3.12.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

The impacts from the vegetation removal along the western base boundary fence would be similar to those described for Project 9, Alternative 1. There would be the potential for short-term, minor, adverse impacts on hazardous materials and waste generated during construction. However, the volume of hazardous materials used and hazardous waste potentially generated would be less. ERP site SS-39, which partially overlaps the project area, would be avoided, as no ground-disturbing activities would occur under this alternative. There would be no potential impacts from ACM or LBP, as no facilities would be demolished or renovated.

3.12.2.25 Project 9, No Action Alternative

Under the No Action Alternative, there would be no vegetation removal and construction of a driving lane along the western base boundary fence. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

Hazardous Materials and Wastes. Impacts would be similar to those described for Project 1, Alternative 1. There would be a short-term, negligible, adverse impact on hazardous materials and wastes with the demolition of 11 buildings. There would be an increase in the quantity of hazardous materials such as POLs used in equipment during construction and the potential for an increase in hazardous wastes.

Environmental Restoration Program. There are two active ERP sites, SS-24 and SS-38, that could be impacted during the demolition of 4 of the 11 buildings (Buildings 707, 720, 760, and 798). However, impacts on Sites SS-24 and SS-38 would not be expected. Existing ejection and monitoring wells would be avoided. All contaminated groundwater would be either avoided during construction or prior to the disturbance of any potentially affected groundwater the GEPD would be notified, and a construction waiver generated by the Moody AFB ERP Office. The Moody ERP Office would then coordinate with the GEPD regarding the proposed project and potential impacts. Before construction begins, construction workers would be informed of the potential presence of hazardous constituents in groundwater. Construction workers would also be provided material safety data sheets and descriptions of safe work practices, including the

use of personal protective equipment. No PFAS contamination has been identified proximate to the 11 buildings proposed for demolition. If PFAS contamination is discovered, a Media Management Plan would be developed and implemented to remediate any PFAS-contaminated solid or aqueous media prior to the implementation of demolition and construction.

Toxic Substances. There is the potential for short-term, minor, adverse impacts from ACM encountered during the demolition of Buildings 707, 760, 763, and 961, and LBP during the demolition of Building 961. However, ACM and LBP sampling would be conducted prior to demolition activities, and if determined to be present, ACM and LBP would be properly handled and disposed of in accordance with federal, state, and local laws during demolition activities.

3.12.2.27 Project 10, No Action Alternative

Under the No Action Alternative, there would be no demolition of existing buildings. Therefore, there would be no impacts on hazardous materials and wastes, ERP sties, or toxic substances.

3.12.2.28 Cumulative Actions and Other Considerations

Hazardous Materials and Wastes. There would be short-term, negligible, adverse cumulative impacts on hazardous materials and wastes with the implementation of the 10 projects included in the Proposed Action in combination with other proposed construction projects on Moody AFB, and the proposed off-base transportation maintenance projects. The quantity of hazardous materials such as POLs used in vehicles and equipment would increase cumulatively on Moody AFB during construction of these facilities and regionally with the highway maintenance projects. However, all hazardous materials required for construction, renovation, and demolition activities would be properly tracked and maintained. On Moody AFB, only the smallest quantities necessary to support each proposed project would be used. Further, all hazardous waste generated as a result of the proposed construction and demolition activities would be disposed of properly and in accordance with the Moody AFB *Hazardous Waste Management Plan* (US Air Force 2016). Following the requirements of federal, state, and local regulations during all proposed project construction and demolition activities on Moody AFB would ensure the proper handling of hazardous materials and disposal of hazardous wastes. For the construction of off-base highway maintenance projects, the use and tracking of all hazardous materials and disposal of hazardous waste would follow local, state, and federal regulations.

Environmental Restoration Program. All active ERP sites would be continuously monitored, and remediation activities implemented as required by each site's corrective action plan. All proposed projects on Moody AFB, including the 10 projects comprising the Proposed Action and reasonably foreseeable future projects would avoid impacts on known contaminated soils or groundwater or prior to the disturbance of any potentially affected groundwater the GEPD would be notified, and a construction waiver would be generated by the Moody AFB ERP Office. The Moody AFB ERP Office would coordinate with the GEPD regarding the proposed project and potential impacts. This would ensure that there would be no cumulative impacts from ERP sites on proposed projects or to ERP sites from proposed project construction activities.

Toxic Substances. There is the potential for short-term, minor, adverse cumulative impacts from either ACMs or LBP or both that could be encountered during the demolition, renovation, and construction activities proposed at Moody AFB. However, prior to any demolition or renovation of existing facilities, ACMs and LBP surveys would be conducted if those surveys have not been previously completed. All ACMs and LBP detected would be properly handled and disposed of in accordance with federal, state, and local laws during demolition activities.

3.13 Socioeconomics – Income and Employment

See **Appendix C-10** for the definition of this resource.

3.13.1 Affected Environment

The populations of Lowndes and Lanier counties were 119,499 and 10,177, respectively, in the 2022 US census. These were 8.6 and 1.0 percent increases, respectively from the 2010 US census population estimated for Lowndes and Lanier counties (US Census Bureau 2024). Further, the city of Valdosta increased in population by 1.0 percent during that same period. The state of Georgia's population totaled 10,913,150 in 2022, which was a 11.2 percent increase over the 2010 US census population of the state. The population growth rates of Lowndes and Lanier counties were less than the growth rate for the state of Georgia. The rate of growth for Lowndes County was similar to that of the US; the rate of growth for Lanier County was substantially lower than that of the US (**Table 3-29**).

Table 3-29. Population in the Moody Air Force Base Region of Influence as Compared to Georgia and the United States (2010 – 2022)

Location	2010	2022	Percent Change (2010 – 2023)
United States	308,745,538	333,271,411	7.9%
Georgia	9,687,653	10,913,150	11.2%
Valdosta	54,518	55,074	1.0%
Lowndes County	109,233	119,499	8.6%
Lanier County	10,078	10,177	1.0%

Source: US Census Bureau 2024

The median income of Lowndes and Lanier counties in 2022 was $52,821 and $39,971, respectively. The median income of the city of Valdosta was $41,365 in 2022. The median incomes of Lowndes and Lanier counties and the city of Valdosta were lower than the state of Georgia at $71,355 and the US at $75,149 (US Census Bureau 2024). The unemployment rates for Lowndes and Lanier counties were 3.4 percent and 3.5 percent in February 2021. This was similar to the unemployment rate of 3.1 percent for Georgia (US Bureau of Labor Statistics 2024).

A total of 4,497 active duty and 184 reserve military personnel are stationed at Moody AFB and another 821 civilian personnel work there. The total annual payroll is estimated to be approximately $300 million, and the total economic impact to the state of Georgia is estimated to be $431 million (Moody AFB 2015c).

3.13.2 Environmental Consequences

Consequences to socioeconomic resources were assessed in terms of the potential impacts on the local economy from the Proposed Action. The level of impacts associated with construction expenditure is assessed in terms of direct effects on the local economy and related effects on other socioeconomic resources (e.g., housing, employment, community resources). The magnitude of potential impacts can vary greatly, depending on the location of an action. For example, implementation of an action that creates 10 employment positions might be unnoticed in an urban area, but it might have significant impacts in a rural region.

In addition, if potential socioeconomic changes resulting from other factors were to result in substantial shifts in population trends or in adverse effects on regional spending and earning patterns, they may be considered adverse.

3.13.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

Additional materials and labor for the proposed squadron operations facility construction would have a short-term, minor, beneficial impact on the socioeconomic condition of the region. There would be increased expenditures in the region during these construction activities, but expenditures such as increased payroll tax revenue and the purchase of additional equipment, materials, and fuel would cease at the end of construction.

3.13.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed squadron operations facility would have a short-term, minor beneficial impact on the socioeconomic condition of the region.

3.13.2.3 Project 1, No Action Alternative

Under the No Action Alternative, there would be no construction of a new squadron operations facility. Therefore, there would be no impacts on socioeconomics.

3.13.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed AFTF improvements would have a short-term, minor beneficial impact on the socioeconomic condition of the region.

3.13.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed AFTF improvements would have a short-term, minor beneficial impact on the socioeconomic condition of the region.

3.13.2.6 Project 2, No Action Alternative

Under the No Action Alternative, there would be no improvements to the AFTF. Therefore, there would be no impacts on socioeconomics.

3.13.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed construction of gate overwatch positions would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.8 Project 3, No Action Alternative

Under the No Action Alternative, there would be no construction of gate overwatch positions. Therefore, there would be no impacts on socioeconomics.

3.13.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed construction of a consolidated AGE facility would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed construction of a consolidated AGE facility would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.11 Project 4, No Action Alternative

Under the No Action Alternative, there would be no construction of a consolidated AGE facility. Therefore, there would be no impacts on socioeconomics.

3.13.2.12 Project 5, Alternative 1: Burma Road Realignment

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed realignment of Burma Road and removal of trees in the CZ would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.13 Project 5, No Action Alternative

Under the No Action Alternative, there would be no realignment of Burma Road. Therefore, there would be no impacts on socioeconomics.

3.13.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

Impacts would be the same Project 1, Alternative 1, as additional materials and labor for the proposed construction of a new parking lot to support the 38 RQS would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.15 Project 6, No Action Alternative

Under the No Action Alternative, there would be no parking lot construction. Therefore, there would be no impacts on socioeconomics.

3.13.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed repairs to the airfield stormwater system would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.17 Project 7, No Action Alternative

Under the No Action Alternative, there would be no repairs to the airfield stormwater system. Therefore, there would be no impacts on socioeconomics.

3.13.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed Mission Lake water barrier and Stone Road repairs would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed Mission Lake water barrier and Stone Road repairs would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed Mission Lake water barrier and Stone Road realignment would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.21 Project 8, No Action Alternative

Under the No Action Alternative, there would be no repairs to the Mission Lake water barrier or Stone Road. Therefore, there would be no impacts on socioeconomics.

3.13.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed vegetation removal and driving lane construction along the western base boundary fence would have a short-term, minor beneficial impact on the socioeconomic condition of the region.

3.13.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed vegetation removal along the western base boundary fence would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed vegetation removal along the western base boundary fence would have a short-term, minor, beneficial impact on the socioeconomic condition of the region.

3.13.2.25 Project 9, No Action Alternative

Under the No Action Alternative, there would be no vegetation removal or construction of a driving lane along the western base boundary fence. Therefore, there would be no impacts on socioeconomics.

3.13.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

Impacts would be the same as Project 1, Alternative 1, as additional materials and labor for the proposed demolition of 11 buildings would have a short-term, minor beneficial impact on the socioeconomic condition of the region.

3.13.2.27 Project 10, No Action Alternative

Under the No Action Alternative, there would be no building demolition. Therefore, there would be no impacts on socioeconomics.

3.13.2.28 Cumulative Actions and Other Considerations

There would be short-term, minor beneficial cumulative impacts from the additional materials and labor associated with the 10 projects composing the Proposed Action in combination with other proposed construction projects on Moody AFB. Collectively these proposed construction

and improvement projects would provide benefits to the socioeconomic condition of Lowndes and Lanier counties, Georgia. There would be increased expenditures in the region during these construction activities, but expenditures such as increased payroll tax revenue and the purchase of additional equipment, materials, and fuel would cease at the end of construction of the Proposed Action and other reasonably foreseeable on-base and off-base projects.

3.14 Health and Safety

See **Appendix C-11** for the definition of this resource.

3.14.1 Affected Environment

Daily training activities and maintenance operations conducted on Moody AFB are performed in accordance with applicable Air Force safety regulations, Air Force technical guidance, and the standards stipulated in Air Force Occupational Safety and Health requirements. Construction and demolition activities are common on Moody AFB and have associated inherent risks such as chemical (e.g., asbestos, lead, hazardous materials) and physical (e.g., noise propagation, falling, electrocution, collisions with equipment) sources. Companies and individuals contracted to perform construction activities on Air Force installations are responsible for adhering to Occupational Safety and Health Administration (OSHA) requirements to mitigate these hazards. Industrial hygiene programs address exposure to hazardous materials, use of personal protective equipment, and the availability and use of safety data sheets, the latter of which are also the responsibility of construction contractors to provide to workers. Federal civilian and military personnel that have a need to enter areas under construction should be familiar with and adhere to OSHA and Air Force Occupational Safety and Health requirements, as well as applicable industrial hygiene programs. Individuals tasked to operate and maintain equipment, such as power generators, are responsible for following all applicable technical guidance, as well as adhering to established OSHA and Air Force safety guidelines.

Health and safety hazards can be identified and subsequently reduced or eliminated before an activity begins. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself, together with the exposed population. The degree of exposure to hazards depends primarily on the proximity of the hazard to the population. Hazards include transportation, maintenance and repair activities, noise, and fire. The proper operation, maintenance, and repair of vehicles and equipment are important for reducing safety risks. Any facility or human-use area with potential explosive or other rapid oxidation process creates unsafe environments due to noise and fire hazards for nearby populations. Noise environments can also mask verbal or mechanical warning signals such as horns and sirens.

3.14.2 Environmental Consequences

Impacts that pose a long-term risk to human health or safety are evaluated. Impacts would be considered significant if federal civilian, military, or contractor personnel did not comply with established OSHA and DAF safety guidelines. There are potential health and safety concerns with proposed construction and demolition activities. Munitions operations would remain

unchanged under the Proposed Action. All management and mitigation of risk from munitions handling and storage would remain the same under the Proposed Action.

The health and safety of on-site military and civilian workers are safeguarded by numerous DoD and military-branch-specific requirements designed to comply with standards issued by federal OSHA, USEPA, and state occupational safety and health agencies. These standards specify health and safety requirements, the amount and type of training required for workers, the use of personal protective equipment, administrative controls, engineering controls, and permissible exposure limits for workplace stressors.

3.14.2.1 Project 1, Alternative 1: Guardian Angel Facility Construction and Renovation North Site

There would be short-term, negligible, adverse impacts on health and safety as a result of the construction of a new squadron operations facility. Construction activities inherently pose increased health and safety risks to workers, military personnel, or the public. However, all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards and would be required to conduct construction activities in a manner that does not increase risk to workers, military personnel, or the public.

3.14.2.2 Project 1, Alternative 2: Guardian Angel Facility Construction and Renovation South Site

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.3 Project 1, No Action Alternative

There would be no construction of a squadron operations facility under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.4 Project 2, Alternative 1: Aircraft Fire Training Facility Improvements with Truck Driving Training

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.5 Project 2, Alternative 2: Aircraft Fire Training Facility Repairs and Construction, No Truck Driving Pad

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would

be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.6 Project 2, No Action Alternative

There would be no AFTF improvements under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.7 Project 3, Alternative 1: Gate Overwatch Position Construction at Davidson Road and Mitchell Boulevard Gates

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.8 Project 3, No Action Alternative

There would be no construction of a overwatch positions under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.9 Project 4, Alternative 1: Aerospace Ground Equipment Facility Construction and Demolition with New Shop, Administrative Space, and Covered Storage

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.10 Project 4, Alternative 2: Aerospace Ground Equipment Facility Construction and Demolition without New Shop and More Renovated Administrative Space

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.11 Project 4, No Action Alternative

There would be no construction of a consolidated AGE facility under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.12 Project 5, Alternative 1: Burma Road Realignment

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would

be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.13 Project 5, No Action Alternative

There would be no realignment of Burma Road and removal of trees from the CZ under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.14 Project 6, Alternative 1: 38th Rescue Squadron Parking Lot Construction

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.15 Project 6, No Action Alternative

There would be no construction of a parking lot under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.16 Project 7, Alternative 1: Airfield Stormwater Repair and Replacement

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards. All airfield restrictions for construction activities would be followed during the stormwater repair and replacement work activities.

3.14.2.17 Project 7, No Action Alternative

There would be no repairs to the stormwater system at the airfield under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.18 Project 8, Alternative 1: Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.19 Project 8, Alternative 2: Mission Lake Water Barrier and Stone Road Repairs – North Shoulder

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would

be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.20 Project 8, Alternative 3: Repair Mission Lake Water Barrier and Realign Stone Road

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.21 Project 8, No Action Alternative

There would be no repairs to the Mission Lake water barrier or Stone Road under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.22 Project 9, Alternative 1: Boundary Fence Repair with Driving Lane

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.23 Project 9, Alternative 2: Boundary Fence Repair with Vegetation Clearance on the Base Side of the Fence

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.24 Project 9, Alternative 3: Boundary Fence Repair with Vegetation Clearance on Both Sides of the Fence

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.25 Project 9, No Action Alternative

There would be no vegetation removal or construction of a driving lane along the western base boundary fence under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.26 Project 10, Alternative 1: Demolish Eleven Buildings

Impacts would be the same as those described for Project 1, Alternative 1. There would be short-term, negligible, adverse impacts on health and safety as all construction personnel would be responsible for following federal and state safety regulations and DoD and OSHA safety standards.

3.14.2.27 Project 10, No Action Alternative

There would be no demolition of 11 buildings under the No Action Alternative. Therefore, there would be no change in health and safety risks to workers, military personnel, or the public.

3.14.2.28 Cumulative Actions and Other Considerations

The implementation of 10 projects composing the Proposed Action in combination with other reasonably foreseeable projects at or near Moody AFB, including the proposed off-base highway maintenance projects, would have a negligible, cumulative, adverse impact on health and safety due to the inherent increase in health and safety risks associated with conducting construction projects. All proposed construction and demolition projects implemented on Moody AFB would follow federal and state safety regulations and DoD and OSHA safety standards. All other proposed construction and demolition projects would be required to conduct construction activities in a manner that does not increase risk to workers, military personnel, or the public.

The proposed highway maintenance projects at Hightower and Bemiss Roads would be constructed following all federal and state safety regulations, including those required by the Federal Highways Administration and the Georgia Department of Transportation. All OSHA safety standards would be followed, and highway construction activities would be completed in a manner that does not increase risk to workers and the public.

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4.0 LIST OF PREPARERS

The following government agency individuals supported the preparation of this Environmental Assessment.

Lorence Busker
Moody AFB
Environmental Planning Function
Contribution: Planning and EA Development

Anna Butler, PG
US Army Corps of Engineers
Contribution: Project Manager and Contracting Officers Representative

Kristen Varney
Moody AFB
Community Planner
Contribution: Planning and Description of Proposed Action and Alternatives Development

Table 4-1 provides the list of preparers from the contractor team for this Environmental Assessment.

Table 4-1. List of Preparers

Name	Affiliation	Education	Years of Experience	Contribution
Dan Becker, GISP	Vernadero Group Inc.	MA Geography BA, Geography	11	Spatial Analyses, Maps
Rahul Chettri	Versar Inc.	MS, Environmental Studies BS, Economics	35	Air Quality
Maggie Fulton	Vernadero Group Inc.	BS, English	34	Technical Editing, Formatting, Production
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Radhika Narayanan	Versar Inc.	MS, Environmental Science BS, Chemistry	30	Air Quality
Crystal Ramey	Vernadero Group Inc.	BA, Visual Arts	23	Document Production and Section 508 Compliance
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Eric Webb, PhD	Vernadero Group Inc.	PhD, Oceanography and Coastal Sciences MS, Biology BS, Biology	28	Project Management, Soils, Socioeconomics, Health and Safety

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APPENDIX A. INTERAGENCY AND INTERGOVERNMENTAL COORDINATION AND CONSULTATIONS AND PUBLIC NOTICES

FORMAT PAGE

EXAMPLE SCOPING LETTER

FORMAT PAGE

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE GEORGIA

23 CES/CD
3485 Georgia Street
Bldg 918
Moody AFB GA 31699-1707

Georgia Department of Transportation – Intermodal Division
Attn: Ms. Carol Comer
One Georgia Center
600 West Peachtree NW – 25th Floor
Atlanta GA 30308

Dear Ms. Comer:

The Department of the Air Force (DAF) is proposing facility infrastructure construction, demolition, and modernization projects at Moody Air Force Base (AFB), Georgia. In accordance with the National Environmental Policy Act of 1969, the Council of Environmental Quality regulations, and the Air Force Environmental Impact Analysis Process (EIAP) (32 Code of Federal Regulations Part 989), the DAF is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of these proposed projects.

Moody AFB is located on 11,881 acres in south-central Georgia, approximately 10 miles northeast of the city of Valdosta, in Lowndes and Lanier counties. The installation consists of the Main Base, the adjacent Grand Bay Range, and the geographically separated Grassy Pond Recreational Annex, which is located 25 miles southwest of the Main Base. The proposed facility infrastructure construction and modernization projects would be limited to Moody AFB Main Base (Figure 1).

The Proposed Action includes 10 facility infrastructure projects to be performed within the next five fiscal years (Fiscal Year 2025 through Fiscal Year 2030) at Moody AFB (Figure 2). The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. The Proposed Action is needed to conform with applicable antiterrorism/force protection criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and risk to the mission due to inefficiencies. The Proposed Action consists of the following proposed projects (Figure 2): Project 1: Guardian Angel Facility Construction and Renovation; Project 2: Aircraft Fire Training Facility Improvements; Project 3: Gate Overwatch Position Construction; Project 4: Aerospace Ground Equipment Facility Construction and Demolition; Project 5: Burma Road Realignment; Project 6: 38th Rescue Squadron Parking Lot Construction; Project 7: Airfield Stormwater Repair and Replacement; Project 8: Mission Lake Water Barrier and Stone Road Repairs; Project 9: Boundary Fence Repair; and Project 10: Building Demolition.

If you have any additional information regarding potential impacts of the Proposed Action on the natural or human environment of which we are unaware, we would appreciate receiving such information for inclusion and consideration in the EIAP. Please submit your written response within 30 days of receipt of this letter to ensure your concerns are adequately addressed in the EA. Written responses can be sent to Mr. Lorence Busker, 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or by email to Thank you in advance for your assistance in this effort.

Sincerely

JOHN L. EUNICE, III, GS-14, DAF
Deputy Commander, 23d Civil Engineer Squadron

Attachments:
1. Figure 1 Location of Moody Air Force Base, Georgia
2. Figure 2 Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia

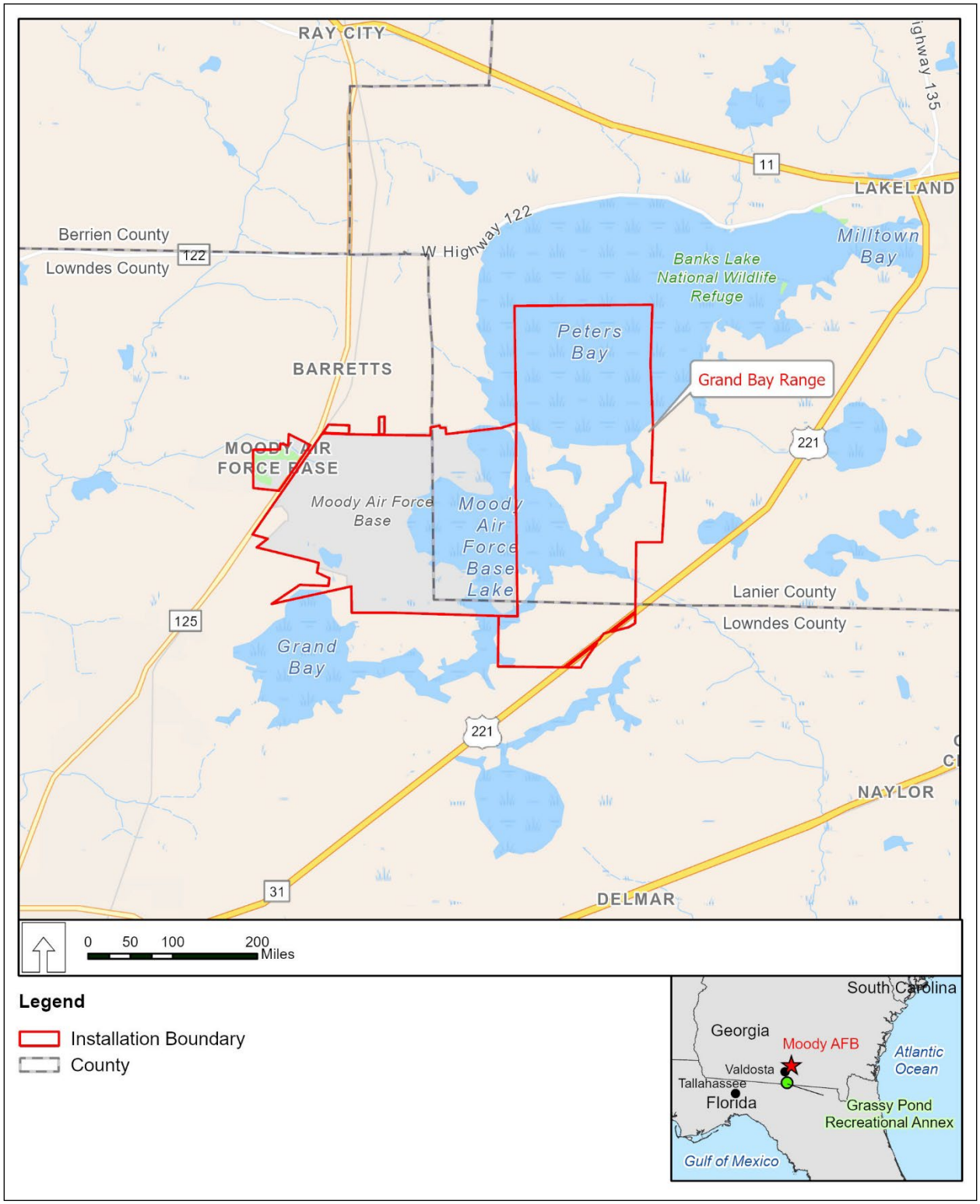


Figure 1. Location of Moody Air Force Base, Georgia

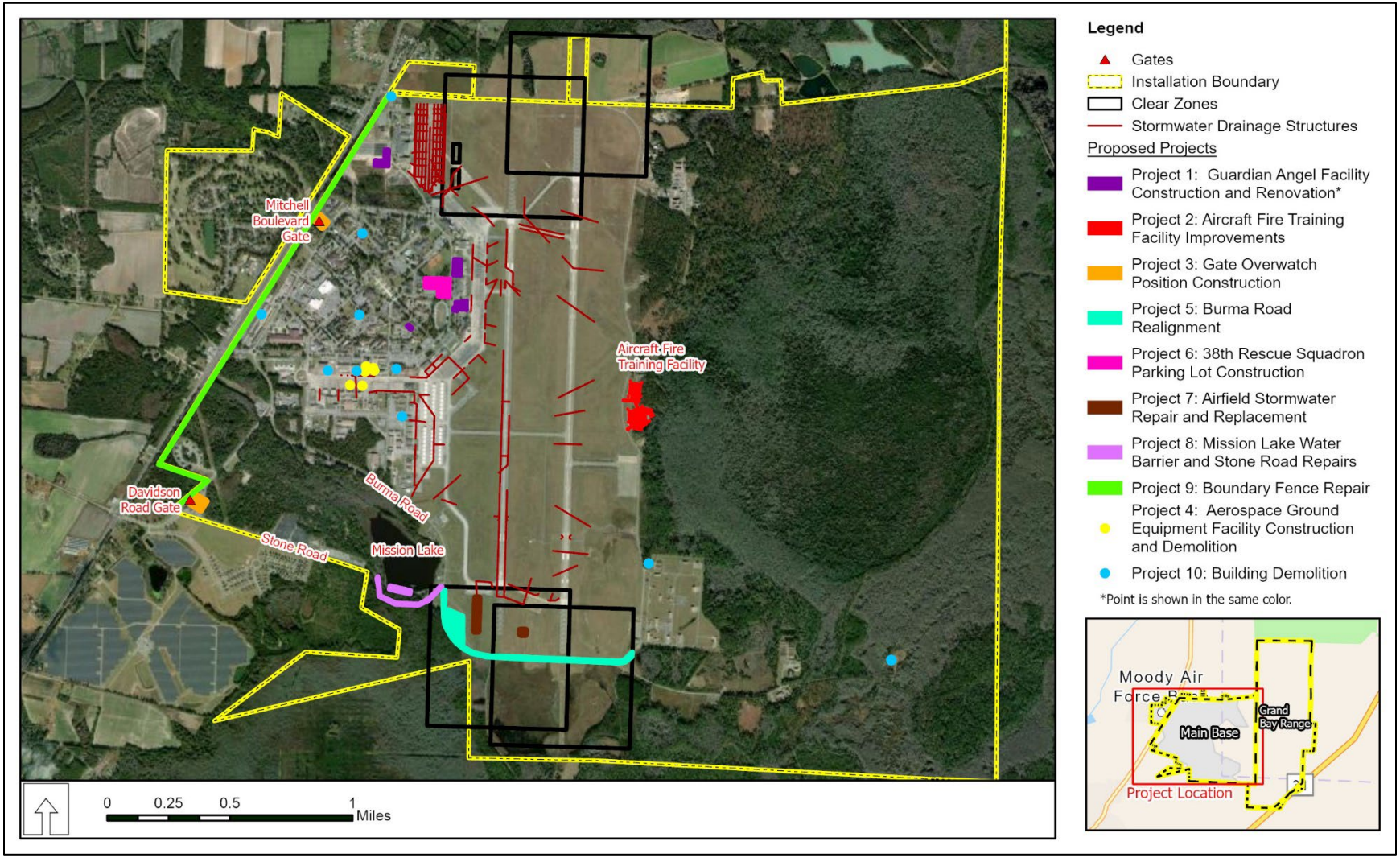


Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE GEORGIA

17 JUL 2024

MEMORANDUM FOR COUSHATTA TRIBE OF LOUISIANA
CHAIRMAN JONATHAN CERNEK
1940 C.C. BEL ROAD
ELTON LA 70532

FROM: 23 WG/CC
23 Flying Tiger Way
Bldg 105, Suite 1
Moody AFB GA 31699

SUBJECT: Facility and Infrastructure Construction and Modernization Environmental Assessment, Moody Air Force Base, Georgia

1. The Department of the Air Force (DAF) is proposing facility infrastructure construction, demolition, and modernization projects at Moody Air Force Base (AFB), Georgia. In accordance with the National Environmental Policy Act of 1969, the Council of Environmental Quality regulations, and the DAF Environmental Impact Analysis Process (EIAP) (32 Code of Federal Regulations Part 989), the DAF is in the process of preparing an Environmental Assessment (EA) and proposed Finding of No Significant Impact, to assess the potential environmental impacts of these proposed projects. I would like to follow up by inviting you to engage in government-to-government consultation with the DAF on this proposal.

2. Moody AFB is located on approximately 11,881 acres in south-central Georgia, approximately 10 miles northeast of the city of Valdosta, in Lowndes and Lanier counties. The installation consists of the Main Base, the adjacent Grand Bay Range, and the geographically separated Grassy Pond Recreational Annex, which is located 25 miles southwest of the Main Base. The proposed facility infrastructure construction and modernization projects would be limited to Moody AFB Main Base (Attachment 1; Figure 1).

3. The Proposed Action includes 10 facility infrastructure projects to be performed within approximately the next five fiscal years (Fiscal Year 2025 through Fiscal Year 2030) at Moody AFB (Attachment 2; Figure 2). The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. The Proposed Action is needed to conform with applicable antiterrorism/force protection criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and risk to the mission due to inefficiencies. The Proposed Action consists of the following proposed projects (Figure 2): Project 1: Guardian Angel Facility Construction and Renovation; Project 2: Aircraft Fire Training Facility Improvements; Project 3: Gate Overwatch Position Construction; Project 4: Aerospace Ground Equipment Facility Construction and Demolition; Project 5: Burma Road Realignment; Project 6: 38th Rescue Squadron Parking Lot Construction; Project 7: Airfield Stormwater Repair and Replacement;

Project 8: Mission Lake Water Barrier and Stone Road Repairs; Project 9 Boundary Fence Repair; and Project 10: Building Demolition.

4 The DAF has defined the Area of Potential Effects (APE) for this undertaking as a 100-foot buffer around the limits of disturbance for each of the 10 facility infrastructure projects. Although most facilities proposed for renovation or demolition in the APE were built in the 1980s and 1990s, they have had minimal repair and sustainment. Of the four buildings over 50 years of age, three have been evaluated and determined not eligible for inclusion in the National Register of Historic Places (NRHP), and one has an evaluation pending (Attachment 3; Table 1). In addition, for archaeological resources, surveys have been completed for all areas that may be subject to ground disturbance. Those surveys identified two NRHP eligible archaeological sites. Both are prehistoric artifact scatters located on the Main Base east of the runway and they are outside of the APE of the Proposed Action.

5 Consistent with the National Historic Preservation Act's implementing regulations (36 Code of Federal Regulations Part 800), Department of Defense Instruction 4710.02, DoD Interactions with Federally Recognized Tribes, and DAF Instruction 90-2002, Air Force Interactions with Federally Recognized Tribes, we invite you to consult with us and identify any such properties that might be affected by the Proposed Action. No Traditional Cultural Properties have been identified on Moody AFB through previous consultation efforts. However, please let us know if any of these properties are present, along with any supporting information you are able and willing to share on their religious and cultural significance. If detailed disclosure is not appropriate, confidential consultations can be arranged to result in measures to avoid or minimize effects on Traditional Cultural Properties. The DAF will comply with the Native American Graves Protection and Repatriation Act by informing you of any inadvertent discovery of archaeological or human remains. Being defined as a federal undertaking, we are seeking input and inviting participation from other consulting parties, such as the Georgia State Historic Preservation Office

6. We would appreciate any additional information regarding potential impacts of the Proposed Action on the natural or human environment. Please forward any additional information at your earliest convenience to Mr. Lorence Busker, 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or by email to Thank you in advance for your assistance in this effort.

PAUL E. SHEETS, Colonel, USAF
Commander

3 Attachments:
1. Figure 1. Location of Moody Air Force Base, Georgia
2. Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia
3. Table 1. National Register of Historic Places Status of Buildings to Demolished or Modified

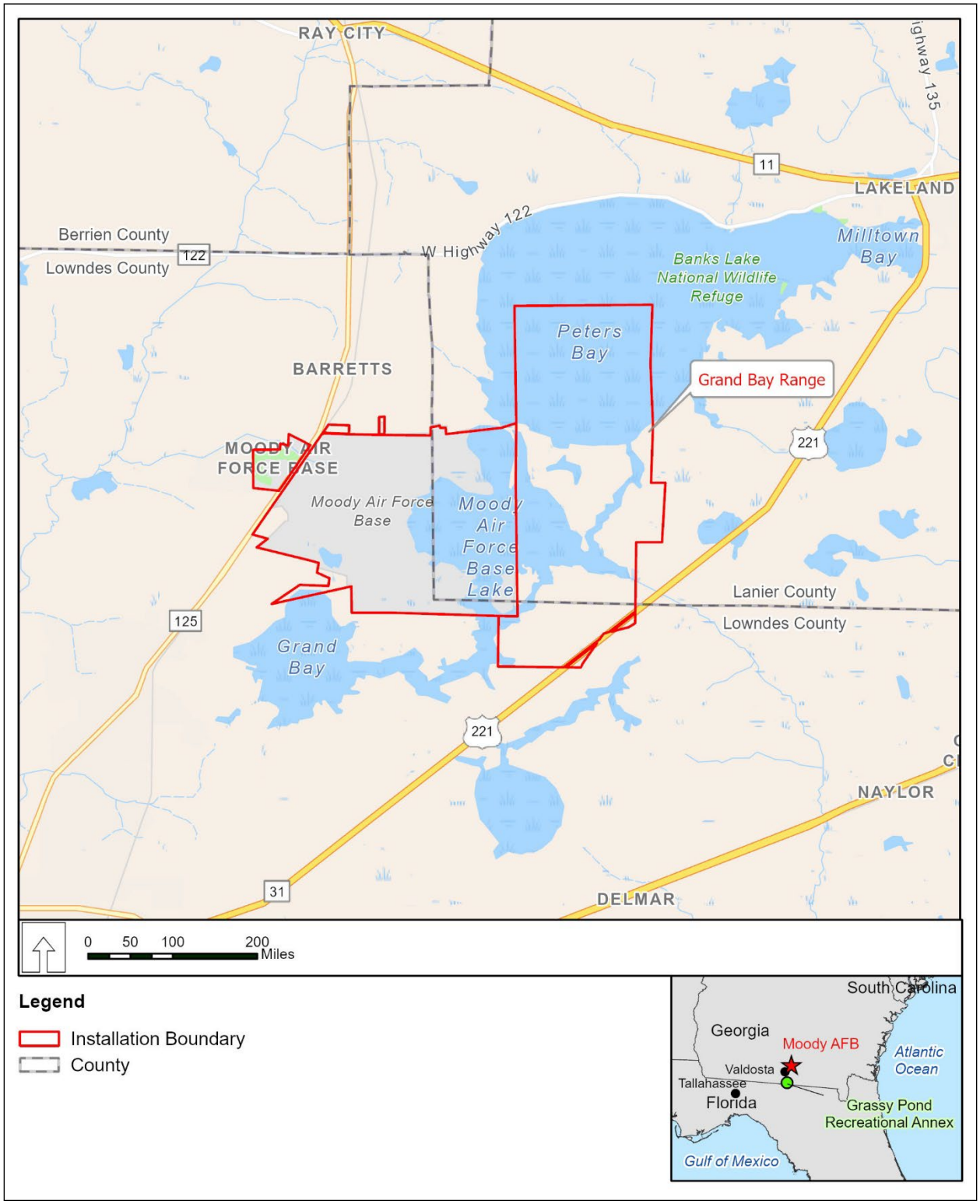


Figure 1. Location of Moody Air Force Base, Georgia

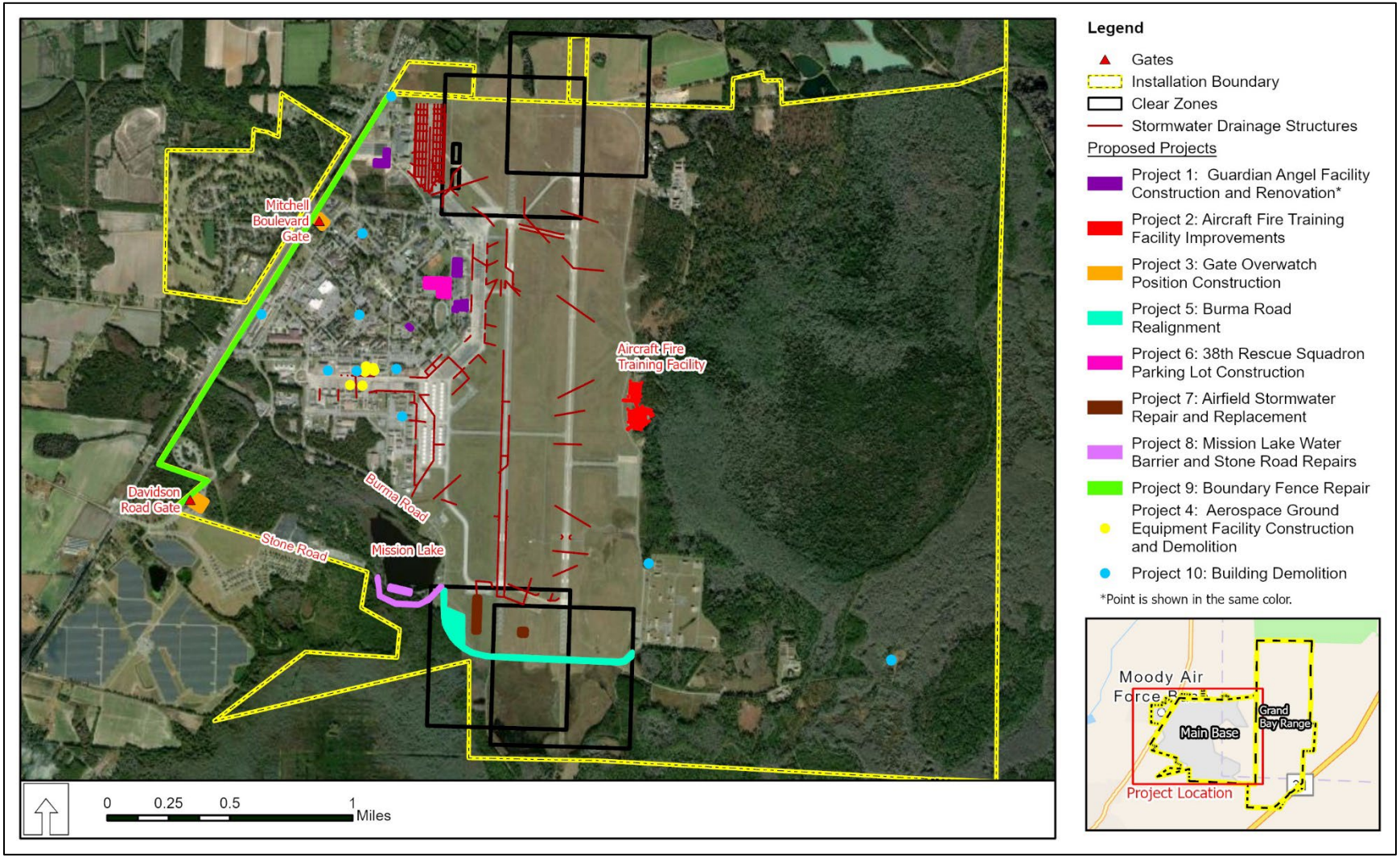


Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia

Table 1. National Register of Historic Places Status of Buildings to Demolished or Modified

Building Number	Year Built	Proposed Activity	NRHP Status	Area (square feet)
153	2005	Demolition	Not Evaluated/ < 50 years	440
200	1992	Demolition	Not Evaluated/ < 50 years	264
556	1941	Addition and Renovation	Evaluated/Not Eligible	9,925
656	1996	Demolition	Not Evaluated/ < 50 years	76
663	2000	Addition	Not Evaluated/ < 50 years	64,568
707	1987	Demolition	Not Evaluated/ < 50 years	3,042
720	1981	Demolition	Not Evaluated/ < 50 years	113
732	1997	Demolition	Not Evaluated/ < 50 years	5,584
752	1994	Demolition	Not Evaluated/ < 50 years	5,264
755	1962	Demolition	Evaluated/Not Eligible	7,958
756	1977	Demolition	Evaluation Pending	2,072
760	1984	Demolition	Not Evaluated/ < 50 years	429
762	1991	Demolition	Not Evaluated/ < 50 years	120
763	1988	Demolition	Not Evaluated/ < 50 years	120
798	2001	Demolition	Not Evaluated/ < 50 years	3,712
961	1953	Demolition	Evaluated/Not Eligible	297
1145	2003	Demolition	Not Evaluated/ < 50 years	242

FORMAT PAGE

SCOPING LETTER RESPONSES

FORMAT PAGE

From: Hembree, Kim
To: BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIEA
Cc: Eric Webb; Clark, Heather
Subject: [External] - RE: Moody Air Force Base Proposed Action
Date: Friday, August 9, 2024 6:48:27 AM
Attachments: image001.png

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you.

From: BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIEA [redacted]
Sent: Thursday, August 8, 2024 11:41 AM
To: Hembree, Kim [redacted]
Cc: Eric Webb [redacted]
Subject: RE: Moody Air Force Base Proposed Action

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ms. Hembree,

Thank you for providing these comments. We are still working to finalize the Environmental Assessment so will be able to incorporate them in the final document. We have been working closely with the manager of the base Environmental Restoration Program and she is making sure we do not impact any of the landfills or any of the restoration or monitoring wells on site.

Thank you,

Lorence T. Busker, PG
Moody AFB NEPA/Environmental Planner
23 CES/CEIEA
3485 Georgia Street
Moody AFB, GA 31699-1707
[redacted]
[redacted]
DSN: 460-1395

From: Hembree, Kim [redacted]
Sent: Thursday, August 8, 2024 8:45 AM
To: BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIEA [redacted]
Subject: [Non-DoD Source] RE: Moody Air Force Base Proposed Action

You don't often get email from [redacted] Learn why this is important

Mr. Busker,

Due to an internal routing error, I believe we have missed the window to submit comments. However, Ms. Heather Clark of my team, who is the Georgia EPD geologist for Moody, has the following comments:

"I went through, site-by-site and evaluated which sites could be impacted by the proposed construction at MAFB. I have provided a summary, below. I have also attached a crude map depicting the sites overlaid on the map MAFB provided with the projects depicted. The sites that are not really at risk are hashed with black lines.

LF-01 (Burma Road Landfill) - Project 8 is proposed immediately to the west of LF-01. From the map provided by MAFB, it appears that some of the westernmost wells could possibly be impacted by that project, but I can't be sure since I don't know the exact footprint of the planned work. Project 5 proposes to realign Burma Road straight through the middle of LF-01. Since the landfill waste was removed, there is no longer a risk that any waste would be uncovered. However, several monitoring wells and the biosparge system are at risk.

LF-03 (Southwest Landfill) - Project 3 is proposed to the west of LF-03. I would not anticipate much in the way of impacts to the LF03 infrastructure.

LF-04 (Northeast Landfill) - No projects planned for this area.

FT-07 (Former Fire Training Area) - Project 2 has potential to impact FT-07. Area 1 of FT-07, which is in the northern portion of the site, is where the fire training area improvements are planned. Several wells surround the fire training pad. The wells in Area 1 don't really monitor contamination associated with FT-07 anymore. They are now being used to detect TCE coming from SS-38 to the west of the runway.

SS-24 (Industrial Area) - This site has a significant potential to be impacted by Project 3 (or it may be 4, the legend of their map is unclear to me) and Project 10. There are several injection and monitoring wells throughout this area.

SS-38 [Flightline Area (Apron A/B)] - Project 1 runs the risk of impacting Location 1 wells at SS-38. Project 10 may run a slight risk for wells in Location 2 but would run a greater risk for the wells in the western portion of Location 3.

SS-39 (Golf Course Area Plume) - No projects planned for this area.

LF-42 (South Gate Fill Site) - No projects planned for this area.

SD-43 (Southeast Surface Disposal Area) - No projects planned for this area.

I note that the Director's office received this on July 1, 2024. We, obviously, did not receive this until August 6, 2024. Since there was a comment due date within 30 days of the date of the letter, I am not sure what our recourse is. Just let me know what you think we need to do."

I've attached the figure that Ms. Clark mentions in her comment above. Please let me know if you have any questions.

Thank you,
Kim Hembree, Manager
Department of Defense Facilities Unit
Hazardous Waste Program
Land Protection Branch
Phone: [redacted]

From: BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIE [redacted]
Sent: Wednesday, August 7, 2024 11:11 AM
To: Hembree, Kim [redacted]
Cc: Eric Webb [redacted]
Subject: RE: Moody Air Force Base Proposed Action

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ms. Hembree,

I apologize for failing to include the figures that went with that letter. Attached are the figures to aid in your review.

Thank you,

From: Hembree, Kim [redacted]
Sent: Tuesday, August 6, 2024 2:25 PM
To: BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIEA [redacted]

Subject: [Non-DoD Source] Moody Air Force Base Proposed Action

> You don't often get email from [redacted]. Learn why this is important

Mr. Busker,

My unit of the Georgia EPD regulates DoD sites in Georgia, and we received the attached letter this week. The letter went to the Director of EPD's office, so it took a few weeks before reaching me. The letter mentions figures, however when we received the letter, there were no figures attached. Can you email me the figures?

Kim Hembree, Manager
Department of Defense Facilities Unit
Hazardous Waste Program
Land Protection Branch
Phone: [redacted]

From:	Edmisten, Colette
To:	BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIEA
Cc:	Eric Webb; Solomon, Clement
Subject:	[External] - RE: Moody AFB EIAP
Date:	Monday, August 5, 2024 3:12:37 PM
Attachments:	image001.png 20240725074210852.pdf 2024_07_29_11_06_57.pdf

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CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon Lorence-

The Georgia Department of Transportation Aviation Program has reviewed the attached documents as received by our office.

The letter asks if we have any additional information regarding potential impacts of the proposed action (10 projects) on the natural or human environment.

The Department has no comment. All construction/demolition is on Moody AFB property.

Additionally, if you could please update your contact records to include:

Clement Solomon, Director, Division of Intermodal
600 West Peachtree St, NW
6th Floor
Atlanta, GA 30308
[redacted]
This will ensure timely delivery and response by GDOT in the future.

Thank you for the time extension and the opportunity to review.

Best,
Colette

Colette Edmisten Williams, A.A.E.
Aviation Program Manager

Division of Intermodal
600 West Peachtree Street NW, 6th Floor
Atlanta, GA 30308
[redacted]

From: BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIEA [redacted]
Sent: Monday, July 29, 2024 11:18 AM
To: Edmisten, Colette [redacted]
Cc: Eric Webb [redacted]
Subject: RE: Moody AFB EIAP

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Ms Edmisten,

I have no issue with giving additional time as this is project is currently at the Scoping Phase so if you could have your comments back to us within a couple of weeks that would be fine. We will be finalizing the Environmental Assessment over the next few weeks bases on comments we have received to date.. I have attached the two figures that we failed to include with the letter to you, sorry about that. Please let me know if you think that two weeks is not enough time and we can rethink that.

Thank you,

From: Edmisten, Colette [redacted]
Sent: Friday, July 26, 2024 11:10 AM
To: BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIEA [redacted]
Cc: Solomon, Clement [redacted]; Trainer, Leigh Ann [redacted]
Subject: [Non-DoD Source] Moody AFB EIAP

You don't often get email from [redacted]. Learn why this is important

Dear Mr. Busker-

Good morning. The Georgia Department of Transportation is in receipt of the attached letter. Unfortunately, the letter did not reach the appropriate office until July 25, 2024, as Ms. Carol Comer retired in October 2021. Additionally, the 2 attachments as listed in the letter were not included.

Upon receipt of the attachments the Department kindly requests an extension in order to appropriately review the documentation.

Thank you for your assistance. Please let me know if you have any questions.

Regards,
Colette

Colette Edmisten Williams, A.A.E.
Aviation Program Manager



Division of Intermodal
600 West Peachtree Street NW, 6th Floor
Atlanta, GA 30308
[redacted]

Human trafficking impacts every corner of the globe, including our state and local communities. Georgia DOT is committed to end human trafficking in Georgia through education enabling its employees and the public to recognize the signs of human trafficking and how to react in order to help make a change. To learn more about the warning signs of human trafficking, visit https://doas.ga.gov/human-resources-administration/human-trafficking-awareness/trafficking-in-georgia. To report any suspicious activity, call the Georgia Human Trafficking Hotline at [redacted]. Let's band together to end human trafficking in Georgia.

FORMAT PAGE

EARLY PUBLIC NOTICE

FORMAT PAGE

Postmaster General promises to fix Georgia mail delay issues

By Dave Williams
Capitol Beat News Service

U.S. Postmaster General Louis DeJoy Friday outlined a series of steps the postal service is taking to improve service at a regional mail processing center in Palmetto.

In a letter to U.S. Sen. Jon Ossoff, D-Ga., DeJoy announced that more than 100 personnel from across the postal service have been sent to the Atlanta Regional Processing and Distribution Center (RPDC) "to work onsite to identify and rectify bottlenecks, conduct quality assurance, ensure Atlanta personnel are adhering to the new procedures, and ensure the timely processing and dispatch of mail and packages."

The federal agency also will revise transportation schedules between the regional center and other local processing centers to increase local trips, add processing capacity at the local centers, and shift cross-country volume away from the Atlanta facility until service stabilizes, DeJoy wrote.

A postal service restructuring plan launched at Atlanta and Richmond, Va., earlier this year aimed at stopping the agency from bleeding red ink resulted in massive delays in mail processing. At a Senate committee hearing last month, Ossoff revealed that only 36% of inbound mail handled by the Palmetto center was being delivered on time as of the end of February.

"The postal service is in the middle of a major new investment in our Georgia operations," DeJoy wrote Friday. "Unfortunately, the initiation of the Atlanta RPDC led to a significant drop in performance, which was unanticipated.

"To address this challenge in a purposeful and deliberative manner, we will continue to devote substantial time, resources, and attention until the facility and network improvements are performing to the intended specifications."

DeJoy had announced earlier this week that the postal service would call a pause in implementing the restructuring plan at least until next year to allow time to get a handle on the problems. However, that raised questions as to whether that pause would affect the processing delays already being experienced in Georgia.

Ossoff released a statement earlier Friday criticizing DeJoy for failing to provide updates the senator had requested regarding on-time mail delivery for Georgia families and businesses.

"I will continue fighting for the Georgians suffering from the postmaster general's failure," Ossoff vowed in a statement he released after receiving the letter.

EARLY NOTICE OF A PROPOSED ACTIVITY WITH THE POTENTIAL TO IMPACT FLOODPLAINS AND WETLANDS FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION MOODY AIR FORCE BASE, GEORGIA

The Department of the Air Force (DAF) is preparing a Draft Environmental Assessment (EA) to evaluate potential environmental impacts associated with proposed facility and infrastructure projects at Moody Air Force Base (AFB), Georgia. The Proposed Action comprises 10 facility and infrastructure construction, demolition, and modernization projects to be performed within the next five fiscal years. The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. The Proposed Action is needed to conform with applicable antiterrorism/force protection criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and unnecessary risk to the mission due to inefficiencies. The Proposed Action consists of the following proposed projects: Project 1: Guardian Angel Facility Construction and Renovation; Project 2: Aircraft Fire Training Facility Improvements; Project 3: Gate Overwatch Position Construction; Project 4: Aerospace Ground Equipment Facility Construction and Demolition; Project 5: Burma Road Realignment; Project 6: 38th Rescue Squadron Parking Lot Construction; Project 7: Airfield Stormwater Repair and Replacement; Project 8: Mission Lake Water Barrier and Stone Road Repairs; Project 9: Boundary Fence Repair; and Project 10: Building Demolition.

The Proposed Action is subject to Executive Order (EO) 11988, Floodplain Management, and EO 11990, Protection of Wetlands, requirements and objectives because three of the proposed projects would occur within wetlands, and a portion of one project would be within a 1 percent annual chance flood hazard area on Moody AFB.

The DAF requests advance public comment to determine if there are public concerns regarding the proposed project's potential impacts on floodplains and wetlands. The DAF would also like to solicit public input or comments on potential project alternatives. The Proposed Action will be analyzed in the forthcoming EA, and the public will have the opportunity to comment on the Draft EA when it is released.

The public comment period is 30 days from the publication of this early notice. Please submit comments or requests for more information during the public comment period to Mr. Lorence Busker, 23d Civil Engineer Squadron, 3485 Georgia Street, Moody Air Force Base, Georgia 31699-1707; or electronically to lorence. [redacted]

SO PROUD OF ALL OF OUR 2024 GRADUATES!

'All Things Are Possible Through Christ!'

Lanier County Probate Court
56 Main Street | Suite 10
Lakeland | [redacted]

Summer Meals
are available at no cost to children 18 & under

at the following location:

Lanier Elementary
92 S. Valdosta Rd
Lakeland, GA 31635
June 3 - June28
Monday-Friday
Breakfast 7:30-8:30
Lunch 11:00-1:00



Fueling Georgia's Future

Contact information
Cathy Jones [redacted]
This institution is an equal opportunity provider.

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Places where your Help Button will work	Available	Pendant/Wrist Buttons
At Home	✓	✓
On a Walk	✓	X
On Vacation	✓	X
At the Park	✓	X
Shopping	✓	X





OUR BEST OFFER EVER!
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MobileHelp Features:
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- Amplified 2-way voice communication
- Available Nationwide



*For a limited time - promotions available for select systems and subscription plans, please call for specific details. Offers are valid for new customers and for the first year of service and cannot be combined with any other offers. $19.95 is the monthly subscription price for a MobileHelp Classic All Point 2-way system. There is a one-time $49.95 processing fee to subscribe to this plan. Equipment shown is the MobileHelp 300 all home unit on the GO system available at a higher monthly cost. Most equipment is included at no cost while actively subscribing and must be returned upon cancellation. If you cancel prior to the 12 month Annual plan and inclusive month 13 at no additional charge. Refer to terms and conditions for specific details. Taxes, shipping and handling not included. When combined with MobileHelp Connect Premium. Fall Detection is available in select areas only. Not available in all areas. Actual results may vary.

SOUTH GEORGIA MEDIA GROUP

The Valdosta Daily Times

The Moultrie Observer

THOMASVILLE TIMES-ENTERPRISE

The Tifton Gazette

AFFIDAVIT

I, Laurie Gay, Publisher, do hereby certify that the Advertisement(s) for

EARLY NOTICE OF A PROPOSED ACTIVITY WITH THE POTENTIAL TO IMPACT FLOODPLAINS AND WETLANDS FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION MOODY AIR FOR BASE, GEORGIA

was/were published in THE VALDOSTA DAILY TIMES

on 05/12/2024

Subscribed and sworn to me, in the County of Lowndes in the State of Georgia on this

23RD **day of** MAY 2024

Notary Public Signature

Publisher

JENNIFER L JONES NOTARY PUBLIC Exp. Mar. 21, 2025 LOWNDES COUNTY, GA

201 N. Troup Street 31601 / P.O. Box 968 (31603)
Valdosta, GA / [redacted]
www.sgaonline.com

Strickland earns top academic award in VSU's Dewar College

BY STAFF REPORTS

VALDOSTA— Lindsey Strickland of Homerville, Georgia, is the recipient of Valdosta State University's 2023-2024 James L. and Dorothy H. Dewar College of Education and Human Services Highest Academic Achievement Award.

Strickland was recognized during VSU's annual Academic Honors and Awards Dinner on April 25.

The James L. and Dorothy H. Dewar College of Education and Human Services Highest Academic Achievement Award is presented to a student with a record of academic excellence and distinguished service inside and outside the classroom, according to a press release from VSU.

"Winning this award is both a pleasure and an honor, but it is not necessarily the defining moment of my time at VSU," she said. "It is more like the cherry on top of an ice cream sundae — an extra touch that makes everything feel complete. My overall experience at VSU has been shaped by the people that I have met, the friendships that were built, and the community that I have found here at VSU. I hope that this award will serve as a reminder of the journey that I have had and the people who have supported me along the way."

Strickland graduated May 4 with a Bachelor of Science in Education in Middle Grades Education Mathematics and Science. She plans to teach mathematics at Hahira Middle School, where she hopes to instill a love of learning in her students. She wants to continue her education in the near future "so that I can learn more ways to help my students be successful not only in the classroom but also in life, wherever it may take them."

Highlights of Strickland's time as a student at VSU include the following:

— Getting to speak at the 2024 Educators Rising National Conference in Orlando, Florida.

— Volunteering at the STEAM Center for Applied Creativity and Innovation and helping young learners get excited about science, technology, engineering, arts, and mathematics, an experience that allowed her to realize her love for teaching.

— Meeting new people and making memories with friends.

"I have always felt like VSU was home to me," she said. "I have made many new friends; some were 'for a while' friends and others I know will be my friend for life."



Submitted photo

Lindsey Strickland of Homerville, Georgia, is the recipient of Valdosta State University's 2023-2024 James L. and Dorothy H. Dewar College of Education and Human Services Highest Academic Achievement Award. She is pictured with Dr. Richard A. Carvajal, president of VSU; Dr. David Slykhuis, dean of the College of Education and Human Services; and Dr. Sheri Noviello, interim provost and vice president for the Division of Academic Affairs.

Her family includes parents Lenora and Raymond Strickland, sister Stephanie Smith, and brother-in-law Arthur Smith.

EDUCATION BRIEFS

UNG cadet Blake Jaramillo honored at awards ceremony

DAHLONEGA— More than 100 military awards and scholarships were presented to University of North Georgia cadets at the March Military Awards Ceremony and a pair of April events during Alumni Weekend.

Cadets were presented with awards and scholarships for academic achievement, potential for leadership, and high moral character.

Cadet Blake Jaramillo from Hahira, received the Chad Allessio Memorial Scholarship and the Charles and Kelli Schell Memorial Scholarship.

Samford University names Mary Griner to dean's list

BIRMINGHAM, Ala. — Mary Griner of Valdosta was among the 1,931 students named to Samford University's Dean's List for the spring 2024 semester.

To qualify for the dean's list, a student must have earned a minimum 3.5 grade point average out of a possible 4.0 while attempting at least 12 credit hours of coursework. The Dean's List is the highest academic recognition given by the school at the end of each semester.

SRTC nursing graduates honored in pinning ceremony

THOMASVILLE — On Monday, May 6, Southern Regional Technical College held a pinning ceremony at SRTC-Moultrie during which 32 Associate of Science in Nursing (ASN) students received their nursing pins. The ceremony commemorates the students' successful completion of their nursing coursework and clinical rotations. This class of nursing students is eligible to participate in SRTC's formal graduation ceremony on July 30 and will officially be Registered Nurses pending the passage of their board exams.

Area students include:

Barwick: Kimberly Coston.

Ray City: Logan Giddens.

Sparks: Jessica Mullis.

Benjamin Dawson graduates from Utah Tech University

ST. GEORGE, Utah— Benjamin Dawson of Valdosta was among Utah Tech University's 113th graduating class Friday, May 3, 2024.

University of Georgia celebrates Class of 2024

ATHENS — The University of Georgia celebrated more than 8,000 candidates for graduation in the Class of 2024 during commencement ceremonies. The spring undergraduate ceremony took place Friday, May 10, in Sanford Stadium. The spring graduate ceremony was held in two sessions on Thursday, May 9, with the master's/specialist ceremony starting at 10 a.m. and the doctoral ceremony starting at 2 p.m. in Stegeman Coliseum.

Branden Dobson, of Adel, is a candidate for a BSA Biological Science.

Erin Twomey, of Adel, is a candidate for a MPA Public Administration.

Surafel Tesfaye, of Adel, is a candidate for a MSW Social Work.

Brooke Berlin, of Hahira, is a candidate for a BSW Social Work.

Brant Chancy, of Hahira, is a candidate for a BSA Agribusiness.

Courtney Raymond, of Hahira, is a candidate for a BS Psychology.

Cavan Fulp, of Hahira, is a candidate for a BSA Biological Science.

Courtney Reliford, of Hahira, is a candidate for a PHARMD Pharmacy.

Ellie Ruff, of Hahira, is a candidate for a BSA Animal Health.

Emma Butler, of Hahira, is a candidate for a BSES Water and Soil Resources.

Emily Kinast, of Hahira, is a candidate for a BS Biomedical Physiology.

Gracyn Sanderlin, of Hahira, is a candidate for a BSA Agricultural and Applied Econ and BSA Agribusiness.

Gracie Kolb, of Hahira, is a candidate for a BFA Art.

Houston Vanlandingham, of Hahira, is a candidate for a BBA Economics.

Hannah Hall, of Hahira, is a candidate for a BBA Marketing and BSFCS Consumer Economics.

Jeremy Troiano, of Hahira, is a candidate for a AB Philosophy.

Abigail Hunt, of Hahira, is a candidate for a MA Journalism and Mass Communication.

Mary Gregory, of Hahira, is a candidate for a BFA Art.

Maxwell Green, of Hahira, is a candidate for a BBA Management Information Systems.

Sarah Cole, of Hahira, is a candidate for a BBA Marketing.

Sarah Johnson, of Hahira, is a candidate for a BSA Hospitality & Food Industry Management.

Kathryn Patten, of Lakeland, is a candidate for a BFA Art.

Alexis Herring, of Lake Park, is a candidate for a BSA Agriscience and Environmental Systems.

Grant Garner, of Lake Park, is a candidate for a BBA Risk Management and Insurance.

Shelby Knowles, of Lake Park, is a candidate for a BSA Biological Science and BSA Avian Biology.

Samuel Trimble, of Lake Park, is a candidate for a BS Ocean Science.

Kaleb Bell, of Nashville, is a candidate for a BSA Agricultural Education.

Michaela Hendley, of Nashville, is a candidate for a AB International Affairs.

Kayla Tucker, of Nashville, is a candidate for a EDS Learning Design and Technology.

Margaret Testerman, of Nashville, is a candidate for a PHARMD Pharmacy.

Sarah Darley, of Nashville, is a candidate for a BBA Risk Management and Insurance.

Thomas Trevino, of Nashville, is a candidate for a BS Biology.

Shaily Patel, of Nashville, is a candidate for a BS Biology.

Zachary Paulk, of Nashville, is a candidate for a BSA Biological Science.

Geri Patterson, of Quitman, is a candidate for a BS Biology and BS Psychology.

Savannah Winters, of Quitman, is a candidate for a BBA Economics.

Hannah Hood, of Pavo, is a candidate for a BSA Biological Science.

Amari Marable, of Valdosta, is a candidate for a JD Law.

Benjamin McTier, of Valdosta, is a candidate for a BS Psychology.

Caitlyn Carter, of Valdosta, is a candidate for a AB Anthropology.

Damian Hari, of Valdosta, is a candidate for a BBA Real Estate.

Ebonie Curry, of Valdosta, is a candidate for a MSW Social Work.

Elizabeth Evans, of Valdosta, is a candidate for a BSA Biological Science.

George Russell, of Valdosta, is a candidate for a BS Computer Science.

Haley Miles, of Valdosta, is a candidate for a BBA Economics.

Isabella Burgelin, of Valdosta, is a candidate for a BBA Marketing.

Jarrett Broome, of Valdosta, is a candidate for a AB Political Science.

Jillian Hanna, of Valdosta, is a candidate for a AB Communication Studies and AB English.

John Wilson, of Valdosta, is a candidate for a BLA Landscape Architecture.

Kaylon Day, of Valdosta, is a candidate for a MPA Public Administration.

Katie Atkinson, of Valdosta, is a candidate for a AB Political Science.

Kenneth Denaux, of Valdosta, is a candidate for a BBA Accounting.

Khushi Patel, of Valdosta, is a candidate for a BS Biochem and Molecular Biology.

Mansi Patel, of Valdosta, is a candidate for a BSA Biological Science.

Morgan Rowan, of Valdosta, is a candidate for a DVM Veterinary Medicine.

Mccoy Fennell, of Valdosta, is a candidate for a BS Psychology.

Mitchell Greer, of Valdosta, is a candidate for a BBA Accounting.

Miller Hollis, of Valdosta, is a candidate for a AB English.

Sarah Call, of Valdosta, is a candidate for a AB Public Relations.

Trent Broome, of Valdosta, is a candidate for a BBA Management Information Systems.

Victoria Goss, of Valdosta, is a candidate for a BSA Agribusiness.

William Browning, of Valdosta, is a candidate for a BBA Accounting.

Yan Ru Lin, of Valdosta, is a candidate for a BBA Risk Management and Insurance.

NOTICE FOR SPECIAL ELECTION

In accordance with OCGA 48-8-244, a special election will be conducted in Echols County in the manner authorized under OCGA 21-2-540 for the purpose of submitting to the voters the following question for approval or rejection: :

"Shall Echols County transportation system and the transportation network in this region and the state be improved by providing for a 1 percent special district transportation sales and use tax for the purpose of transportation projects and programs for a period of ten years?"
( ) YES
( ) NO

The special election will be held on Tuesday, May 21, 2024.

All persons who are not registered to vote and who desire to register to vote in the special election may register to vote through close of business on April 22, 2024.

Advance voting will be held April 29, 2024 through May 17, 2024, at the Echols County Election office located at 110 GA-Hwy 94 E., Statenville, GA 31648.

Polls will open from 7:00 a.m. until 7:00 p.m. on Election Day, May 21, 2024.

This the 1st day of April, 2024.

Election Superintendent
County of Echols

EARLY NOTICE OF A PROPOSED ACTIVITY WITH THE POTENTIAL TO IMPACT FLOODPLAINS AND WETLANDS
FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION
MOODY AIR FORCE BASE, GEORGIA

The Department of the Air Force (DAF) is preparing a Draft Environmental Assessment (EA) to evaluate potential environmental impacts associated with proposed facility and infrastructure projects at Moody Air Force Base (AFB), Georgia. The Proposed Action comprises 10 facility and infrastructure construction, demolition, and modernization projects to be performed within the next five fiscal years. The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. The Proposed Action is needed to conform with applicable antiterrorism/force protection criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and unnecessary risk to the mission due to inefficiencies. The Proposed Action consists of the following proposed projects: Project 1: Guardian Angel Facility Construction and Renovation; Project 2: Aircraft Fire Training Facility Improvements; Project 3: Gate Overwatch Position Construction; Project 4: Aerospace Ground Equipment Facility Construction and Demolition; Project 5: Burma Road Realignment; Project 6: 38th Rescue Squadron Parking Lot Construction; Project 7: Airfield Stormwater Repair and Replacement; Project 8: Mission Lake Water Barrier and Stone Road Repairs; Project 9: Boundary Fence Repair; and Project 10: Building Demolition.

The Proposed Action is subject to Executive Order (EO) 11988, Floodplain Management, and EO 11990, Protection of Wetlands, requirements and objectives because three of the proposed projects would occur within wetlands, and a portion of one project would be within a 1 percent annual chance flood hazard area on Moody AFB.

The DAF requests advance public comment to determine if there are public concerns regarding the proposed project's potential impacts on floodplains and wetlands. The DAF would also like to solicit public input or comments on potential project alternatives. The Proposed Action will be analyzed in the forthcoming EA, and the public will have the opportunity to comment on the Draft EA when it is released.

The public comment period is 30 days from the publication of this early notice. Please submit comments or requests for more information during the public comment period to Mr. Lorence Busker, 23d Civil Engineer Squadron, 3485 Georgia Street, Moody Air Force Base, Georgia 31699-1707; or electronically to [redacted]

FORMAT PAGE

CONSULTATION LETTERS

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Example Tribal Consultation Letter

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 23D WING (ACC)
MOODY AIR FORCE BASE GEORGIA

MEMORANDUM FOR COUSHATTA TRIBE OF LOUISIANA
CHAIRMAN JONATHAN CERNEK
1940 C.C. BEL ROAD
ELTON LA 70532

FROM: 23 WG/CC
23 Flying Tiger Way
Bldg 105, Suite 1
Moody AFB GA 31699

04 NOV 2024

SUBJECT: Proposed Facility and Infrastructure Construction and Modernization Projects, Moody Air Force Base, Georgia

Reference: Department of the Air Force, 4 February 2024, *Integrated Cultural Resources Management Plan, Moody Air Force Base and Grand Bay Range, Installation Supplement*

1. In July 2024, we sent you a letter briefly describing the intent of the Department of the Air Force (DAF) to prepare an Environmental Assessment (EA) to evaluate the potential impacts of proposed facility and infrastructure construction, demolition, and modernization projects at Moody Air Force Base (AFB), Georgia. The DAF is in the process of preparing an EA to assess the potential environmental impacts of these proposed projects. I would like to follow up by inviting you to engage in government-to-government consultation with Moody AFB on this proposal.

2. Moody AFB is located on approximately 11,881 acres in south-central Georgia, approximately 10 miles northeast of the city of Valdosta, in Lowndes and Lanier counties. The installation consists of the Main Base, the adjacent Grand Bay Range, and the geographically separated Grassy Pond Recreational Annex, which is located 25 miles southwest of the Main Base. The proposed facility infrastructure construction and modernization projects would be limited to Moody AFB Main Base (Attachment 1; Figure 1).

3. The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. These deficiencies would be remedied through an ongoing process of construction of new facilities and new infrastructure, the repair of existing facilities and infrastructure, and the demolition of obsolete and unneeded facilities. The Proposed Action is needed to conform with applicable antiterrorism/force protection (AT/FP) criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and risk to the mission due to inefficiencies.

4. The undertaking would include 10 facility infrastructure projects to be performed within approximately the next five fiscal years (Fiscal Year 2025 through Fiscal Year 2030) at Moody AFB (Attachment 2; Figure 2). The DAF has defined the Area of Potential Effects (APE) for this undertaking as comprising a 100-foot buffer around the limits of disturbance for each of the following 10 projects:

a. Project 1 – Guardian Angel Facility Construction and Renovation: To support the 38th Rescue Squadron primary operations, which currently shares a building with the 41st Rescue Squadron (41 RQS), an adequately sized and properly configured squadron operations building would be constructed.

The DAF carried forward two project-level alternatives for Project 1 (Attachment 3; Figure 3). Under Alternative 1, the DAF would construct a new 55,005-square-foot squadron operations facility near Sijan Street to support the relocation of the 41 RQS. Approximately 5,000 square feet of additional pavement would be constructed for emergency vehicle access and parking, as well as a retaining wall for slope stabilization at the building location. The DAF would renovate buildings 556 and 663, construct a 5,280-square-foot addition to building 556 and would construct a 62,414-square-foot addition to building 663. The DAF would renovate buildings 606, 607, and 609. Under Alternative 2, the DAF would construct the new 55,005-square-foot squadron operations facility south of the Project 1, Alternative 1, location to support the relocation of the 41 RQS. Approximately 30,000 square feet of additional pavement would be constructed for emergency vehicle access and parking. Trenching would be required to extend utilities (i.e., sewer, water, electric, gas, and communications) for the new 41 RQS squadron operations building. The DAF would renovate buildings 556 and 663, construct a 5,280-square-foot addition to building 556, and construct a 62,414-square-foot addition to building 663. DAF would renovate buildings 606, 607, and 609.

b. Project 2 – Aircraft Fire Training Facility (AFTF) Improvements: The DAF would modernize the existing AFTF at Moody AFB. The DAF carried forward two project-level alternatives for Project 2. Under Alternative 1 (Attachment 4; Figure 4), the DAF would construct an approximately 6-acre concrete pad around the AFTF and connect the concrete pad to North Perimeter Road. The DAF would remove the existing and install a new mockup training aircraft for fire training. Five new fire hydrants would be installed to replace the existing fire hydrants. The DAF would install nine stadium-style lights to encompass all areas within the AFTF to allow for nighttime training. The existing retention pond would be renovated, the propane gas tank replaced at a location beyond the existing quantity-distance arc, and environmental concerns associated with hazardous materials managed by capping those contaminated soils with concrete. The DAF would construct a 10,000-square-foot training facility and an approximately 3-acre pad for truck driving training using approximately 2,300 cubic yards of concrete. Under Alternative 2 (Attachment 5; Figure 5), the DAF would construct all the proposed facilities and infrastructure at the existing AFTF as described in Project 2, Alternative 1, except for the approximately 3-acre truck driving training pad, and truck driver training would continue at a temporary pad set up elsewhere on Moody AFB.

c. Project 3 – Gate Overwatch Position Construction: The Davidson Road and Mitchell Boulevard gates do not meet the current AT/FP requirements. The DAF would construct two-story overwatch buildings at both the Davidson Road Gate and at the Mitchell Boulevard Gate (Attachment 6; Figure 6). Each overwatch building would be approximately 1,250 square feet, with approximately 625 square feet of new ground disturbance. The overwatch buildings would be connected to utilities and communication systems, which are all located proximate to the gates.

d. Project 4 – Aerospace Ground Equipment (AGE) Facility Construction and Demolition: To consolidate AGE facilities and operations at Moody AFB, the DAF would renovate existing AGE facilities and demolish existing AGE facilities within the existing AGE complex. The DAF carried forward two project-level alternatives for Project 4. Under Alternative 1 (Attachment 7; Figure 7), the DAF would demolish buildings 732, 752, 755, and 756 and construct a new consolidated AGE facility with warehouse area, administrative space, and covered storage. Under Alternative 2 (Attachment 8; Figure 8), the DAF would demolish buildings 732, and 756. Building 755 would be modified to create administrative areas (e.g., offices, break room, conference room), and building 752 would be renovated for warehouse space. The DAF would construct a new parts-support section.

e. Project 5 – Burma Road Realignment: A portion of Burma Road and the associated airfield fence are located within the graded portion of the Runway 18R/36L Clear Zone (CZ), causing a violation of Unified Facilities Criteria 3-260-01, *Airfield and Heliport Planning and Design*, which requires a

temporary airfield waiver. The temporary waiver was granted until the closure of an Environmental Restoration Program (ERP) site, which would allow for removal of trees in this area that also violate airfield surfaces. After closure of the ERP site, the DAF would realign and repave approximately 6,000 linear feet of Burma Road with conventional asphalt and remove approximately 4.6 acres of trees from the realignment footprint (Attachment 9; Figure 9).

f. Project 6 – 38th Rescue Squadron Parking Lot Construction: The DAF would construct a 20,000-square-foot parking lot for 125 personally operated vehicles on an existing fitness track east of building 663. The parking lot would be paved with either conventional or permeable asphalt. A total of 10 electric charging stations for personally operated vehicles would be included at the parking lot (Attachment 10; Figure 10).

g. Project 7 – Airfield Stormwater Repair and Replacement: The Moody AFB airfield stormwater drainage system is entirely below ground. Portions of the drainage system have noticeably begun to fail, and deterioration of underground drainage structures has caused visible slumping of surface soils within the airfield. Additionally, two exposed concrete structures at the south end of the airfield are within the graded portion of the CZ for Runway 18R/36L and require an airfield waiver from land use compatibility guidelines (Attachment 11; Figure 11). The DAF would complete a condition survey of all stormwater structures previously located during the 2023 Ground Penetrating Radar Airfield Survey. An estimated 1,500 linear feet of belowground structures would be repaired or replaced with the same-sized stormwater drainage pipe, using concrete, high-density polyethylene, or corrugated metal stormwater pipes. Stormwater system repairs would require excavation within the airfield at select locations to access the belowground stormwater structures, disturbing approximately 7,500 square feet of airfield soils. Excavation, repair, and replacement activities would be coordinated with airfield operations to ensure that at least one Moody AFB runway would always remain operational. The DAF would remove two concrete stormwater outfall structures located in the graded portion of the CZ and replace them with approximately 700 linear feet of belowground concrete, high-density polyethylene, or corrugated metal stormwater pipes to disperse stormwater flows passing from the airfield surface through existing culverts located beneath Burma Road.

h. Project 8 – Mission Lake Water Barrier and Stone Road Repairs: The water barrier for Mission Lake underlies a portion of Stone Road; both show signs of aging and degradation, and approximately 300 feet of Stone Road adjacent to Mission Lake lacks shoulders, which poses a safety risk for vehicles (Attachment 12; Figure 12). The DAF carried forward three project-level alternatives for Project 8. Under Alternative 1, the DAF would extend the shoulders of Stone Road both to the north and south along an approximately 300-foot section of road currently lacking shoulders. The water barrier for Mission Lake would be strengthened by installing 3,500 cubic yards of riprap at the toe of slope on both sides of the water barrier. It is estimated that 20 feet of riprap would be placed on both sides of the water barrier, and a total of 4,000 cubic yards of clay would be used to backfill over the water barrier to support new shoulders for Stone Road. Stone Road would be closed during the construction of shoulder and water barrier improvements and then repaved prior to reopening the road for travel. Alternative 2 would be the same as Alternative 1, except a new shoulder would be constructed only on the north side (Mission Lake side) of Stone Road and not on the south side of Stone Road, where a parallel drainage channel would potentially be impacted by fill material. Approximately 2,000 cubic yards of clay fill would be required to construct the shoulder on the north side of Stone Road. Under Alternative 3, the DAF would strengthen the water barrier as described for Alternative 1. However, instead of widening 300 feet of Stone Road, Stone Road would be realigned to no longer pass over the top of the Mission Lake water barrier. Approximately 1,800 linear feet of a new two-lane road with shoulders would be constructed to realign Stone Road south of the Mission Lake water barrier and south of the stream channel that originates as the outfall from Mission Lake. This would require approximately 1.6 acres of tree removal, grading, and new pavement placement to realign Stone Road. The former Stone Road alignment would

be decommissioned, old pavement removed, and the surface covered in turf grasses or gravel, as necessary to support the Mission Lake water barrier.

i. Project 9 – Boundary Fence Repair: Portions of the Moody AFB boundary fence along the western Moody AFB boundary contain mature woody vegetation that extends to the fence line. There is no perimeter driving lane parallel to the western base boundary fence because of this vegetation. Required fence maintenance is difficult without proper access to the fence. Further, the lack of a clear line-of-sight at the boundary fence does not meet AT/FP requirements (Attachment 13; Figure 13). The DAF carried forward three project-level alternatives for Project 9. Under Alternative 1, the DAF would remove vegetation along approximately 10,000 linear feet of the Moody AFB boundary fence to create a 16-foot-wide corridor by clearing approximately 3.4 acres of vegetation on both sides of the fence. Stumps would be removed, and a driving lane would be constructed within the 16-foot-wide corridor. This would include grading the roadway through an existing wetland area, placing a culvert in Beatty Branch, and building the driving lane over the culverted Beatty Branch. The driving lane would be approximately 10 feet wide with an unimproved (i.e., dirt) surface. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth. Under Alternative 2, the DAF would remove all aboveground vegetation along approximately 10,000 linear feet of the Moody AFB boundary fence to create a 16-foot-wide corridor, removing approximately 1.7 acres of vegetation only on the Moody AFB side of the fence. Stumps and other belowground vegetation material would be left in place, and no driving lane would be constructed. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth. Under Alternative 3, the DAF would remove all aboveground vegetation along approximately 10,000 linear feet of the Moody AFB boundary fence, removing approximately 3.4 acres of vegetation, to create a 16-foot-wide corridor clear of vegetation on both sides of the Moody AFB boundary fence. Stumps and other belowground vegetation material would be left in place, and no driving lane would be constructed. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth.

j. Project 10 – Building Demolition: The DAF would demolish 11 buildings that have been determined to be underutilized or no longer needed (buildings 153, 200, 656, 707, 720, 760, 762, 763, 798, 961, and 1145) (Attachment 14; Figure 14). All demolished materials and solid waste would be removed from Moody AFB using dump trucks and haul-off debris containers. All demolition debris and other associated solid waste would be transported to the Evergreen Landfill in Valdosta, Georgia. Demolished building locations would either be left with the foundation building pad in place, or the building foundations removed, and the soils revegetated and maintained as grass-covered space.

5. Previous archaeological investigations at Moody AFB have located 61 archaeological sites and 63 isolated finds (DAF 2024). No archaeological sites have been identified within the footprint of the 10 proposed project construction areas or within 100 feet of the 10 proposed project areas comprising the Proposed Action. Moody AFB has two National Register of Historic Places (NRHP)-eligible archaeological sites and four sites that require additional testing. Sites 9LW63 and 9LW71 are both prehistoric artifact scatters located on the Main Base east of the runway (DAF 2024) (Attachment 15; Figure 15). Both are outside of the footprint of the proposed projects APEs. The four sites requiring testing (i.e., 9LW230, 9LW231, 9LW235, and 9LW237) are all located at the Grassy Pond Recreational Annex geographically separated unit and, therefore, have no potential to be affected by the proposed project.

6. Numerous comprehensive surveys of World War II- and Cold War-era buildings and structures at Moody AFB have been undertaken. No intact historic districts have been identified. Only two structures have been determined to be eligible for inclusion in the NRHP (Attachment 15; Figure 15). Facility 618, constructed in 1941, is a steel water tower with a 200,000-gallon capacity. It was determined to be

eligible for inclusion in the NRHP in 1999 (DAF 2024). Building 110 is a chapel built in 1971. Significant for its midcentury modern architectural design, the chapel was determined to be eligible for inclusion in the NRHP in May 2017. Both have lost integrity of setting due to the historic and ongoing construction and demolition within the main cantonment. Both eligible buildings are outside of the proposed projects' APEs. Buildings on Moody AFB that would be modified or demolished under the Proposed Action and their NRHP eligibility are summarized in Attachment 16; Table 1.

7. We invite you to consult with us and identify any such properties that might be affected by the Proposed Action. Please let us know if any of these properties are present, along with any supporting information you are able and willing to share on their religious and cultural significance. If detailed disclosure is not appropriate, confidential consultations can be arranged to result in measures to avoid or minimize effects on Traditional Cultural Properties.

8. The DAF will comply with the Native American Graves Protection and Repatriation Act by informing you of any inadvertent discovery of archaeological or human remains. Because this is defined as a federal undertaking, we are seeking input and inviting participation from other consulting parties, such as the Georgia State Historic Preservation Office.

9. We would appreciate any additional information regarding potential impacts of the Proposed Action. Please forward any additional information at your earliest convenience to Mr. Lorence Busker, 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or by email to lorence.busker@us.af.mil. Thank you in advance.

BEN M. RUDOLPHI, Colonel, USAF
Commander

16 Attachments:
1. Figure 1. Location of Moody Air Force Base, Georgia
2. Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia
3. Figure 3. Project 1 – Guardian Angel Facility Construction and Renovation
4. Figure 4. Project 2 – Aircraft Fire Training Facility Improvements Alternative 1
5. Figure 5. Project 2 – Aircraft Fire Training Facility Improvements Alternative 2
6. Figure 6. Project 3 – Gate Overwatch Position Construction
7. Figure 7. Project 4, Alternative 1 – Aerospace Ground Equipment Facility with New Shop, Administrative Space, and Covered Storage
8. Figure 8. Project 4, Alternative 2 – Aerospace Ground Equipment Facility without New Shop and More Renovated Administrative Space
9. Figure 9. Project 5 – Burma Road Realignment
10. Figure 10. Project 6 – 38th Rescue Squadron Parking Lot Construction
11. Figure 11. Project 7 – Airfield Stormwater Repair and Replacement
12. Figure 12. Project 8 – Mission Lake Water Barrier and Stone Road Repairs
13. Figure 13. Project 9 – Boundary Fence Repair
14. Figure 14. Project 10 – Building Demolition
15. Figure 15. Locations of National Register of Historic Places-Eligible Sites
16. Table 1. National Register of Historic Places Status of Buildings to Demolished or Modified

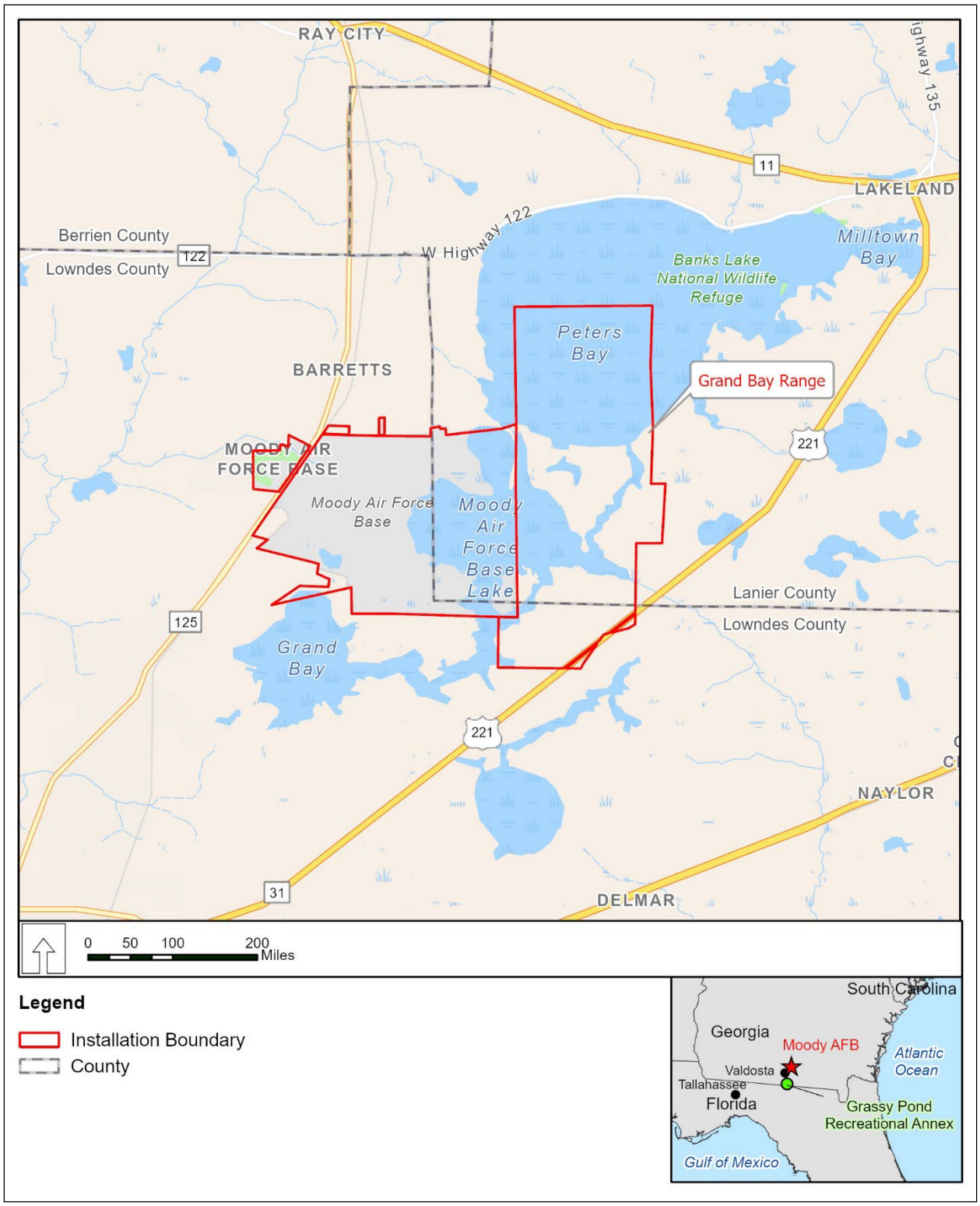


Figure 1. Location of Moody Air Force Base, Georgia

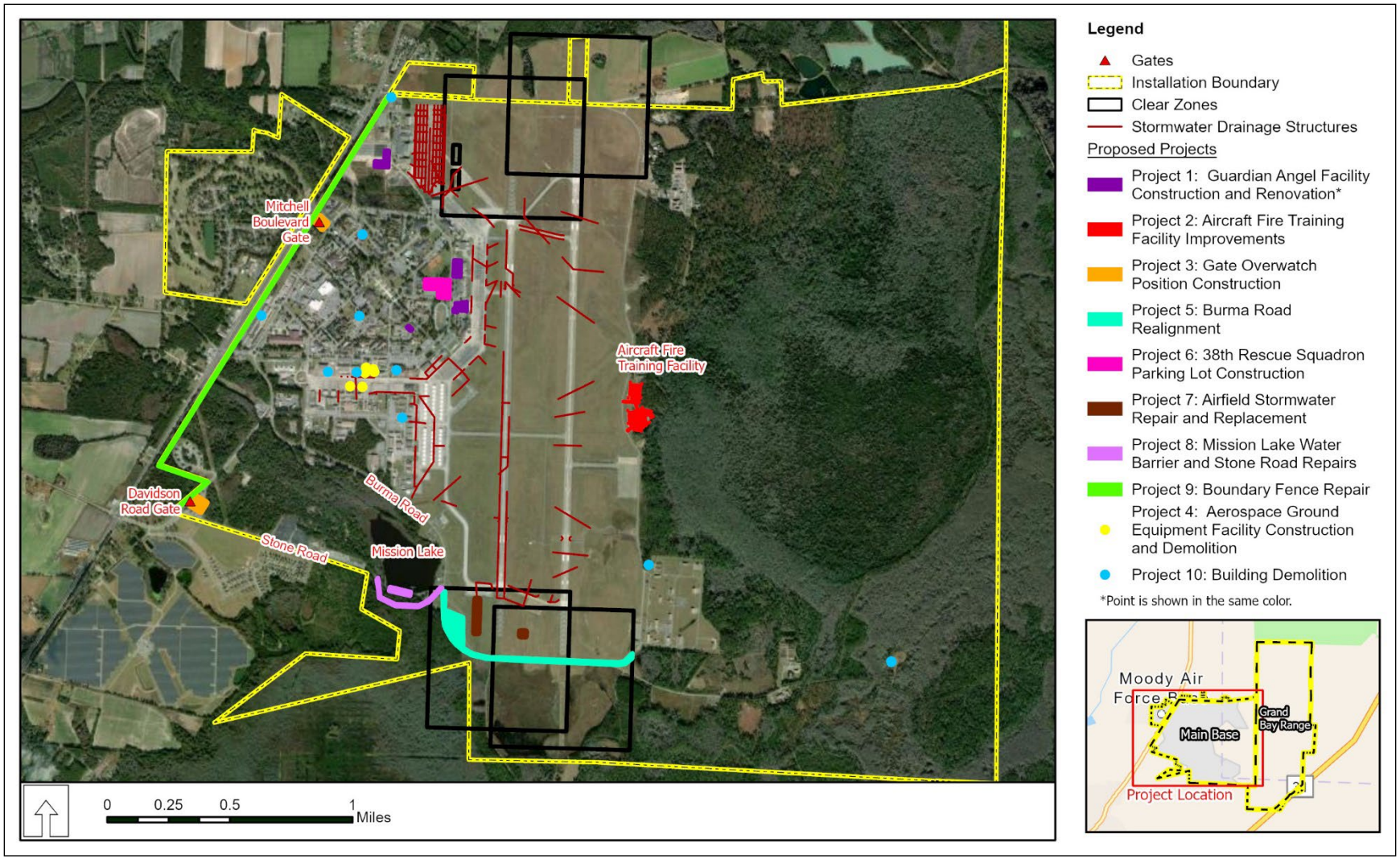


Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia

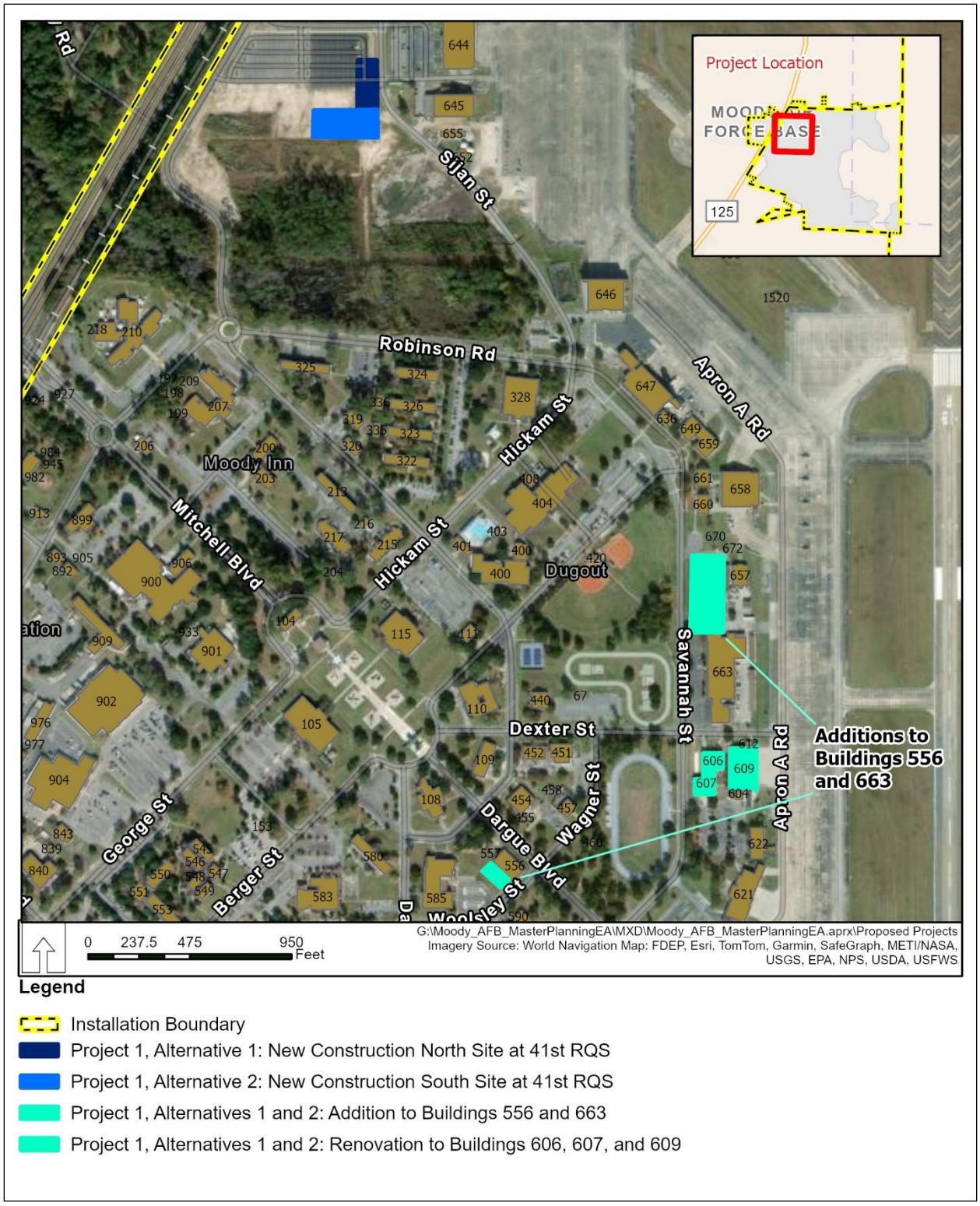


Figure 3. Project 1 – Guardian Angel Facility Construction and Renovation

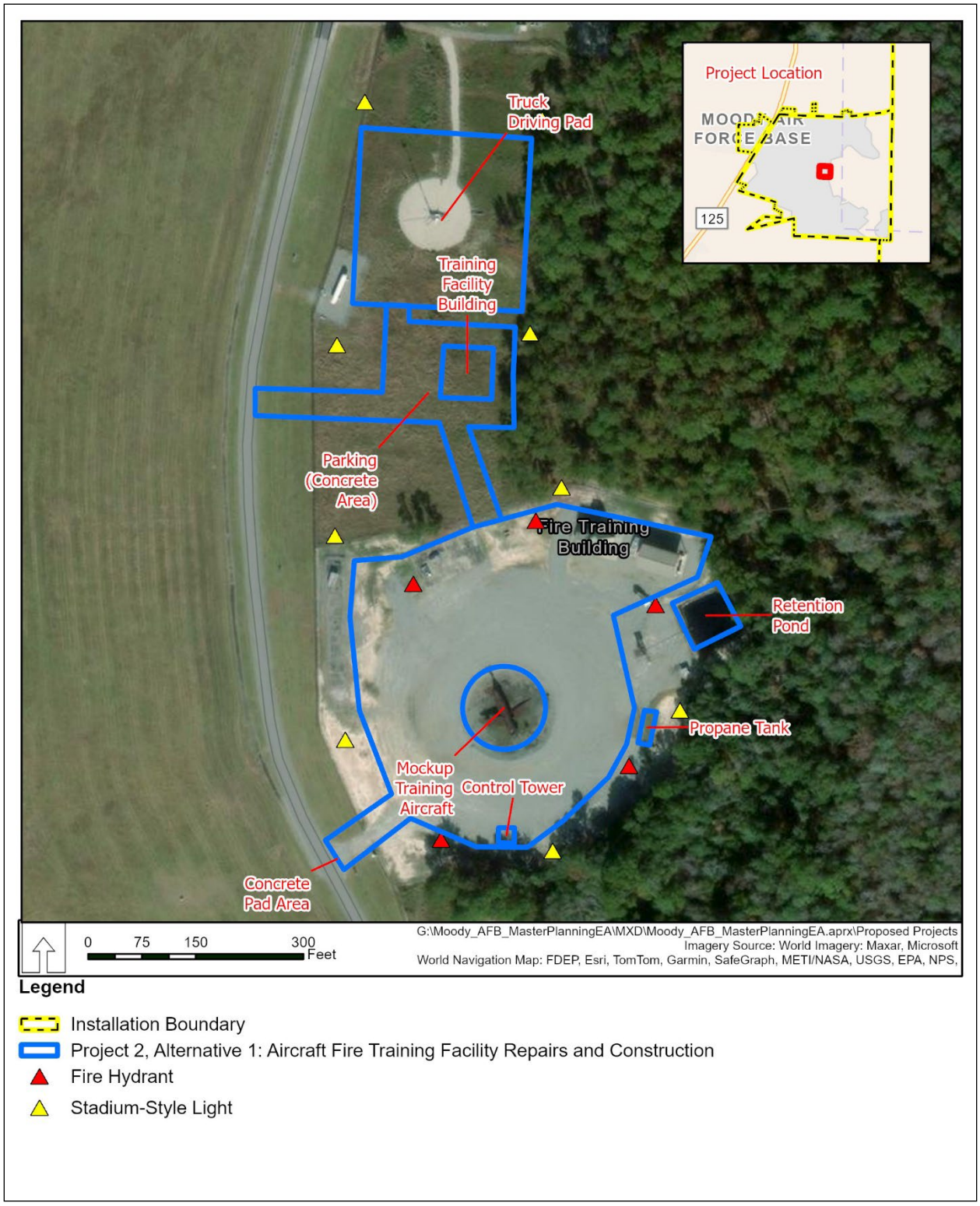


Figure 4. Project 2 – Aircraft Fire Training Facility Improvements Alternative 1

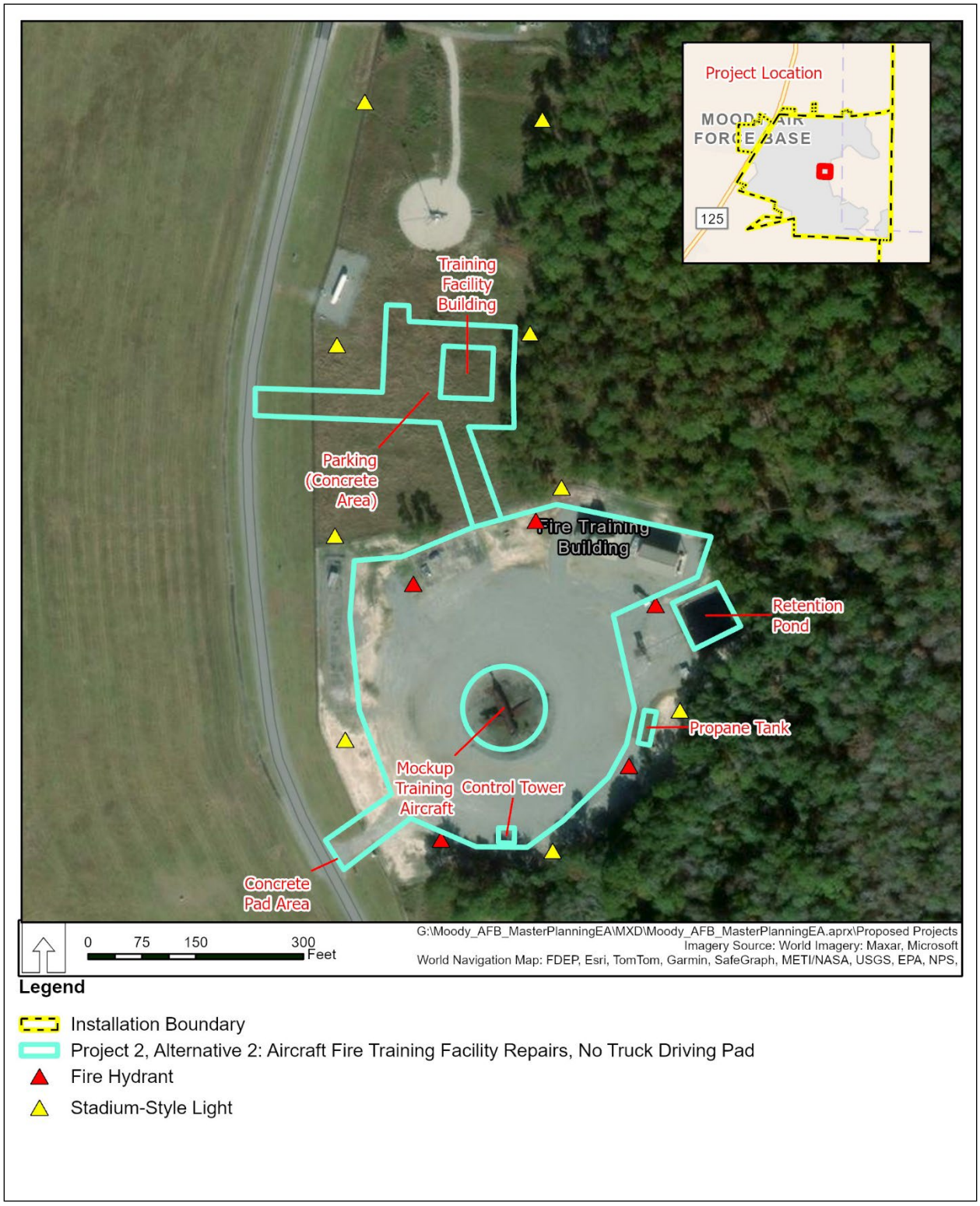


Figure 5. Project 2 – Aircraft Fire Training Facility Improvements Alternative 2



Figure 6. Project 3 – Gate Overwatch Position Construction

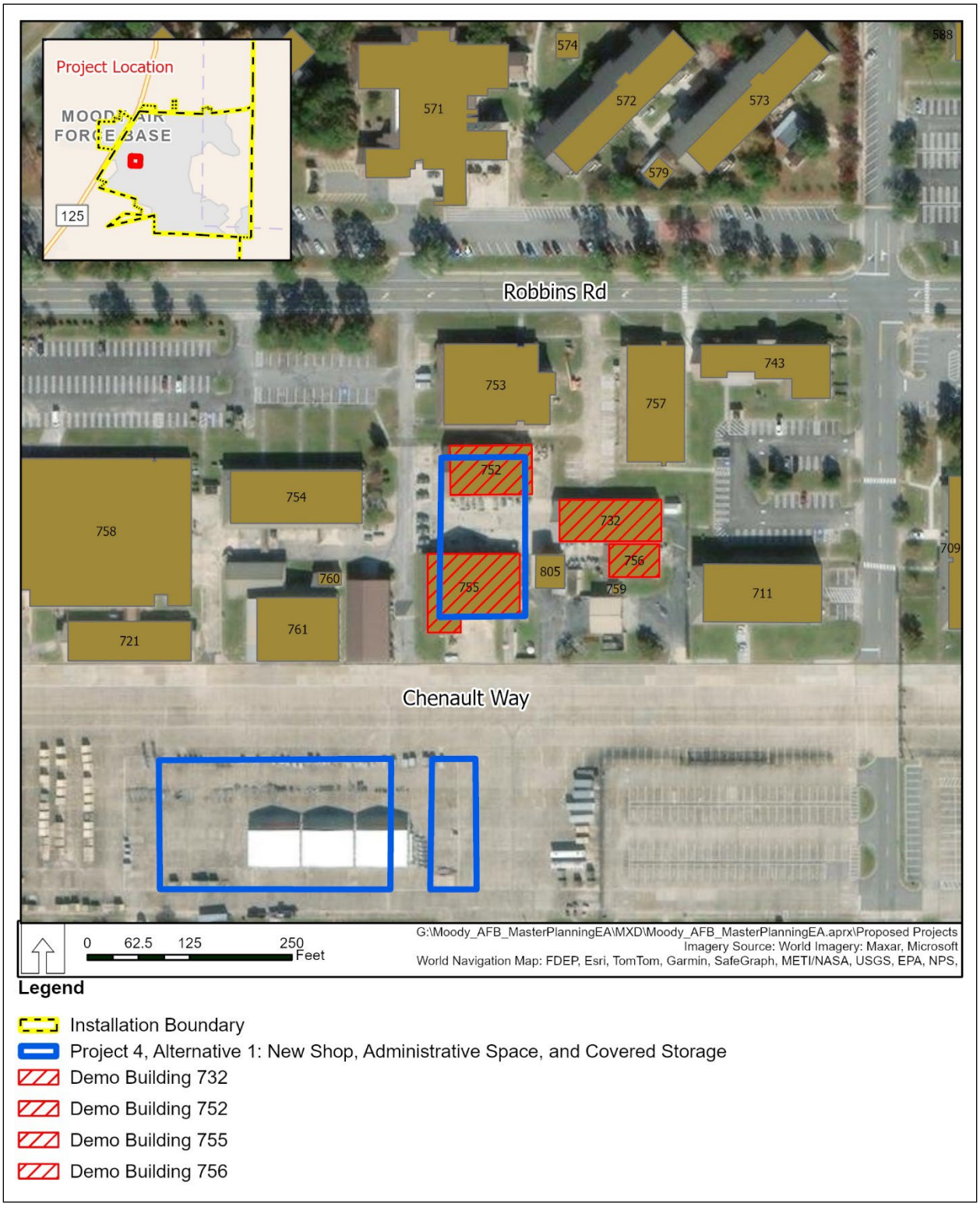


Figure 7. Project 4, Alternative 1 – Aerospace Ground Equipment Facility with New Shop, Administrative Space, and Covered Storage

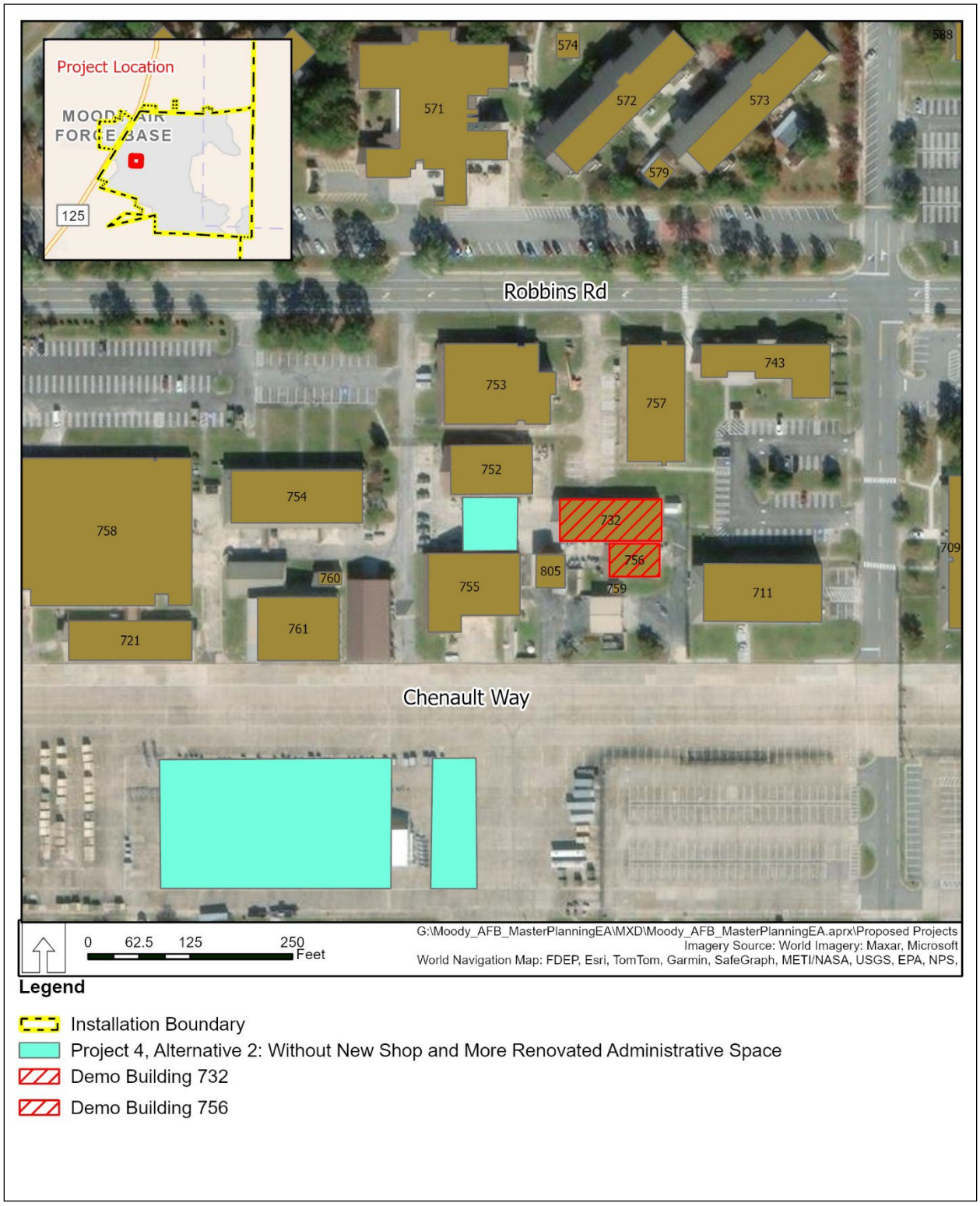


Figure 8. Project 4, Alternative 2 – Aerospace Ground Equipment Facility without New Shop and More Renovated Administrative Space



Figure 9. Project 5 – Burma Road Realignment



Figure 10. Project 6 – 38th Rescue Squadron Parking Lot Construction

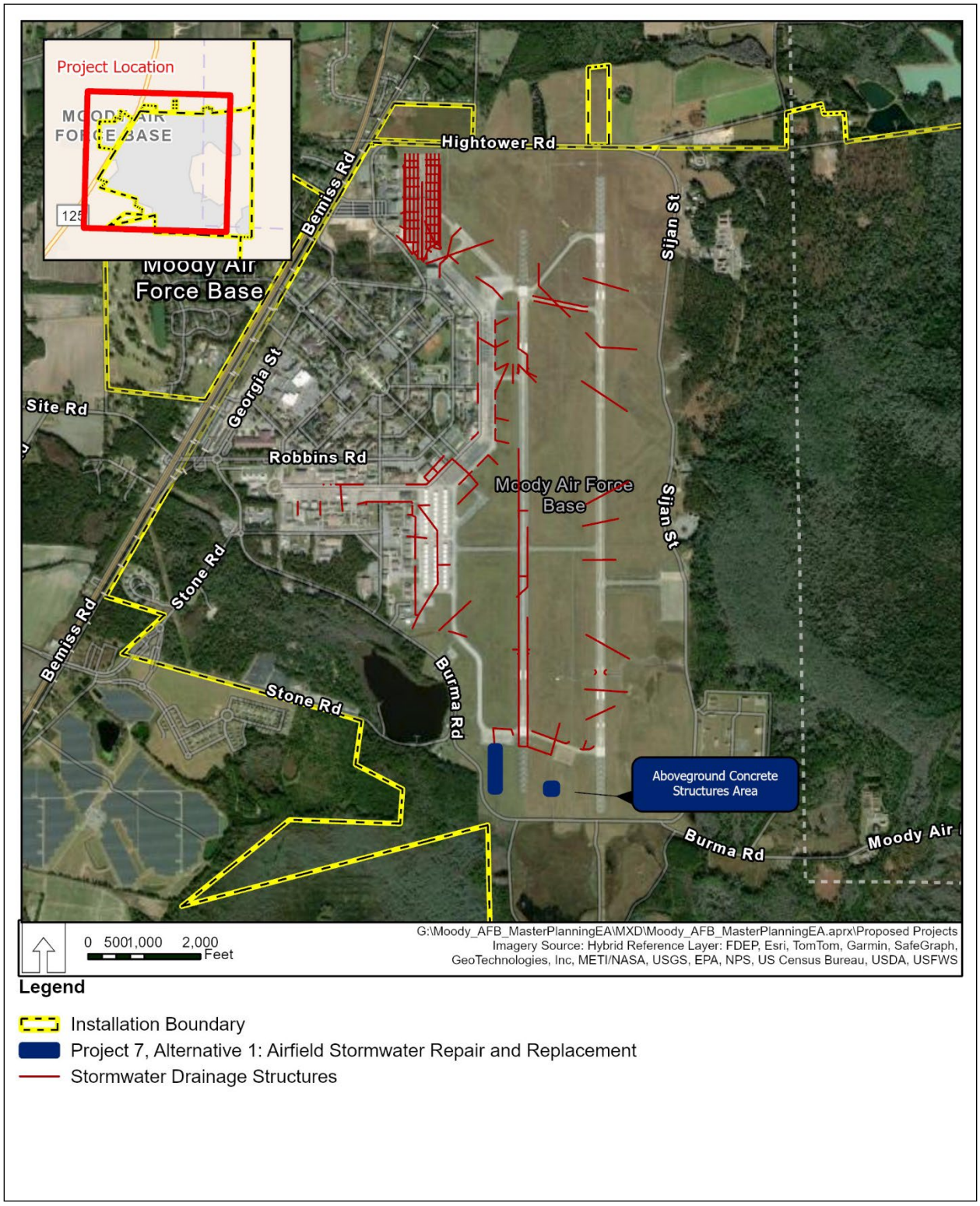


Figure 11. Project 7 – Airfield Stormwater Repair and Replacement

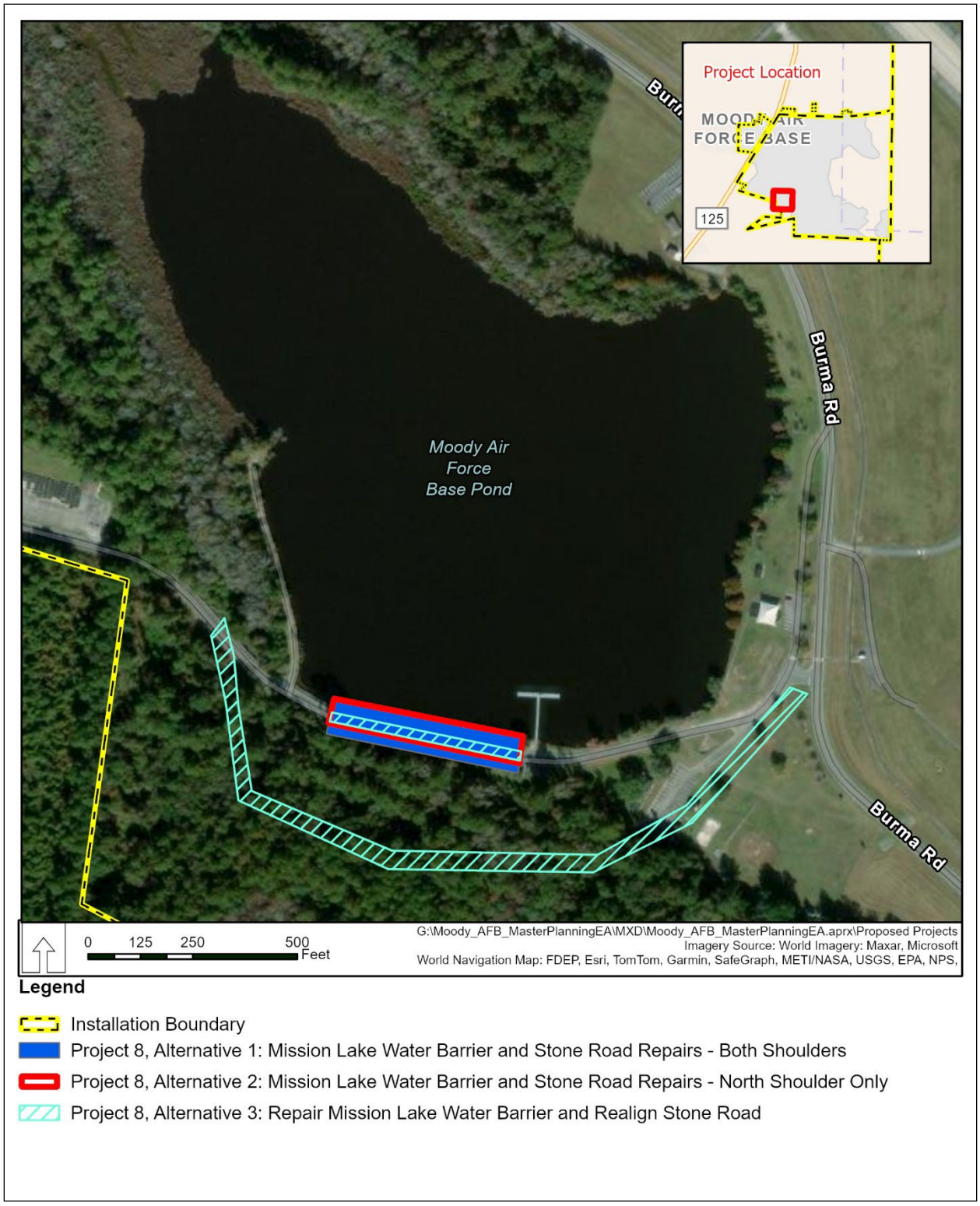


Figure 12. Project 8 – Mission Lake Water Barrier and Stone Road Repairs

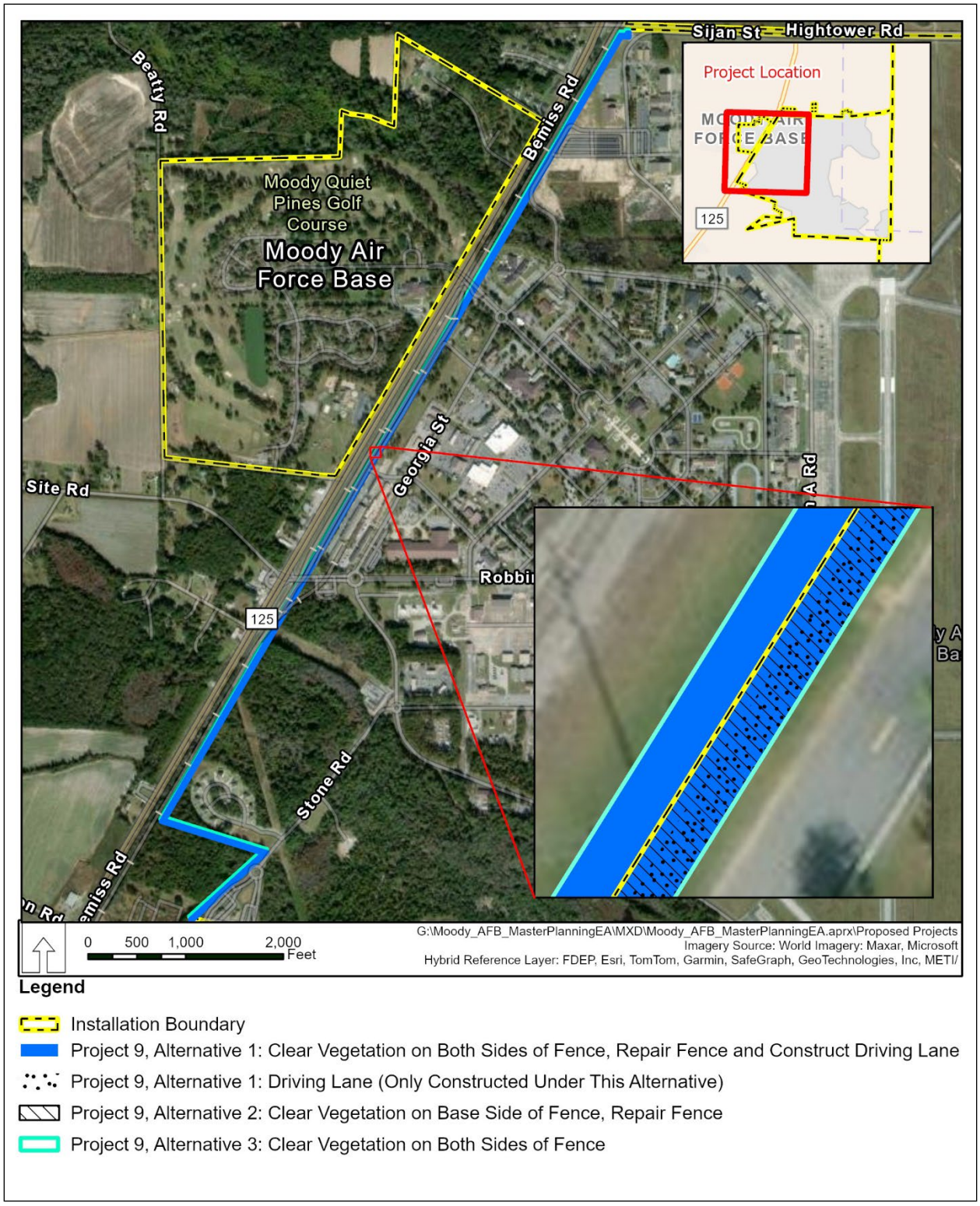


Figure 13. Project 9 – Boundary Fence Repair

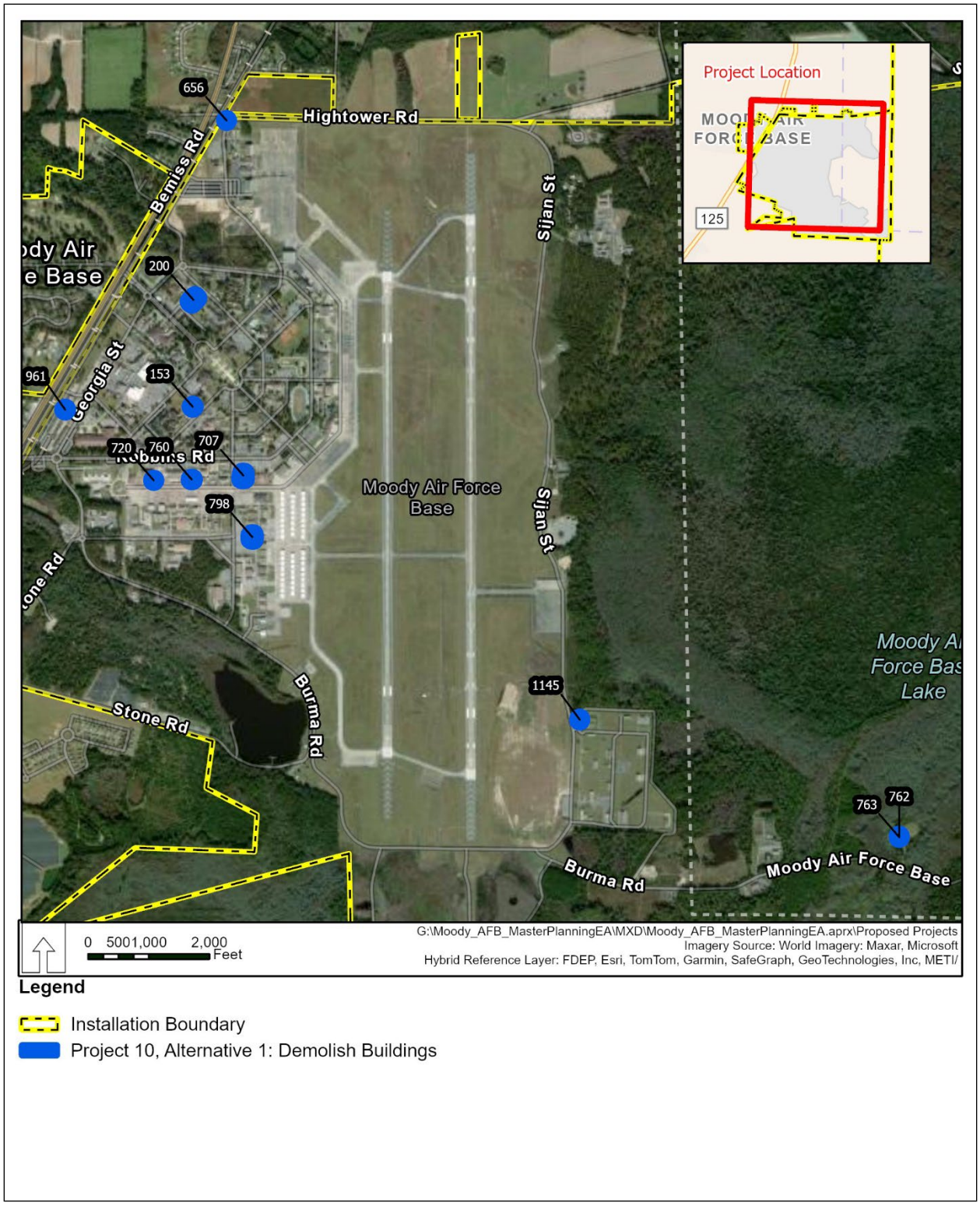


Figure 14. Project 10 – Building Demolition

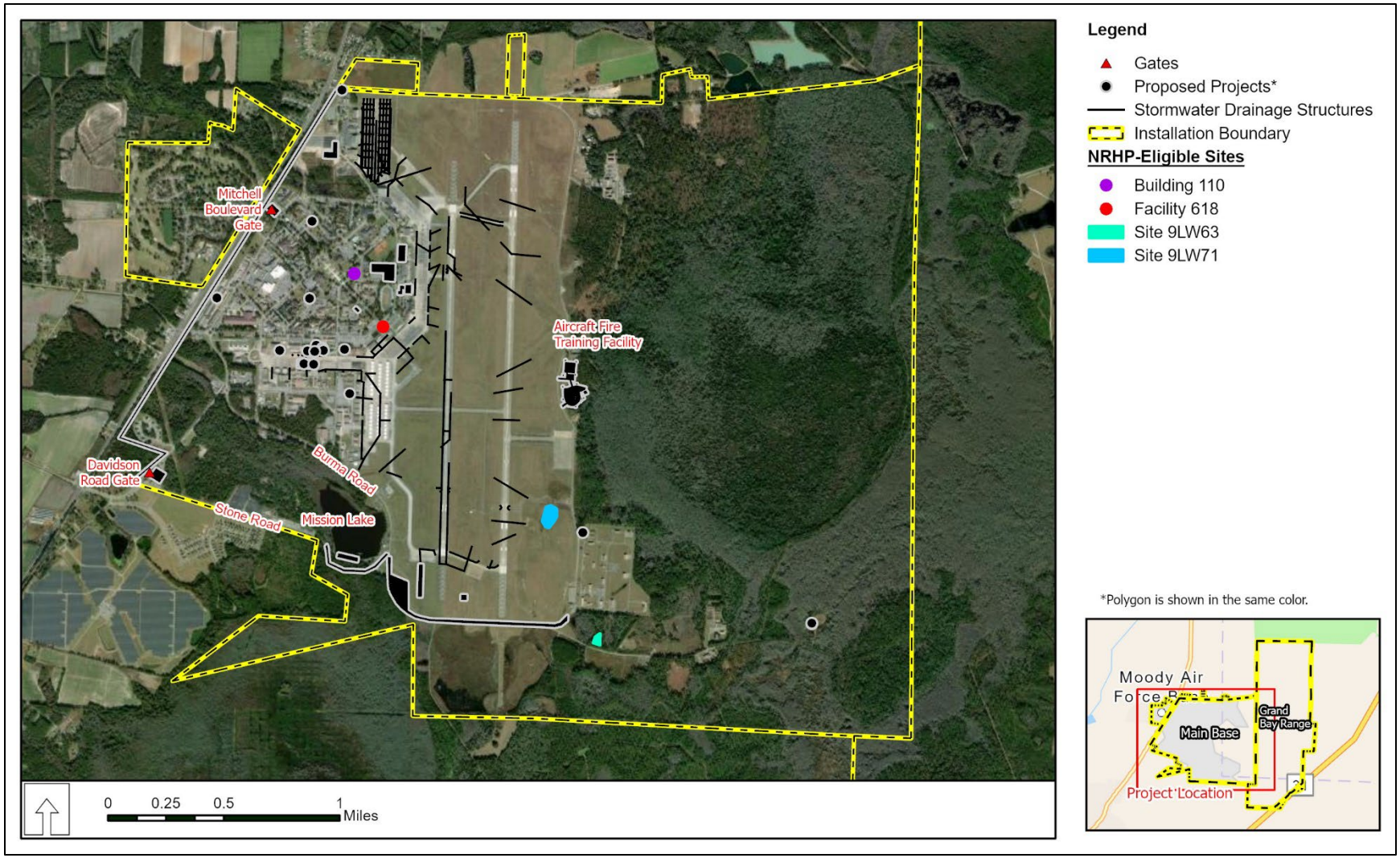


Figure 15. Locations of National Register of Historic Places-Eligible Sites

Table 1. National Register of Historic Places Status of Buildings to Be Demolished or Modified

Building Number	Year Built	Proposed Activity	NRHP Status	Area (square feet)
153	2005	Demolition	Not Evaluated/ < 50 years	440
200	1992	Demolition	Not Evaluated/ < 50 years	264
556	1941	Addition and Renovation	Evaluated/Not Eligible	9,925
656	1996	Demolition	Not Evaluated/ < 50 years	76
663	2000	Addition	Not Evaluated/ < 50 years	64,568
707	1987	Demolition	Not Evaluated/ < 50 years	3,042
720	1981	Demolition	Not Evaluated/ < 50 years	113
732	1997	Demolition	Not Evaluated/ < 50 years	5,584
752	1994	Demolition	Not Evaluated/ < 50 years	5,264
755	1962	Demolition	Evaluated/Not Eligible	7,958
756	1977	Demolition	Evaluation Pending	2,072
760	1984	Demolition	Not Evaluated/ < 50 years	429
762	1991	Demolition	Not Evaluated/ < 50 years	120
763	1988	Demolition	Not Evaluated/ < 50 years	120
798	2001	Demolition	Not Evaluated/ < 50 years	3,712
961	1953	Demolition	Evaluated/Not Eligible	297
1145	2003	Demolition	Not Evaluated/ < 50 years	242

NRHP – National Register of Historic Places

DEPARTMENT OF THE AIR FORCE
23D CIVIL ENGINEER SQUADRON (ACC)
MOODY AIR FORCE BASE GEORGIA

23 CES/CD
3485 Georgia Street
Bldg 918
Moody AFB GA 31699-1707

US Fish and Wildlife Service
Ecological Services - Coastal Georgia Sub Office
Attn: Bill Wikoff, Supervisory Biologist
4980 Wildlife Drive, NE
Townsend GA 31311

Subject: Endangered Species Act Section 7 Consultation for Proposed Facility and Infrastructure Construction and Modernization Projects, Moody Air Force Base, Georgia

Dear Mr. Wikoff:

The Department of the Air Force (DAF) requests informal Section 7 consultation under the Endangered Species Act (ESA) for proposed facility infrastructure construction, demolition, and modernization projects at Moody Air Force Base (AFB), Georgia (Attachment 1; Figure 1). The DAF has made a no effect determination for the wood stork (*Mycteria americana*) and whooping crane (*Grus americana*) and a may affect but not likely to adversely affect determination for the eastern indigo snake (*Drymarchon couperi*) and Suwannee alligator snapping turtle (SAST; *Macrochelys suwanniensis*). DAF determined that the proposed projects would not jeopardize the continued existence of the tricolored bat (*Perimyotis subflavus*).

Moody AFB is located on approximately 11,881 acres in south-central Georgia, approximately 10 miles northeast of the city of Valdosta, in Lowndes and Lanier counties. The installation consists of the Main Base, the adjacent Grand Bay Range, and the geographically separated Grassy Pond Recreational Annex, which is located 25 miles southwest of the Main Base. The proposed facility infrastructure construction and modernization projects would be limited to Moody AFB Main Base (see Attachment 1; Figure 1).

The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. These deficiencies would be remedied through an ongoing process of construction of new facilities and new infrastructure, the repair of existing facilities and infrastructure, and the demolition of obsolete and unneeded facilities. The Proposed Action is needed to conform with applicable antiterrorism/force protection (AT/FP) criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and risk to the mission due to inefficiencies. The Proposed Action includes the following 10 facility infrastructure projects to be performed within approximately the next five fiscal years (Fiscal Year 2025 through Fiscal Year 2030) at Moody AFB (Attachment 2; Figure 2).

Project 1 – Guardian Angel Facility Construction and Renovation. To support the 38th Rescue Squadron (38 RQS) primary operations, which currently shares a building with the 41st Rescue Squadron (41 RQS), an adequately sized and properly configured squadron operations building would be constructed. The DAF carried forward two project-level alternatives for Project 1 (Attachment 3; Figure 3). Under Alternative 1, the DAF would construct a new 55,005-square-foot squadron operations facility near Sijan Street to support the relocation of the 41 RQS. Approximately 5,000 square feet of additional pavement would be constructed for emergency vehicle access and parking, as well as a retaining wall for slope stabilization at the building location. DAF would renovate Buildings 556 and 663, construct a 5,280-square-foot addition to Building 556, and construct a 62,414-square-foot addition to Building 663. DAF would renovate Buildings 606, 607, and 609. Under Alternative 2, the DAF would construct the new 55,005-square-foot squadron operations facility south of the Project 1, Alternative 1, location to support the relocation of the 41 RQS. Approximately 30,000 square feet of additional pavement would be constructed for emergency vehicle access and parking. Trenching would be required to extend utilities (i.e., sewer, water, electric, gas, and communications) for the new 41 RQS squadron operations building. DAF would renovate Buildings 556 and 663, construct a 5,280-square-foot addition to Building 556, and construct a 62,414-square-foot addition to Building 663. DAF would renovate Buildings 606, 607, and 609.

Project 2 – Aircraft Fire Training Facility (AFTF) Improvements. The DAF would modernize the existing AFTF at Moody AFB. The DAF carried forward two project-level alternatives for Project 2. Under Alternative 1 (Attachment 4; Figure 4), the DAF would construct an approximately 6-acre concrete pad around the AFTF and connect the concrete pad to North Perimeter Road. The DAF would remove the existing and install a new mockup training aircraft for fire training. Five new fire hydrants would be installed to replace the existing fire hydrants. The DAF would install nine stadium-style lights to encompass all areas within the AFTF to allow for nighttime training. The existing retention pond would be renovated, the propane gas tank replaced at a location beyond the existing quantity-distance arc, and environmental concerns associated with hazardous materials managed by capping those contaminated soils with concrete. The DAF would construct a 10,000-square-foot training facility and an approximately 3-acre pad for truck driving training using approximately 2,300 cubic yards of concrete. Under Alternative 2 (Attachment 5; Figure 5), the DAF would construct all the proposed facilities and infrastructure at the existing AFTF as described in Project 2, Alternative 1, except for the approximately 3-acre truck driving training pad, and truck driver training would continue at a temporary pad set up elsewhere on Moody AFB.

Project 3 – Gate Overwatch Position Construction. The Davidson Road and Mitchell Boulevard gates do not meet the current AT/FP requirements. The DAF would construct two-story overwatch buildings at both the Davidson Road Gate and at the Mitchell Boulevard Gate (Attachment 6; Figure 6). Each overwatch building would be approximately 1,250 square feet, with approximately 625 square feet of new ground disturbance. The overwatch buildings would be connected to utilities and communication systems, which are all located proximate to the gates.

Project 4 – Aerospace Ground Equipment (AGE) Facility Construction and Demolition. To consolidate AGE facilities and operations at Moody AFB, the DAF would renovate existing AGE facilities and demolish existing AGE facilities within the existing AGE complex. The DAF

carried forward two project-level alternatives for Project 4. Under Alternative 1 (Attachment 7; Figure 7), the DAF would demolish Buildings 732, 752, 755, and 756 and construct a new consolidated AGE facility with warehouse area, administrative space, and covered storage. Under Alternative 2 (Attachment 8; Figure 8), the DAF would demolish Buildings 732 and 756. Building 755 would be modified to create administrative areas (e.g., offices, break room, conference room), and Building 752 would be renovated for warehouse space. The DAF would construct a new parts-support section.

Project 5 – Burma Road Realignment. A portion of Burma Road and the associated airfield fence are located within the graded portion of the Runway 18R/36L Clear Zone (CZ), causing a violation of Unified Facilities Criteria (UFC) 3-260-01, *Airfield and Heliport Planning and Design*, which requires a temporary airfield waiver. The temporary waiver was granted until the closure of an Environmental Restoration Program (ERP) site, which would allow for removal of trees in this area that also violate airfield surfaces. After closure of the ERP site, the DAF would realign and repave approximately 6,000 linear feet of Burma Road with conventional asphalt and remove approximately 4.6 acres of trees from the realignment footprint (Attachment 9; Figure 9).

Project 6 – 38th Rescue Squadron Parking Lot Construction. The DAF would construct a 20,000-square-foot parking lot for 125 personally operated vehicles on an existing fitness track east of Building 663. The parking lot would be paved with either conventional or permeable asphalt. A total of 10 electric charging stations for personally operated vehicles would be included at the parking lot (Attachment 10; Figure 10).

Project 7 – Airfield Stormwater Repair and Replacement. The Moody AFB airfield stormwater drainage system is entirely below ground. Portions of the drainage system have noticeably begun to fail, and deterioration of underground drainage structures has caused visible slumping of surface soils within the airfield. Additionally, two exposed concrete structures at the south end of the airfield are within the graded portion of the CZ for Runway 18R/36L and require an airfield waiver from land use compatibility guidelines (Attachment 11; Figure 11). The DAF would complete a condition survey of all stormwater structures previously located during the 2023 Ground Penetrating Radar Airfield Survey. An estimated 1,500 linear feet of belowground structures would be repaired or replaced with the same-sized stormwater drainage pipe, using concrete, high-density polyethylene, or corrugated metal stormwater pipes. Stormwater system repairs would require excavation within the airfield at select locations to access the belowground stormwater structures, disturbing approximately 7,500 square feet of airfield soils. Excavation, repair, and replacement activities would be coordinated with airfield operations to ensure that at least one Moody AFB runway would always remain operational. The DAF would remove two concrete stormwater outfall structures located in the graded portion of the CZ and replace them with approximately 700 linear feet of belowground concrete, high-density polyethylene, or corrugated metal stormwater pipes to disperse stormwater flows passing from the airfield surface through existing culverts located beneath Burma Road.

Project 8 – Mission Lake Water Barrier and Stone Road Repairs. The water barrier for Mission Lake underlies a portion of Stone Road; both show signs of aging and degradation, and approximately 300 feet of Stone Road adjacent to Mission Lake lacks shoulders, which poses a safety risk for vehicles (Attachment 12; Figure 12). The DAF carried forward three project-level alternatives for Project 8. Under Alternative 1, the DAF would extend the shoulders of Stone

Road both to the north and south along an approximately 300-foot section of road currently lacking shoulders. The water barrier for Mission Lake would be strengthened by installing 3,500 cubic yards of riprap at the toe of slope on both sides of the water barrier. It is estimated that 20 feet of riprap would be placed on both sides of the water barrier, and a total of 4,000 cubic yards of clay would be used to backfill over the water barrier to support new shoulders for Stone Road. Stone Road would be closed during the construction of shoulder and water barrier improvements and then repaved prior to reopening the road for travel. Alternative 2 would be the same as Alternative 1, except a new shoulder would be constructed only on the north side (Mission Lake side) of Stone Road and not on the south side of Stone Road, where a parallel drainage channel would potentially be impacted by fill material. Approximately 2,000 cubic yards of clay fill would be required to construct the shoulder on the north side of Stone Road. Under Alternative 3, the DAF would strengthen the water barrier as described for Alternative 1. However, instead of widening 300 feet of Stone Road, Stone Road would be realigned to no longer pass over the top of the Mission Lake water barrier. Approximately 1,800 linear feet of a new two-lane road with shoulders would be constructed to realign Stone Road south of the Mission Lake water barrier and south of the stream channel that originates as the outfall from Mission Lake. This would require approximately 1.6 acres of tree removal, grading, and new pavement placement to realign Stone Road. The former Stone Road alignment would be decommissioned, old pavement removed, and the surface covered in turf grasses or gravel, as necessary to support the Mission Lake water barrier.

Project 9 – Boundary Fence Repair. Portions of the Moody AFB boundary fence along the western Moody AFB boundary contain mature woody vegetation that extends to the fence line. There is no perimeter driving lane parallel to the western base boundary fence because of this vegetation. Required fence maintenance is difficult without proper access to the fence. Further, the lack of a clear line-of-sight at the boundary fence does not meet AT/FP requirements (Attachment 13; Figure 13). The DAF carried forward three project-level alternatives for Project 9. Under Alternative 1, the DAF would remove vegetation along approximately 10,000 linear feet of the Moody AFB boundary fence to create a 16-foot-wide corridor by clearing approximately 3.4 acres of vegetation on both sides of the fence. Stumps would be removed, and a driving lane would be constructed within the 16-foot-wide corridor. This would include grading the roadway through an existing wetland area, placing a culvert in Beatty Branch, and building the driving lane over the culverted Beatty Branch. The driving lane would be approximately 10 feet wide with an unimproved (i.e., dirt) surface. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth. Under Alternative 2, the DAF would remove all aboveground vegetation along approximately 10,000 linear feet of the Moody AFB boundary fence to create a 16-foot-wide corridor, removing approximately 1.7 acres of vegetation only on the Moody AFB side of the fence. Stumps and other belowground vegetation material would be left in place, and no driving lane would be constructed. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth. Under Alternative 3, the DAF would remove all aboveground vegetation along approximately 10,000 linear feet of the Moody AFB boundary fence, removing approximately 3.4 acres of vegetation, to create a 16-foot-wide corridor clear of vegetation on both sides of the Moody AFB boundary fence. Stumps and other belowground vegetation material would be left in place, and no driving lane would be constructed. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth.

Project 10 – Building Demolition. DAF would demolish 11 buildings that have been determined to be underutilized or no longer needed (Buildings 153, 200, 656, 707, 720, 760, 762, 763, 798, 961, and 1145) (Attachment 14; Figure 14). All demolished materials and solid waste would be removed from Moody AFB using dump trucks and haul-off debris containers. All demolition debris and other associated solid waste would be transported to the Evergreen Landfill in Valdosta, Georgia. Demolished building locations would either be left with the foundation building pad in place, or the building foundations removed, and the soils revegetated and maintained as grass-covered space.

Listed Species Occurrences

The Moody AFB Integrated Natural Resources Management Plan (Moody AFB 2024), US Fish and Wildlife Service (USFWS) Information for Planning and Consultation System (USFWS 2024a), and the Georgia Rare Element Natural Data Portal were reviewed for the most up-to-date information concerning federally and state threatened and endangered species on Moody AFB Main Base. The USFWS Information for Planning and Consultation database search identified three threatened, one proposed endangered, one candidate, and one experimental, nonessential species that could occur on Moody AFB:

- Eastern indigo snake – Threatened
- Wood stork – Threatened
- Tricolored bat – Proposed Endangered
- SAST – Threatened
- Monarch butterfly (*Danaus plexippus*) – Candidate
- Whooping crane – Experimental, Nonessential

There is no designated critical habitat for any listed species on Moody AFB (USFWS 2024a). The monarch butterfly, as a Candidate species, is not evaluated for consultation or conference under Section 7 of the ESA and is not discussed further.

Gopher tortoises (*Gopherus polyphemus*) are known to occur on Moody AFB (Moody AFB 2024) and are a species of concern. The gopher tortoise, a keystone species, and the federally threatened eastern indigo snake are known to coexist throughout their range. The gopher tortoise occurs from the coastal plain from South Carolina and westward to eastern Louisiana. They are a characteristic species of the rapidly disappearing longleaf pine and wiregrass communities, which includes sandhill dry flatwoods and turkey oak scrub. The eastern indigo snake's range extends from peninsular Florida to southeastern Georgia, where it inhabits the pine flatwoods, hardwood forests, moist hammocks, and areas that surround cypress swamps. Importantly, eastern indigo snake is known to use the burrow of gopher tortoise as refugia, hence the importance of this particular tortoise as a species of concern at Moody AFB. However, the eastern indigo snake has not been officially sighted on Moody AFB since 1996 (Moody AFB 2024).

The tricolored bat occurs in forested habitats across the eastern US and roosts in trees, primarily among leaves, during the spring, summer, and fall. In winter, tricolored bats roost in

caves and mines or in human-made structures such as culverts. Tricolored bats are one of the smallest bats in North America, and populations have declined dramatically as a result of white-nose syndrome, a disease caused by a fungal pathogen. The tricolored bat occurs seasonally at Moody AFB and has been detected during surveys (Moody AFB 2024). However, the tricolored bat is a proposed endangered species under the ESA, and consultation with the USFWS under Section 7 of the ESA is not required.

The SAST is in the genus *Macrochelys*, which includes the largest freshwater turtle species in size in North America. They are highly aquatic and secretive turtles. Its distribution is primarily limited to the Suwannee River basin in south Georgia and north Florida, and SAST is associated with deeper water habitats such as larger rivers, canals, lakes, ponds, and oxbows. The SAST is an opportunistic scavenger, and primarily feeds on fish, crayfish, mollusks, smaller turtles, insects, snakes, birds, and some vegetation (USFWS 2020). Both eDNA and trapping surveys have been conducted on Main Base of Moody AFB for SAST, and there have not been any SAST detections on Main Base. However, there is marginally suitable habitat for the SAST in Mission Lake and Beatty Branch. The SAST is a threatened species under the ESA.

There is no suitable habitat on Main Base for the wood stork or whooping crane; therefore, these species would not be expected to occur in the proposed project areas.

Proposed Projects Affects Determinations

Proposed projects 1, 3, 6, and 7 would have no effect on any federally listed or proposed listed species.

Project 2, Alternatives 1 and 2 have the potential to affect the eastern indigo snake. Known gopher tortoise burrows and gopher tortoise habitat is located proximate to the AFTF; however, there is no known habitat supporting any federally listed species, including the gopher tortoise and indigo snake in the AFTF improvement footprint (Moody AFB 2024). Even so, because of the proximity to burrows and occupied habitat, there is a chance that the gopher tortoise could be present at the project area, and because eastern indigo snakes are associated with gopher tortoise habitat, there is also the potential for indigo snake occurrence. Therefore, species-specific surveys would be conducted by a qualified biologist prior to the start of any construction-related activities. If a gopher tortoise or an indigo snake were to be detected during surveys, Moody AFB would coordinate with Georgia Department of Natural Resources and USFWS to relocate captured tortoises and indigo snakes outside of the AFTF construction zone. Therefore, Project 2, Alternatives 1 and 2, may affect but are not likely to adversely affect the eastern indigo snake.

Tricolored bats do not typically utilize buildings for roosting in Tricolored Bat Year Round Active Zone 2 (USFWS 2024b), which includes Moody AFB. Therefore, the demolition of buildings under Projects 4 and 10 would not affect the tricolored bat. However, there is a possibility that the tricolored bat could utilize trees at Moody AFB for roosting. Therefore, tree removal would not occur from 1 May to 15 July, to avoid tricolored bat pup season (USFWS 2024b). With the seasonal restrictions on tree removal activities, Projects 5, 8, and 9 would not jeopardize the continued existence of the tricolored bat.

The SAST has never been detected on Main Base. Habitat for the SAST is mostly absent in the existing riprap along the Mission Lake Water Barrier on the northern bank of Stone Road and at the Moody AFB boundary fence crossing of Beatty Branch. Noise and equipment movement from proposed construction activities such as the placement of riprap along the banks and within open water areas of Mission Lake and a culvert in Beatty Branch would further deter any SASTs from being present in the project areas during construction activities. BMPs would be used to ensure construction activities do not substantially increase water turbidity in Mission Lake or Beatty Branch. Therefore, the proposed repairs to the Mission Lake Water Barrier and Stone Road under Project 8, Alternatives 1, 2, and 3, and the placement of a culvert in Beatty Branch during the construction of a driving lane under Project 9, Alternative 1 may affect but is not likely to adversely affect the SAST.

The Proposed Action may affect but is not likely to adversely affect the indigo snake and SAST, and have no effects on any other federally listed species. Further, the Proposed Action would not jeopardize the continued existence of the tricolored bat. I am requesting your written concurrence with DAF's determinations on these ESA federally listed, proposed for listing, and candidate species. Please provide concurrence or comments and additional information concerning the Proposed Action within 30 days of the date of this letter to Mr. Lorence Busker, 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or by email to lorence.busker@us.af.mil. Thank you in advance for your assistance.

Sincerely

JOHN L. EUNICE, III, DAF
Deputy Base Civil Engineer

14 Attachments:

1. Figure 1. Location of Moody Air Force Base, Georgia
2. Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia
3. Figure 3. Project 1 – Guardian Angel Facility Construction and Renovation
4. Figure 4. Project 2 – Aircraft Fire Training Facility Improvements Alternative 1
5. Figure 5. Project 2 – Aircraft Fire Training Facility Improvements Alternative 2
6. Figure 6. Project 3 – Gate Overwatch Position Construction
7. Figure 7. Project 4, Alternative 1 – Aerospace Ground Equipment Facility with New Shop, Administrative Space, and Covered Storage
8. Figure 8. Project 4, Alternative 2 – Aerospace Ground Equipment Facility without New Shop and More Renovated Administrative Space
9. Figure 9. Project 5 – Burma Road Realignment
10. Figure 10. Project 6 – 38th Rescue Squadron Parking Lot Construction
11. Figure 11. Project 7 – Airfield Stormwater Repair and Replacement
12. Figure 12. Project 8 – Mission Lake Water Barrier and Stone Road Repairs
13. Figure 13. Project 9 – Boundary Fence Repair

14. Figure 14. Project 10 – Building Demolition

References

Moody Air Force Base (AFB). 2024. Integrated Natural Resources Management Plan, Plan Years FY2024 – FY2028, Moody AFB, Georgia.

United States Fish and Wildlife Service. 2020. Species Status Assessment Report for the Suwannee Alligator Snapping Turtle (*Macrochelys suwanniensis*). Version 1.1. July.

United States Fish and Wildlife Service (USFWS). 2024a. Information for Planning and Consultation. Web portal. <https://ipac.ecosphere.fws.gov>. Accessed April 2024.

United States Fish and Wildlife Service (USFWS). 2024b. Northern Long-Eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Projects, Version 1.0. April.

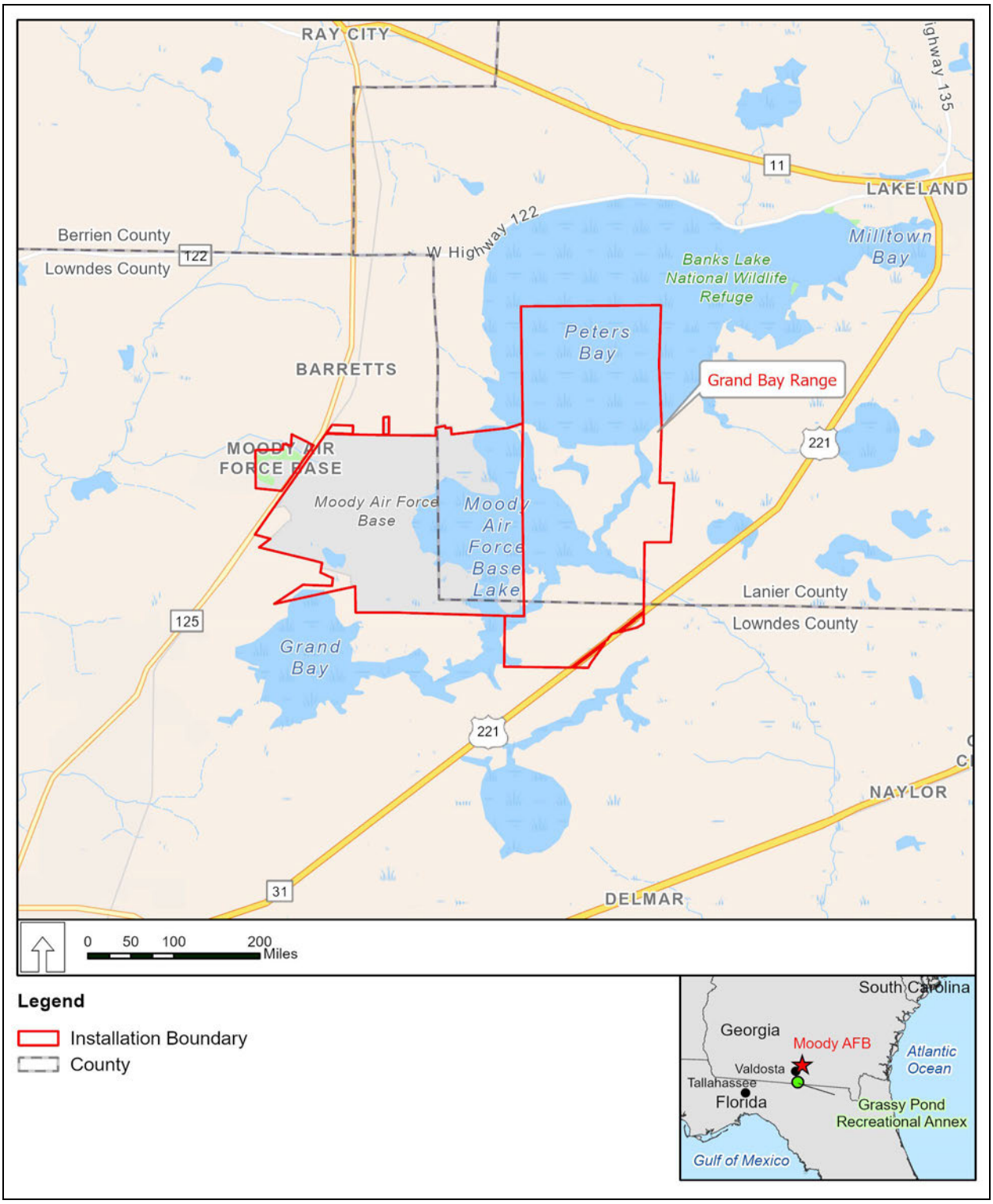


Figure 1. Location of Moody Air Force Base, Georgia

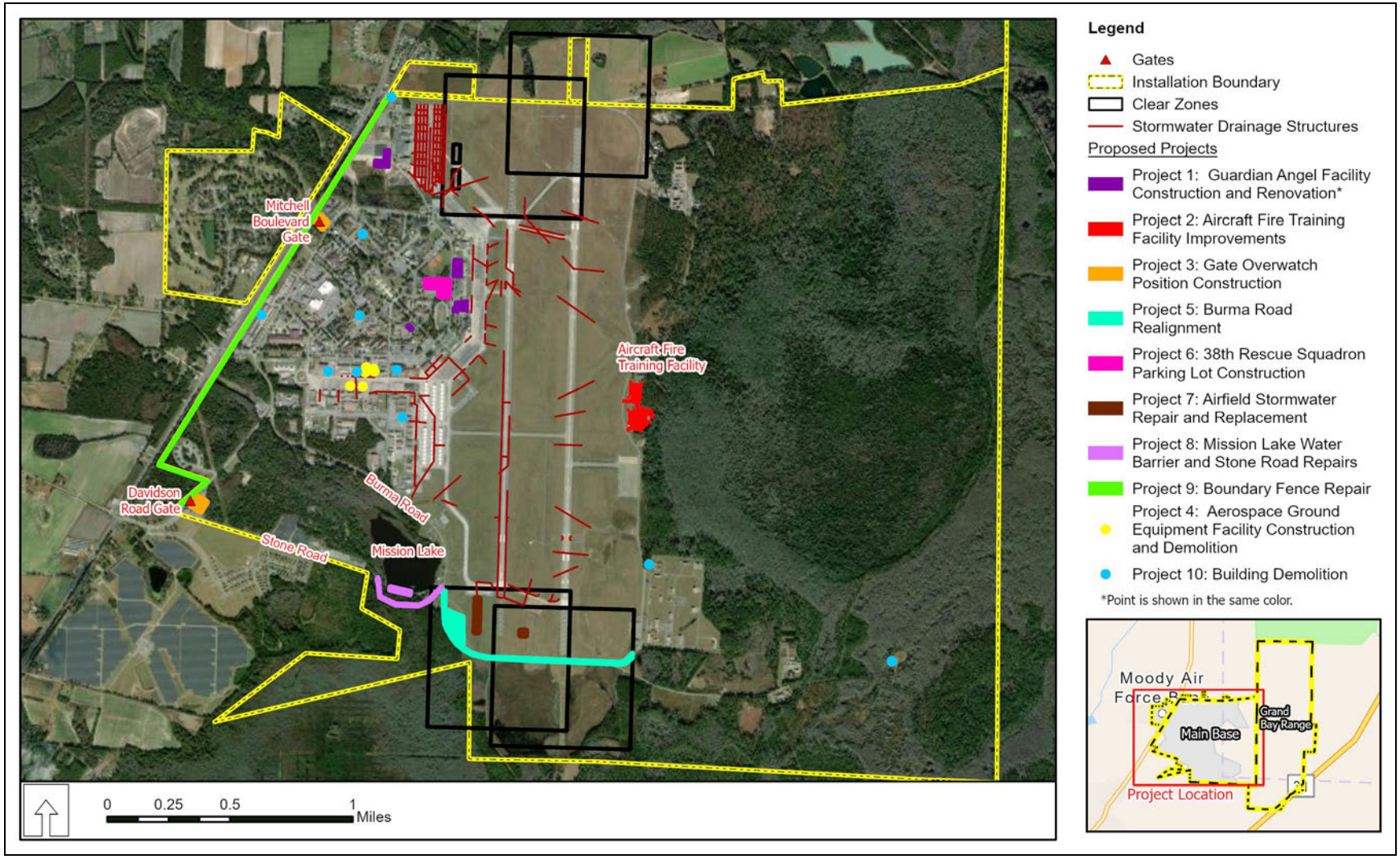


Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia

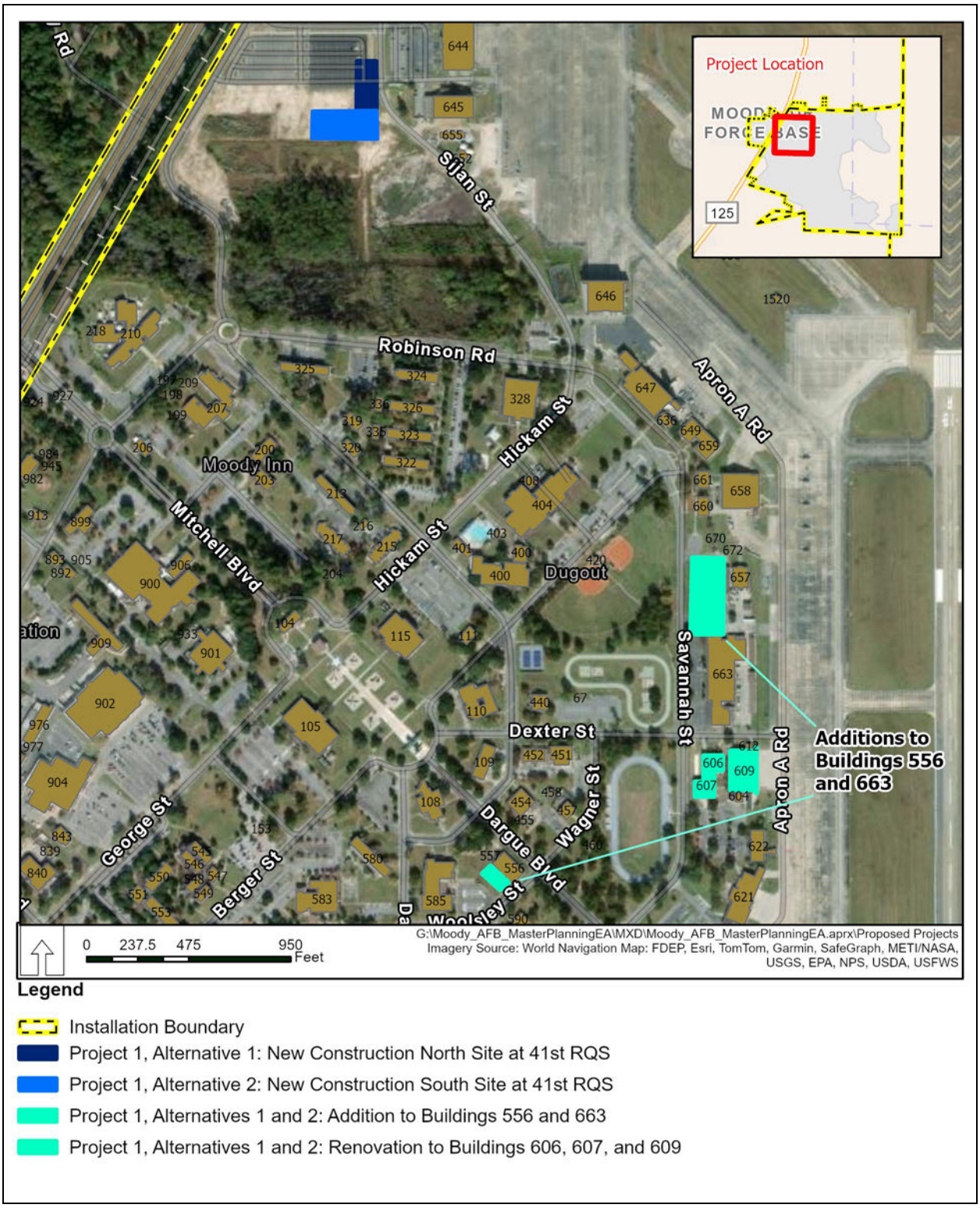


Figure 3. Project 1 – Guardian Angel Facility Construction and Renovation

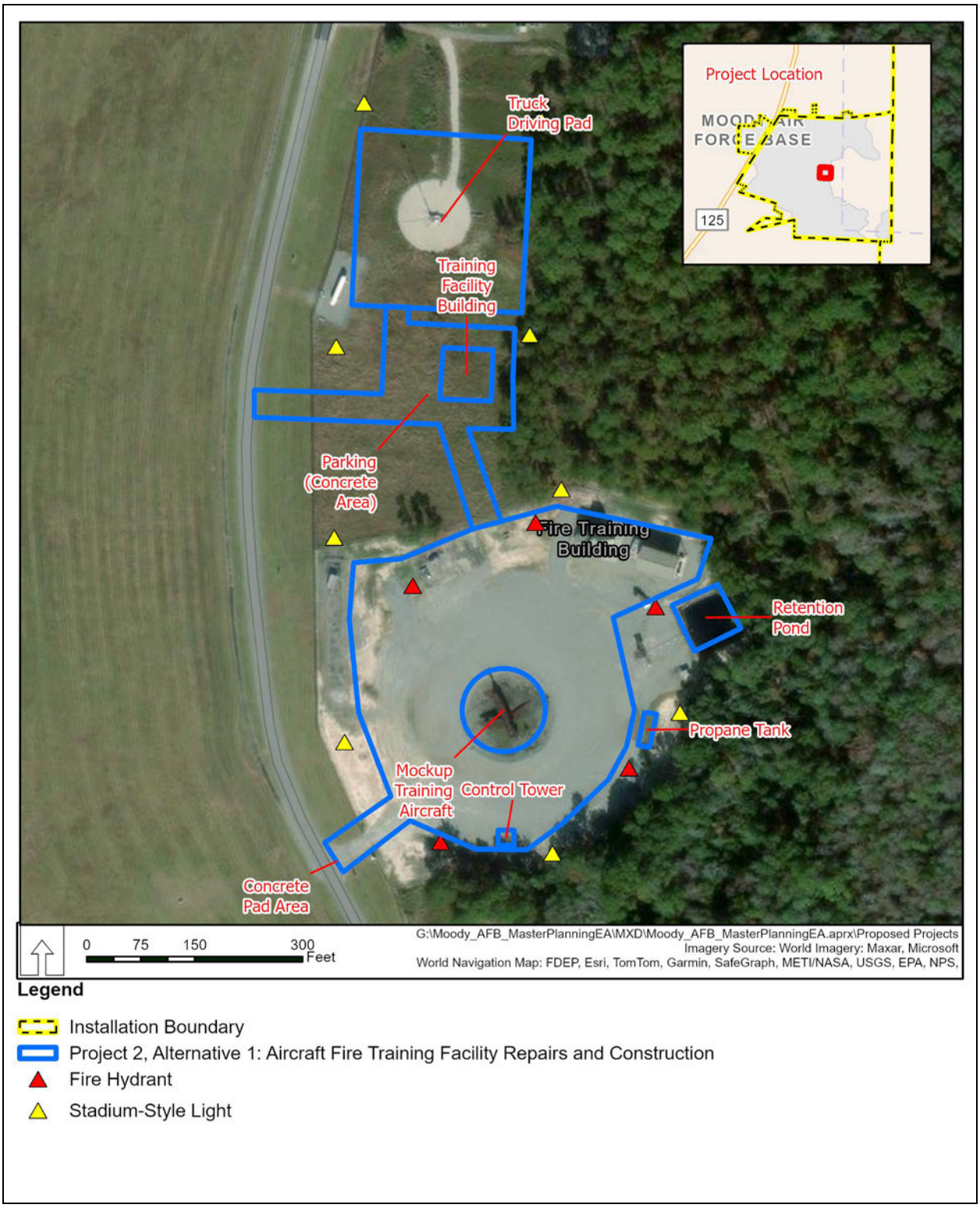


Figure 4. Project 2 – Aircraft Fire Training Facility Improvements Alternative 1

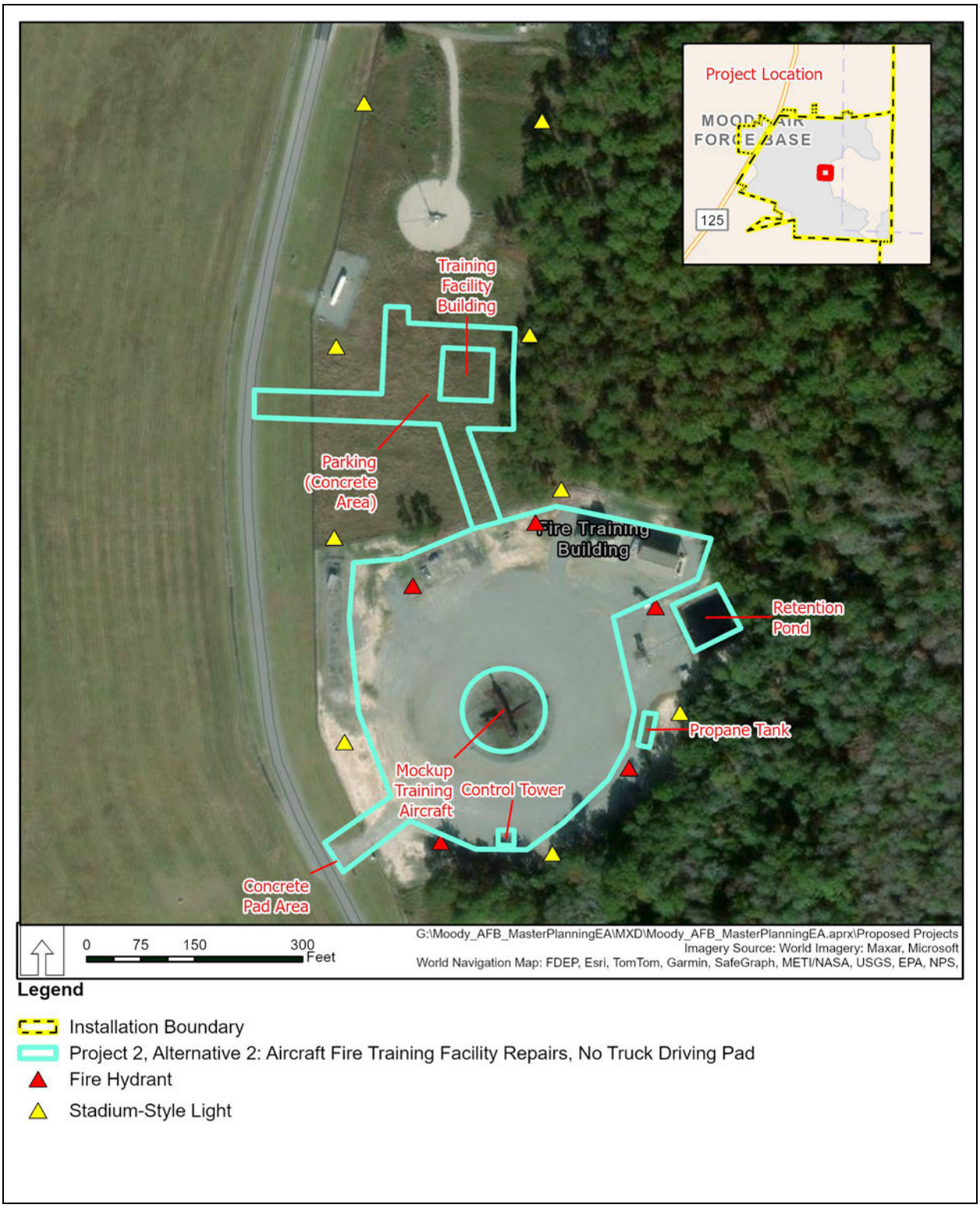


Figure 5. Project 2 – Aircraft Fire Training Facility Improvements Alternative 2



Figure 6. Project 3 – Gate Overwatch Position Construction

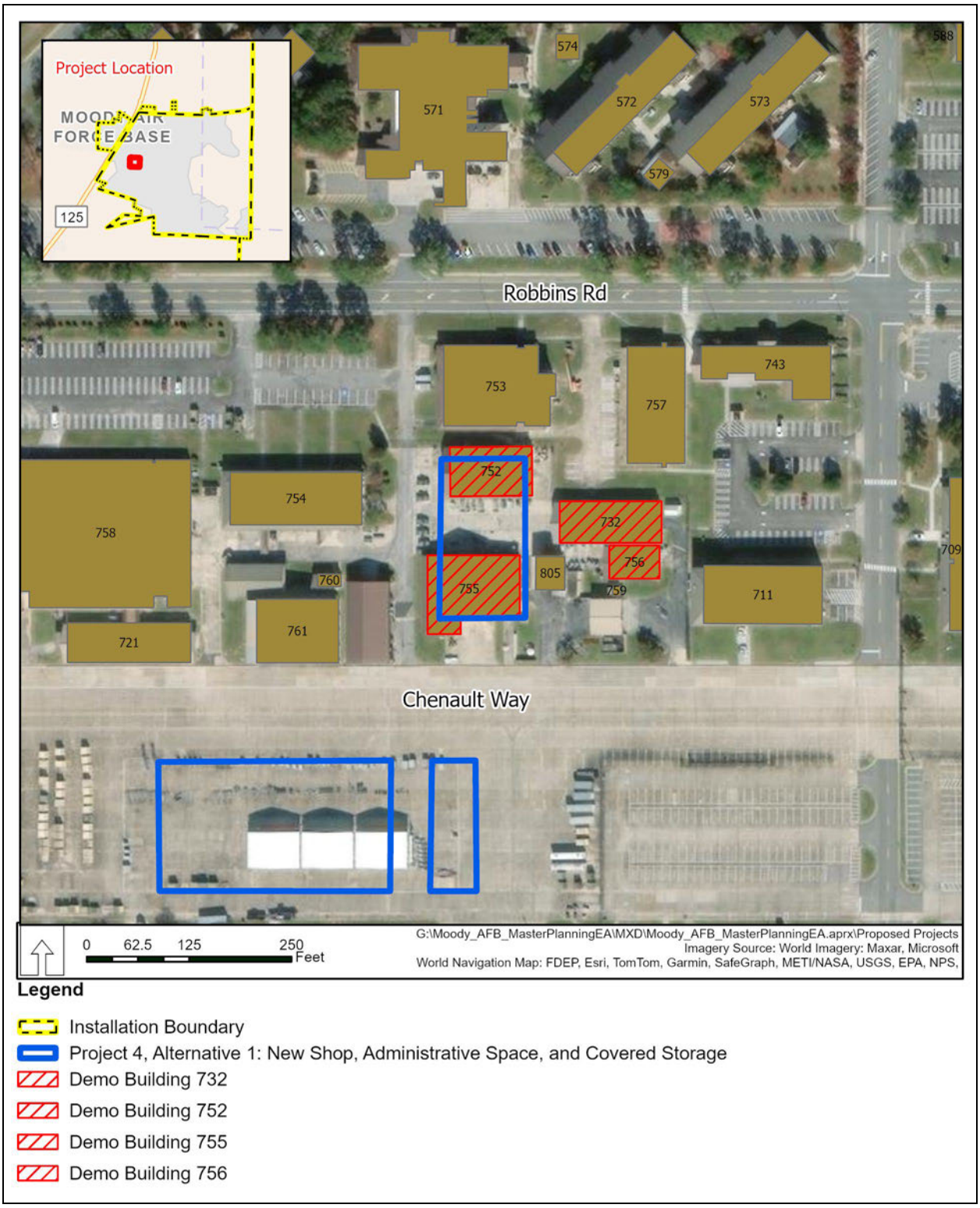


Figure 7. Project 4, Alternative 1 – Aerospace Ground Equipment Facility with New Shop, Administrative Space, and Covered Storage

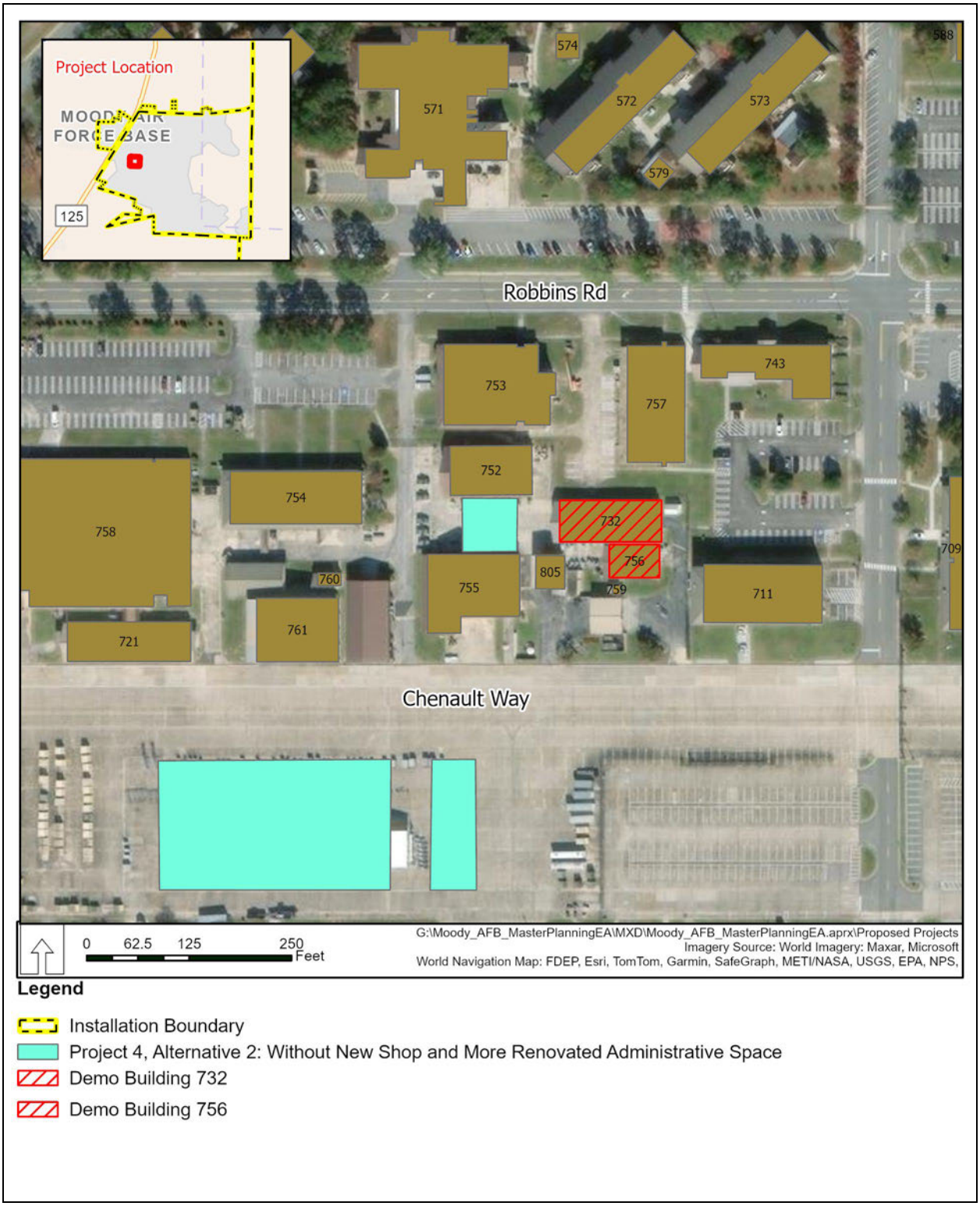


Figure 8. Project 4, Alternative 2 – Aerospace Ground Equipment Facility without New Shop and More Renovated Administrative Space



Figure 9. Project 5 – Burma Road Realignment



Figure 10. Project 6 – 38th Rescue Squadron Parking Lot Construction

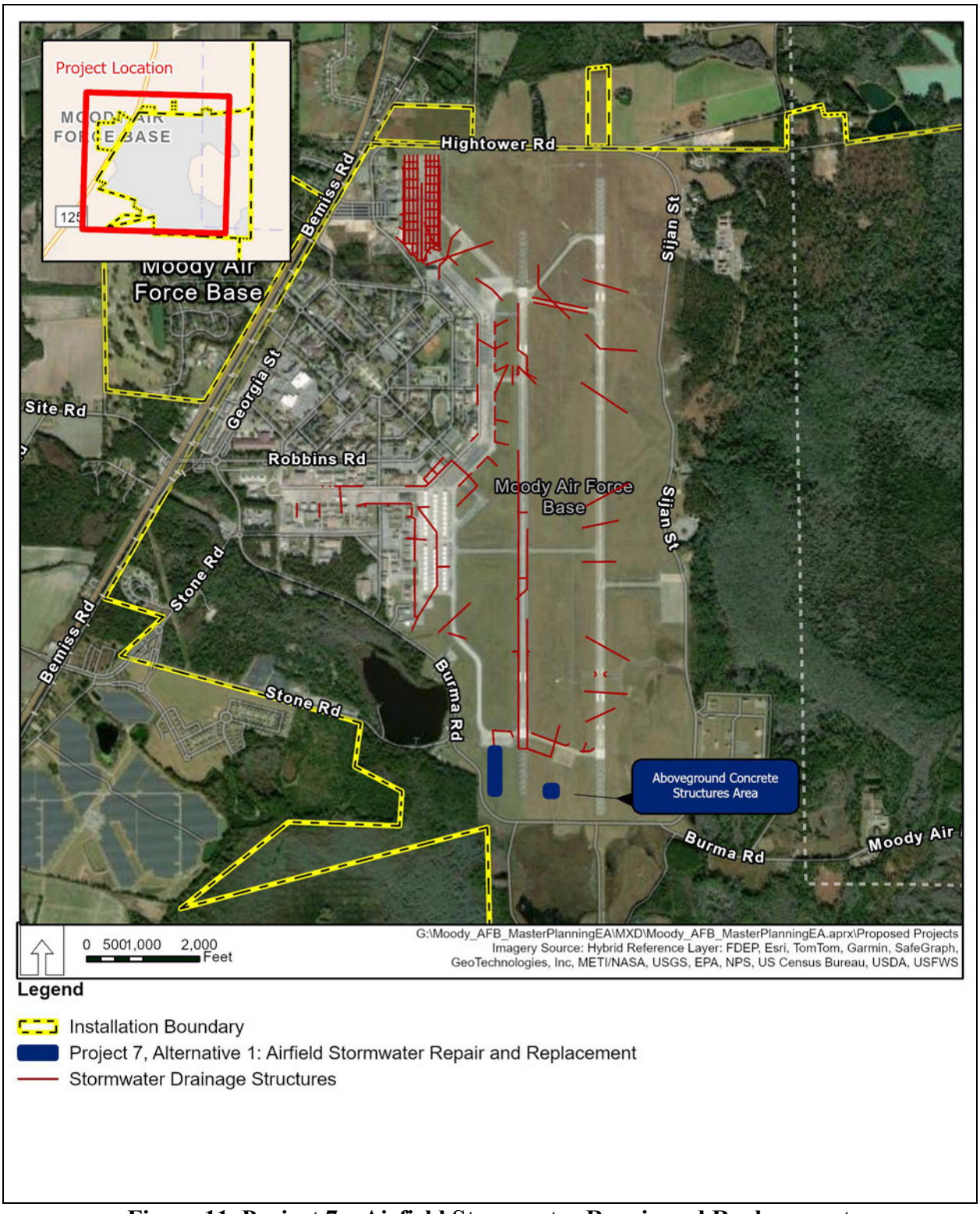


Figure 11. Project 7 – Airfield Stormwater Repair and Replacement

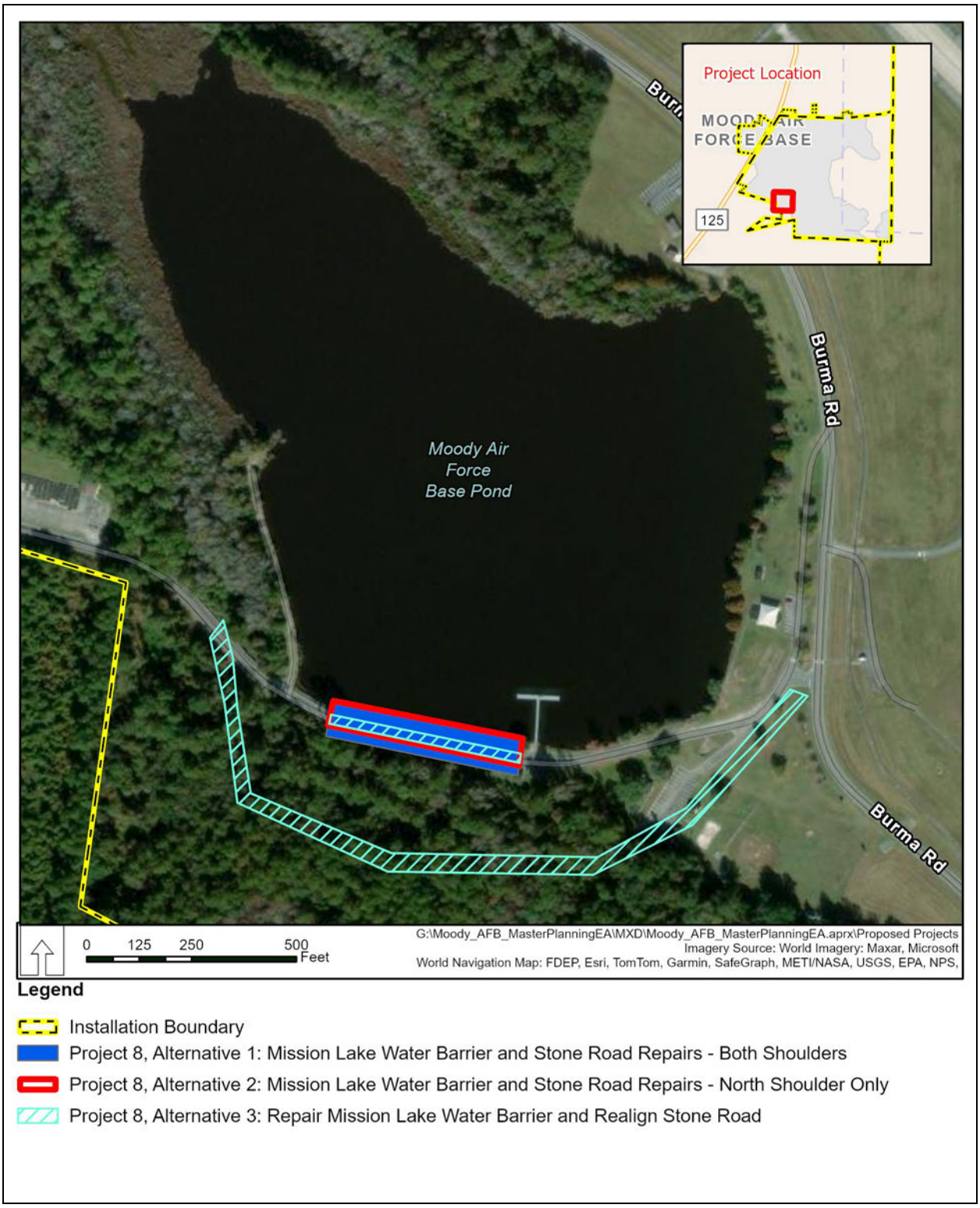


Figure 12. Project 8 – Mission Lake Water Barrier and Stone Road Repairs

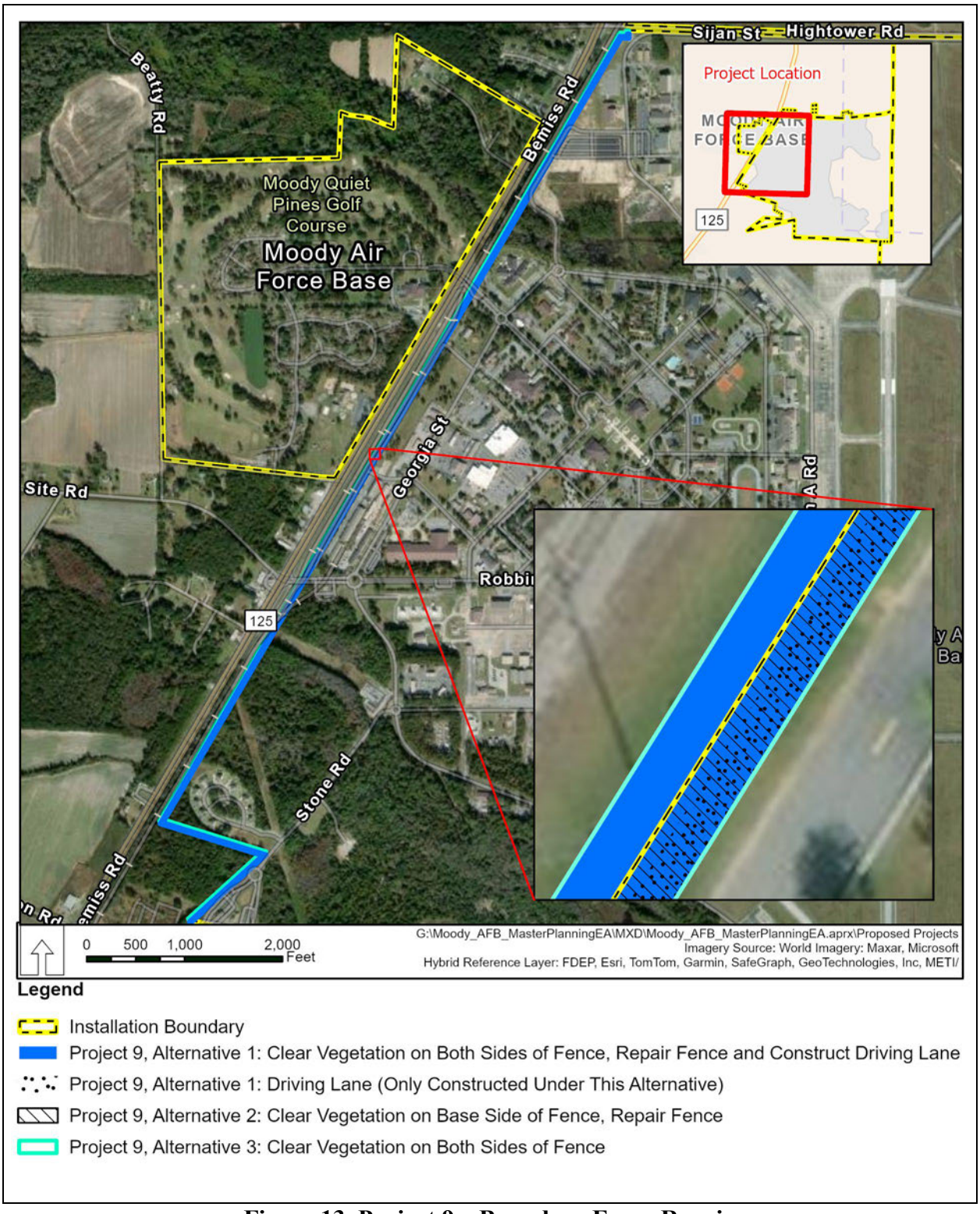


Figure 13. Project 9 – Boundary Fence Repair

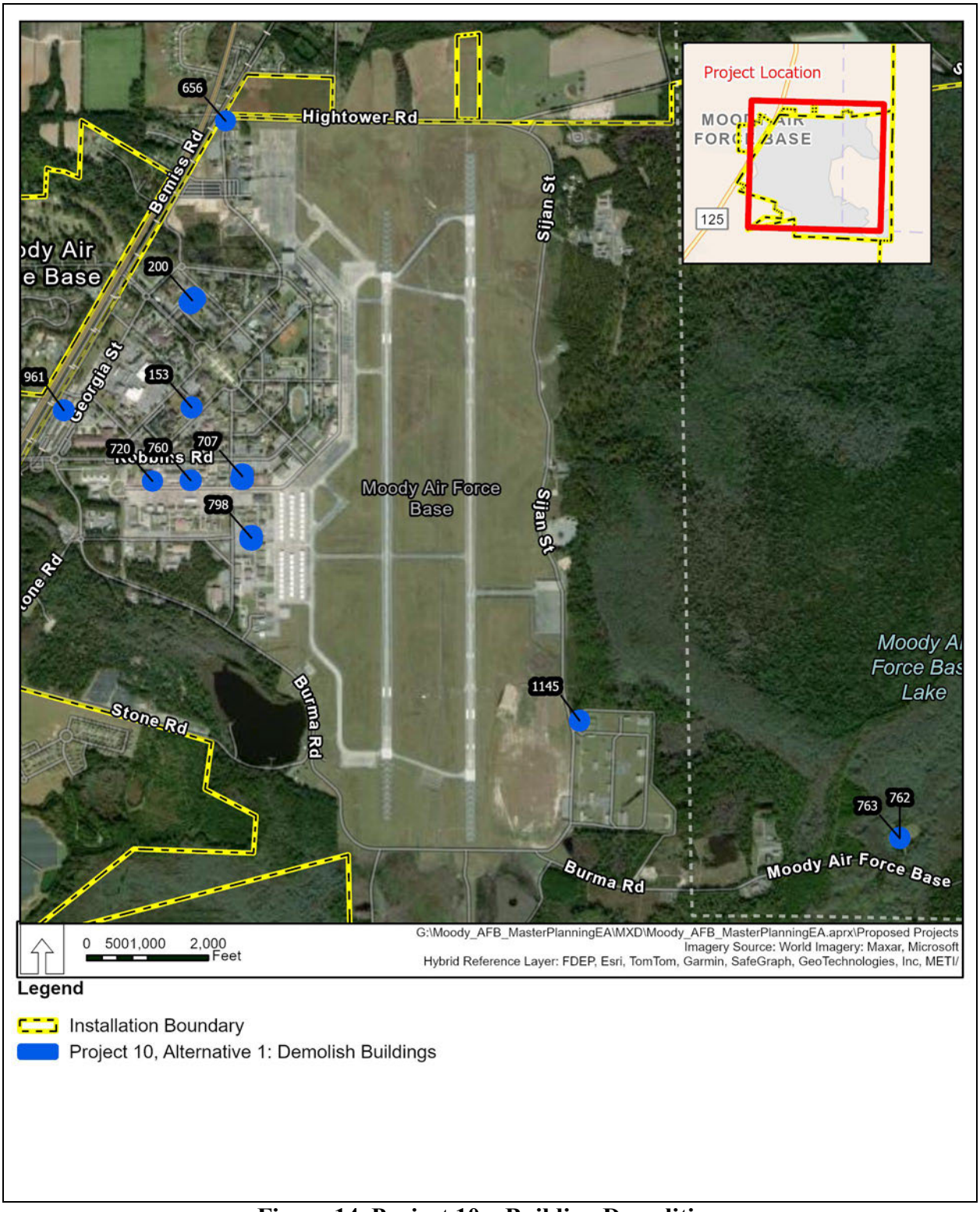


Figure 14. Project 10 – Building Demolition

DEPARTMENT OF THE AIR FORCE
23D CIVIL ENGINEER SQUADRON (ACC)
MOODY AIR FORCE BASE GEORGIA

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Athens, GA 30601
706-613-9493

2025-0025464
FWS Log No.

23 CES/CD
3485 Georgia Street
Bldg 918
Moody AFB GA 31699

Based on information provided, we concur with your determination that the project is not likely to adversely affect federally-listed species. No further action is required under Section 7(a)(2) of the Endangered Species Act. However, consultation should be resumed if the project changes, a new species is listed, or new data shows impacts to listed species may occur.

Peter Maholland, Field Supervisor

January 29, 2025
Date

US Fish and Wildlife Se
Ecological Services - Coastal Georgia Sub Office
Attn: Bill Wikoff, Supervisory Biologist
4980 Wildlife Drive, NE
Townsend GA 31311

Subject: Endangered Species Act Section 7 Consultation for Proposed Facility and Infrastructure Construction and Modernization Projects, Moody Air Force Base, Georgia

Dear Mr. Wikoff:

The Department of the Air Force (DAF) requests informal Section 7 consultation under the Endangered Species Act (ESA) for proposed facility infrastructure construction, demolition, and modernization projects at Moody Air Force Base (AFB), Georgia (Attachment 1; Figure 1). The DAF has made a no effect determination for the wood stork (*Mycteria americana*) and whooping crane (*Grus americana*) and a may affect but not likely to adversely affect determination for the eastern indigo snake (*Drymarchon couperi*) and Suwannee alligator snapping turtle (SAST; *Macrochelys suwanniensis*). DAF determined that the proposed projects would not jeopardize the continued existence of the tricolored bat (*Perimyotis subflavus*).

Moody AFB is located on approximately 11,881 acres in south-central Georgia, approximately 10 miles northeast of the city of Valdosta, in Lowndes and Lanier counties. The installation consists of the Main Base, the adjacent Grand Bay Range, and the geographically separated Grassy Pond Recreational Annex, which is located 25 miles southwest of the Main Base. The proposed facility infrastructure construction and modernization projects would be limited to Moody AFB Main Base (see Attachment 1; Figure 1).

The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. These deficiencies would be remedied through an ongoing process of construction of new facilities and new infrastructure, the repair of existing facilities and infrastructure, and the demolition of obsolete and unneeded facilities. The Proposed Action is needed to conform with applicable antiterrorism/force protection (AT/FP) criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and risk to the mission due to inefficiencies. The Proposed

Action includes the following 10 facility infrastructure projects to be performed within approximately the next five fiscal years (Fiscal Year 2025 through Fiscal Year 2030) at Moody AFB (Attachment 2; Figure 2).

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vegetation material would be left in place, and no driving lane would be constructed. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth.

Project 10 – Building Demolition. DAF would demolish 11 buildings that have been determined to be underutilized or no longer needed (Buildings 153, 200, 656, 707, 720, 760, 762, 763, 798, 961, and 1145) (Attachment 14; Figure 14). All demolished materials and solid waste would be removed from Moody AFB using dump trucks and haul-off debris containers. All demolition debris and other associated solid waste would be transported to the Evergreen Landfill in Valdosta, Georgia. Demolished building locations would either be left with the foundation building pad in place, or the building foundations removed, and the soils revegetated and maintained as grass-covered space.

Listed Species Occurrences

The Moody AFB Integrated Natural Resources Management Plan (INRMP, Moody AFB 2024), US Fish and Wildlife Service (USFWS) Information for Planning and Consultation System (USFWS 2024a), and the Georgia Rare Element Natural Data Portal were reviewed for the most up-to-date information concerning federally and state threatened and endangered species on Moody AFB Main Base. The USFWS Information for Planning and Consultation database search identified three threatened, one proposed endangered, one candidate, and one experimental, nonessential species that could occur on Moody AFB:

- Eastern indigo snake – Threatened
- Wood stork – Threatened
- Tricolored bat – Proposed Endangered
- SAST – Threatened
- Monarch butterfly (*Danaus plexippus*) – Candidate
- Whooping crane – Experimental, Nonessential

There is no designated critical habitat for any listed species on Moody AFB (USFWS 2024a). The monarch butterfly, as a Candidate species, is not evaluated for consultation or conference under Section 7 of the ESA and is not discussed further.

Gopher tortoises (*Gopherus polyphemus*) are known to occur on Moody AFB (Moody AFB 2024) and are a species of concern. The gopher tortoise, a keystone species, and the federally threatened eastern indigo snake are known to coexist throughout their range. The gopher tortoise occurs from the coastal plain from South Carolina and westward to eastern Louisiana. They are a characteristic species of the rapidly disappearing longleaf pine and wiregrass communities, which includes sandhill dry flatwoods and turkey oak scrub. The eastern indigo snake's range extends from peninsular Florida to southeastern Georgia, where it inhabits the pine flatwoods, hardwood forests, moist hammocks, and areas that surround cypress swamps. Importantly, eastern indigo snake is known to use the burrows of gopher tortoises as refugia, hence the importance of this particular tortoise as a species of concern at Moody AFB. However,

the eastern indigo snake has not been officially sighted on Moody AFB since 1996 (Moody AFB 2024).

The tricolored bat occurs in forested habitats across the eastern US and roosts in trees, primarily among leaves, during the spring, summer, and fall. In winter, tricolored bats roost in caves and mines or in human-made structures such as culverts. Tricolored bats are one of the smallest bats in North America, and populations have declined dramatically as a result of white-nose syndrome, a disease caused by a fungal pathogen. The tricolored bat occurs seasonally at Moody AFB and has been detected during surveys (Moody AFB 2024). However, the tricolored bat is a proposed endangered species under the ESA, and consultation with the USFWS under Section 7 of the ESA is not required.

The SAST is in the genus *Macrochelys*, which includes the largest freshwater turtle species in size in North America. They are highly aquatic and secretive turtles. Its distribution is primarily limited to the Suwannee River basin in south Georgia and north Florida, and SAST is associated with deeper water habitats such as larger rivers, canals, lakes, ponds, and oxbows. The SAST is an opportunistic scavenger, and primarily feeds on fish, crayfish, mollusks, smaller turtles, insects, snakes, birds, and some vegetation (USFWS 2020). Both eDNA and trapping surveys have been conducted on Main Base of Moody AFB for SAST, and there have not been any SAST detections on Main Base. However, there is marginally suitable habitat for the SAST in Mission Lake and Beatty Branch. The SAST is a threatened species under the ESA.

There is no suitable habitat on Main Base for the wood stork or whooping crane; therefore, these species would not be expected to occur in the proposed project areas.

Proposed Projects Affects Determinations

Proposed projects 1, 3, 6, and 7 would have no effect on any federally listed or proposed listed species.

Project 2, Alternatives 1 and 2 have the potential to affect the eastern indigo snake. Known gopher tortoise burrows and gopher tortoise habitat is located proximate to the AFTF; however, there is no known habitat supporting any federally listed species, including the gopher tortoise and indigo snake in the AFTF improvement footprint (Moody AFB 2024). Even so, because of the proximity to burrows and occupied habitat, there is a chance that the gopher tortoise could be present at the project area, and because eastern indigo snakes are associated with gopher tortoise habitat, there is also the potential for eastern indigo snake occurrence. Project implementation would include the implementation of all eastern indigo snake protection measures as described in the INRMP (Moody AFB 2024). As such, species-specific surveys would be conducted by a qualified biologist prior to the start of any construction-related activities. Additionally, a qualified biologist would conduct eastern indigo snake awareness training for all project workers prior to the start of work activities. If a gopher tortoise or an eastern indigo snake were to be detected during surveys, Moody AFB would coordinate with Georgia Department of Natural Resources and USFWS to relocate captured tortoises and indigo snakes outside of the AFTF construction zone. Therefore, Project 2, Alternatives 1 and 2, may affect but are not likely to adversely affect the eastern indigo snake.

Tricolored bats do not typically utilize buildings for roosting in Tricolored Bat Year Round Active Zone 2 (USFWS 2024b), which includes Moody AFB. To ensure that tricolored bats are not present in human-made structures that would be renovated or demolished, a qualified biologist would inspect all structures before renovation and demolition activities. Therefore, the demolition of buildings under Projects 4 and 10 would not affect the tricolored bat. There is a possibility that the tricolored bat could utilize trees at Moody AFB for roosting. Therefore, tree removal would not occur from 1 May to 15 July, to avoid tricolored bat pup season (USFWS 2024b). With the seasonal restrictions on tree removal activities and inspections of human-made structures prior to renovation or demolition activities, Projects 5, 8, and 9 would not jeopardize the continued existence of the tricolored bat.

The SAST has never been detected on Main Base. Habitat for the SAST is mostly absent in the existing riprap along the Mission Lake Water Barrier on the northern bank of Stone Road and at the Moody AFB boundary fence crossing of Beatty Branch. Noise and equipment movement from proposed construction activities such as the placement of riprap along the banks and within open water areas of Mission Lake and a culvert in Beatty Branch would further deter any SASTs from being present in the project areas during construction activities. BMPs would be used to ensure construction activities do not substantially increase water turbidity in Mission Lake or Beatty Branch. Therefore, the proposed repairs to the Mission Lake Water Barrier and Stone Road under Project 8, Alternatives 1, 2, and 3, and the placement of a culvert in Beatty Branch during the construction of a driving lane under Project 9, Alternative 1 may affect but is not likely to adversely affect the SAST.

The Proposed Action may affect but is not likely to adversely affect the indigo snake and SAST, and have no effects on any other federally listed species. Further, the Proposed Action would not jeopardize the continued existence of the tricolored bat. I am requesting your written concurrence with DAF's determinations on these ESA federally listed, proposed for listing, and candidate species. Please provide concurrence or comments and additional information concerning the Proposed Action within 30 days of the date of this letter to Mr. Lorence Busker, 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or by email to lorence.busker@us.af.mil. Thank you in advance for your assistance.

Sincerely

THOMAS E WAHL, R.A., GS-14, DAF
Deputy Base Civil Engineer

14 Attachments:
1. Figure 1. Location of Moody Air Force Base, Georgia
2. Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia
3. Figure 3. Project 1 – Guardian Angel Facility Construction and Renovation
4. Figure 4. Project 2 – Aircraft Fire Training Facility Improvements Alternative 1

5. Figure 5. Project 2 – Aircraft Fire Training Facility Improvements Alternative 2
6. Figure 6. Project 3 – Gate Overwatch Position Construction
7. Figure 7. Project 4, Alternative 1 – Aerospace Ground Equipment Facility with New Shop, Administrative Space, and Covered Storage
8. Figure 8. Project 4, Alternative 2 – Aerospace Ground Equipment Facility without New Shop and More Renovated Administrative Space
9. Figure 9. Project 5 – Burma Road Realignment
10. Figure 10. Project 6 – 38th Rescue Squadron Parking Lot Construction
11. Figure 11. Project 7 – Airfield Stormwater Repair and Replacement
12. Figure 12. Project 8 – Mission Lake Water Barrier and Stone Road Repairs
13. Figure 13. Project 9 – Boundary Fence Repair
14. Figure 14. Project 10 – Building Demolition

References

Moody Air Force Base (AFB). 2024. Integrated Natural Resources Management Plan, Plan Years FY2024 – FY2028, Moody AFB, Georgia.

United States Fish and Wildlife Service. 2020. Species Status Assessment Report for the Suwannee Alligator Snapping Turtle (*Macrochelys suwanniensis*). Version 1.1. July.

United States Fish and Wildlife Service (USFWS). 2024a. Information for Planning and Consultation. Web portal. <https://ipac.ecosphere.fws.gov>. Accessed April 2024.

United States Fish and Wildlife Service (USFWS). 2024b. Northern Long-Eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Projects, Version 1.0. April.

DEPARTMENT OF THE AIR FORCE
23D CIVIL ENGINEER SQUADRON (ACC)
MOODY AIR FORCE BASE GEORGIA

23 CES/CD
3485 Georgia Street
Bldg 918
Moody AFB GA 31699-1707

Georgia Department of Community Affairs
Christopher Nunn, SHPO
60 Executive Park South, NE
Atlanta GA 30329

Subject: National Historic Preservation Act Section 106 Consultation for Proposed Facility and Infrastructure Construction and Modernization Projects, Moody Air Force Base, Georgia

Dear Mr. Nunn:

The Department of the Air Force (DAF) requests concurrence with our finding of no historic properties affected by the proposed facility and infrastructure construction, demolition, and modernization projects at Moody Air Force Base (AFB), Georgia.

Moody AFB is located on approximately 11,881 acres in south-central Georgia, approximately 10 miles northeast of the city of Valdosta, in Lowndes and Lanier counties. The installation consists of the Main Base, the adjacent Grand Bay Range, and the geographically separated Grassy Pond Recreational Annex, which is located 25 miles southwest of the Main Base. The proposed facility infrastructure construction and modernization projects would be limited to Moody AFB Main Base (Attachment 1; Figure 1).

The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. These deficiencies would be remedied through an ongoing process of construction of new facilities and new infrastructure, the repair of existing facilities and infrastructure, and the demolition of obsolete and unneeded facilities. The Proposed Action is needed to conform with applicable antiterrorism/force protection (AT/FP) criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and risk to the mission due to inefficiencies.

In accordance with the National Historic Preservation Act (NHPA) and its implementing regulations at 36 CFR Part 800, the DAF is advising you of a proposed undertaking that may have the potential to affect historic properties. The undertaking would include 10 facility infrastructure projects to be performed within approximately the next five fiscal years (Fiscal Year 2025 through Fiscal Year 2030) at Moody AFB (Attachment 2: Figure 2). The DAF has

defined the Area of Potential Effects (APE) for this undertaking as comprising a 100-foot buffer around the limits of disturbance for each of the 10 projects described below.

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vegetation material would be left in place, and no driving lane would be constructed. The boundary fence would be repaired in all areas that have been previously inaccessible due to thick vegetation growth.

Project 10 – Building Demolition. DAF would demolish 11 buildings that have been determined to be underutilized or no longer needed (Buildings 153, 200, 656, 707, 720, 760, 762, 763, 798, 961, and 1145) (Attachment 14; Figure 14). All demolished materials and solid waste would be removed from Moody AFB using dump trucks and haul-off debris containers. All demolition debris and other associated solid waste would be transported to the Evergreen Landfill in Valdosta, Georgia. Demolished building locations would either be left with the foundation building pad in place, or the building foundations removed, and the soils revegetated and maintained as grass-covered space.

Previous archaeological investigations at Moody AFB have located 61 archaeological sites and 63 isolated finds (DAF 2024). No archaeological sites have been identified within the footprint of the 10 proposed project construction areas or within 100 feet of the 10 proposed project areas comprising the Proposed Action. Moody AFB has two NRHP-eligible archaeological sites and four sites that require additional testing. Sites 9LW63 and 9LW71 are both prehistoric artifact scatters located on the Main Base east of the runway (DAF 2024) (Attachment 15; Figure 15). Both are outside of the footprint of the proposed projects APEs. The four sites requiring testing (i.e., 9LW230, 9LW231, 9LW235, and 9LW237) are all located at the Grassy Pond geographically separated unit and, therefore, have no potential to be affected by the proposed project.

Numerous comprehensive surveys of World War II and Cold War era buildings and structures at Moody AFB have been undertaken. No intact historic districts have been identified. Only two structures have been determined to be eligible for inclusion in the NRHP (Attachment 15; Figure 15). Facility 618, constructed in 1941, is a steel water tower with a 200,000-gallon capacity. It was determined to be eligible for inclusion in the NRHP in 1999 (DAF 2024). Building 110 is a chapel built in 1971. Significant for its midcentury modern architectural design, the chapel was determined to be eligible for inclusion in the NRHP in May 2017. Both have lost integrity of setting due to the historic and ongoing construction and demolition within the main cantonment. Both eligible buildings are outside of the proposed projects' APEs.

There would be no adverse effects to historic properties. The proposed construction and demolition areas for all 10 proposed projects have been previously surveyed for archaeological resources and no NRHP-eligible sites were identified. The two NRHP-eligible architectural resources are located within Main Base and neither building would be physically altered. There would be no effect on the two NRHP-eligible buildings. Projects 4 and 10 include demolition of Buildings 153, 200, 656, 707, 720, 732, 752, 755, 756, 760, 762, 763, 798, 961, and 1145 (Attachment 16; Table 1). Neither Building 732 or Building 752 are 50 years old or will become 50 years old during the course of the proposed project and, therefore, do not require evaluation. Except for Buildings 755, 756, and 961, none are presently 50 years of age and will not be 50 years of age prior to the completion of the project. These buildings do not require evaluation at this time and would not be affected by the project. Building 755 was constructed in 1962 and was previously determined ineligible. Building 756, which is an equipment storage building, was constructed in 1977 and has not yet been evaluated. Building 756 could potentially turn 50 years old before the Project 4, Alternative 1 is completed. Based on previous evaluations of similar

buildings at Moody AFB, it is unlikely to be eligible. Regardless, Moody AFB will complete an evaluation of Building 756 prior to the proposed building demolition. Building 961 was constructed in 1963 and was not identified as a historic property and, therefore, is not eligible for the NRHP.

This letter requests concurrence with the DAF's determination of no effects to historic properties. Please submit your written concurrence response or request for additional information within 30 days of receipt of this letter. Written responses can be sent to Mr. Lorence Busker, 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or by email to lorence.busker@us.af.mil. Thank you in advance.

Sincerely

JOHN L. EUNICE, III, GS-14, DAF
Deputy Commander, 23d Civil Engineer Squadron

16 Attachments:
1. Figure 1. Location of Moody Air Force Base, Georgia
2. Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia
3. Figure 3. Project 1 – Guardian Angel Facility Construction and Renovation
4. Figure 4. Project 2 – Aircraft Fire Training Facility Improvements Alternative 1
5. Figure 5. Project 2 – Aircraft Fire Training Facility Improvements Alternative 2
6. Figure 6. Project 3 – Gate Overwatch Position Construction
7. Figure 7. Project 4, Alternative 1 – Aerospace Ground Equipment Facility with New Shop, Administrative Space, and Covered Storage
8. Figure 8. Project 4, Alternative 2 – Aerospace Ground Equipment Facility without New Shop and More Renovated Administrative Space
9. Figure 9. Project 5 – Burma Road Realignment
10. Figure 10. Project 6 – 38th Rescue Squadron Parking Lot Construction
11. Figure 11. Project 7 – Airfield Stormwater Repair and Replacement
12. Figure 12. Project 8 – Mission Lake Water Barrier and Stone Road Repairs
13. Figure 13. Project 9 – Boundary Fence Repair
14. Figure 14. Project 10 – Building Demolition
15. Figure 15. Figure 15. Locations of National Register of Historic Places-Eligible Sites
16. Table 1. National Register of Historic Places Status of Buildings to Demolished or Modified

References

Department of the Air Force (DAF). 2024. Integrated Cultural Resources Management Plan. Moody Air Force Base and Grand Bay Range. Installation Supplement. 4 February.

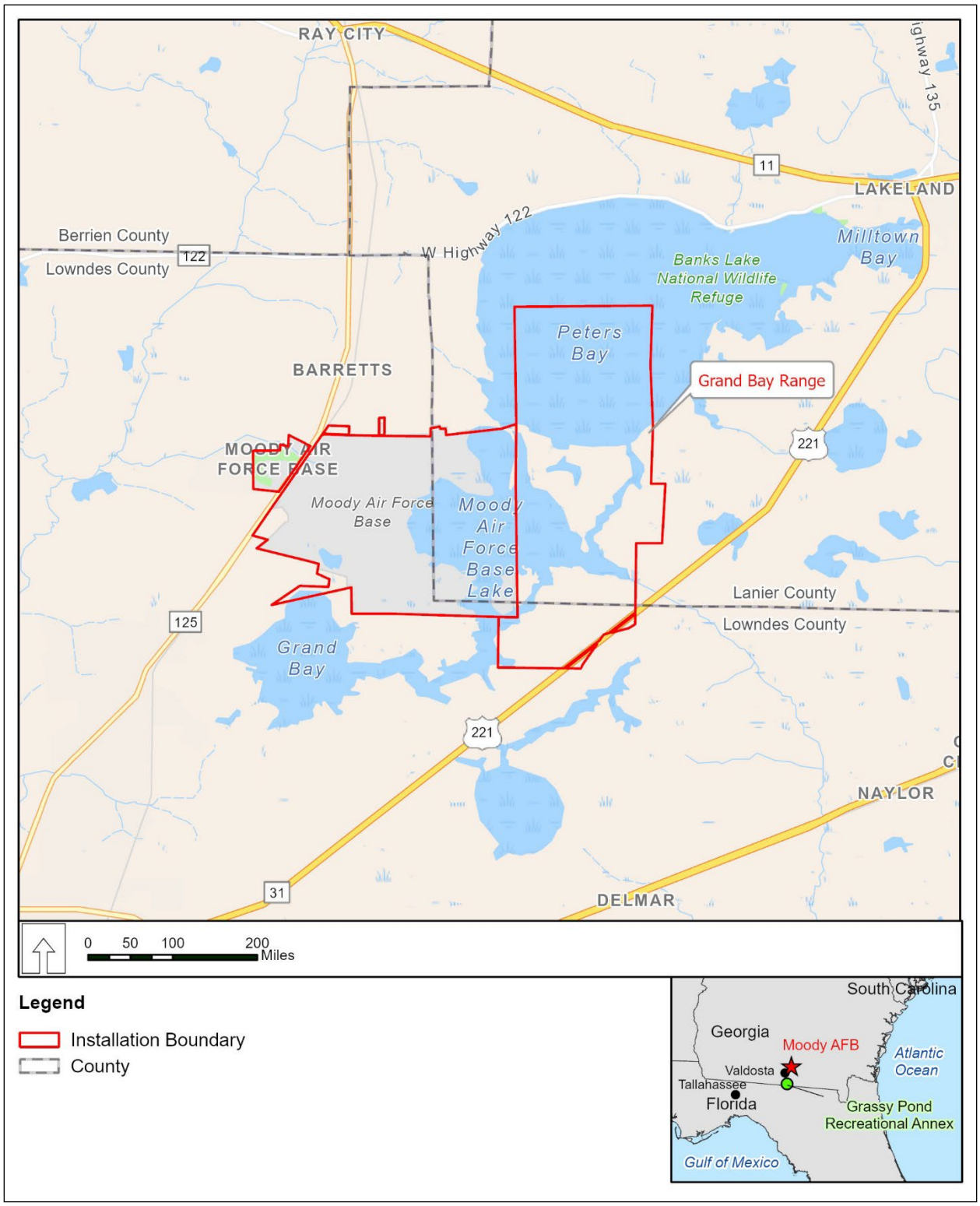


Figure 1. Location of Moody Air Force Base, Georgia

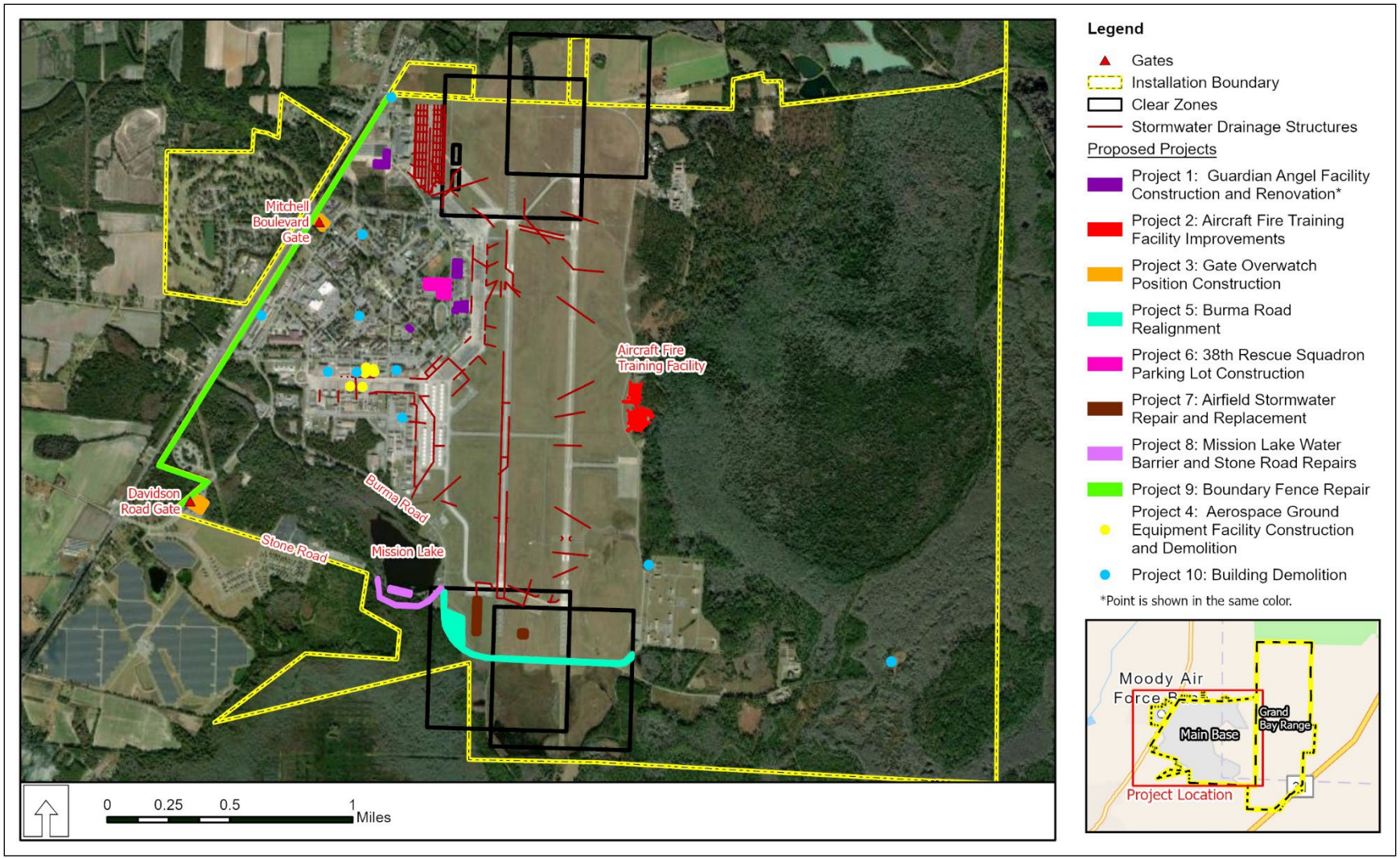


Figure 2. Proposed Construction, Demolition, and Modernization Projects at Moody Air Force Base, Georgia

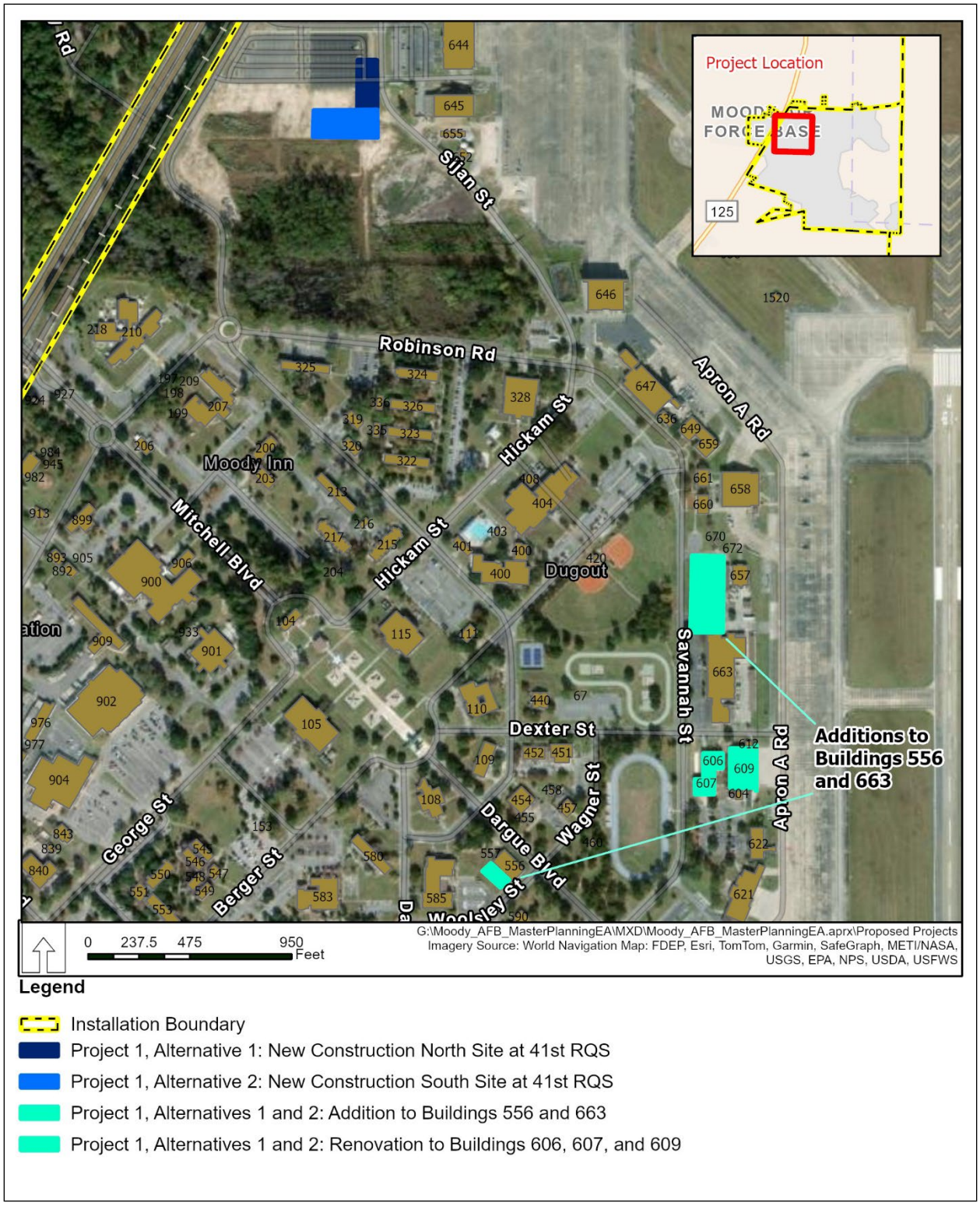


Figure 3. Project 1 – Guardian Angel Facility Construction and Renovation

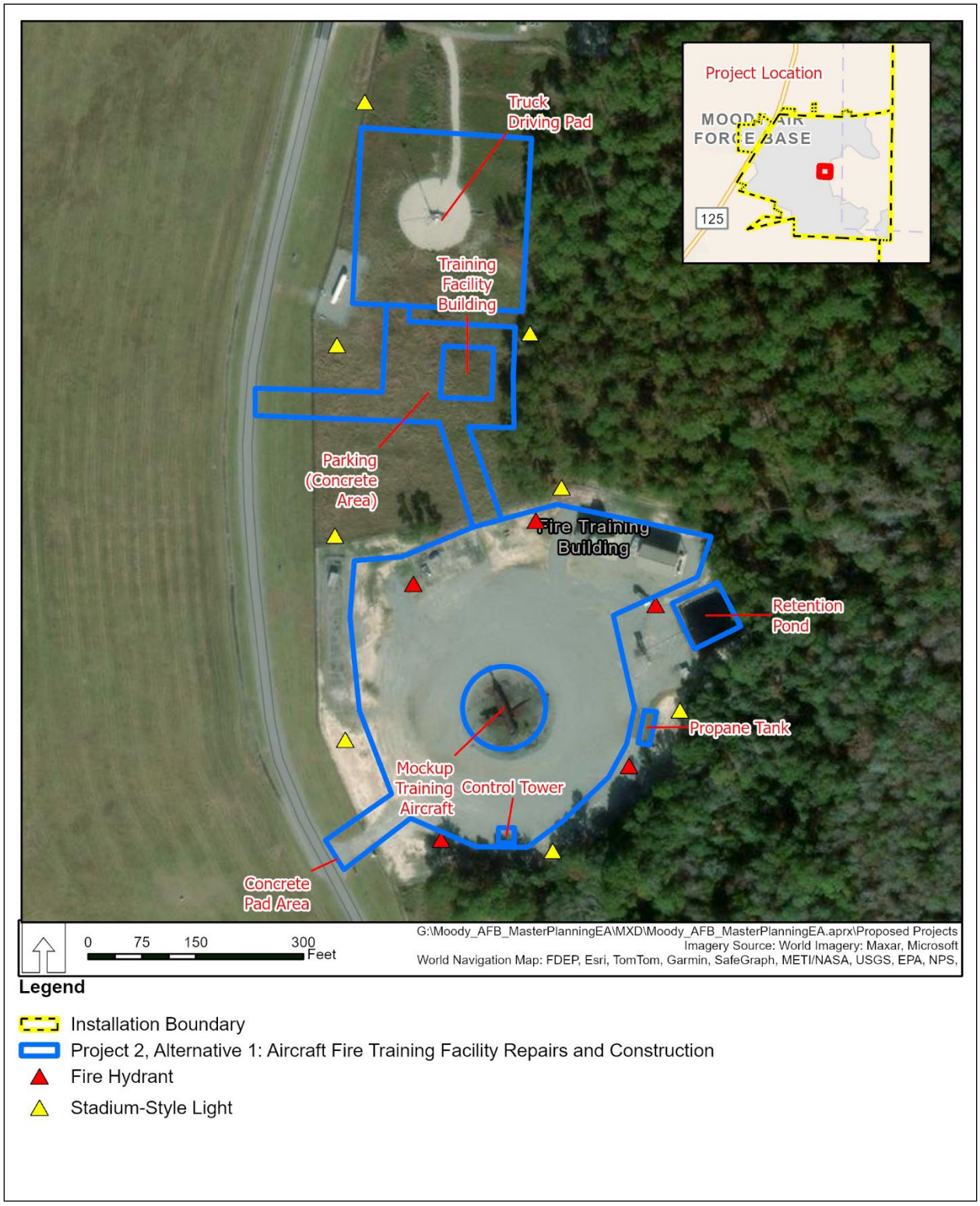


Figure 4. Project 2 – Aircraft Fire Training Facility Improvements Alternative 1

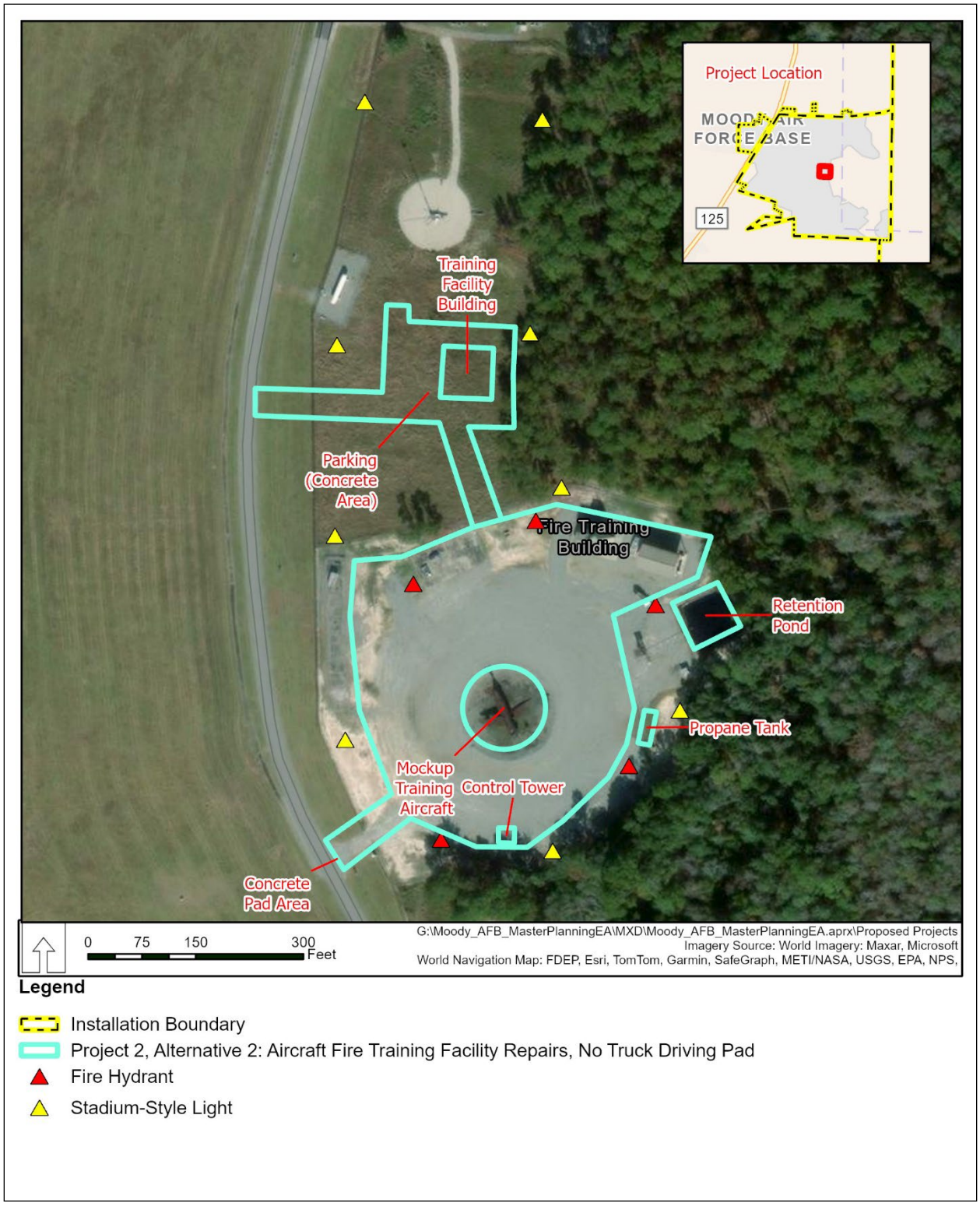


Figure 5. Project 2 – Aircraft Fire Training Facility Improvements Alternative 2



Figure 6. Project 3 – Gate Overwatch Position Construction

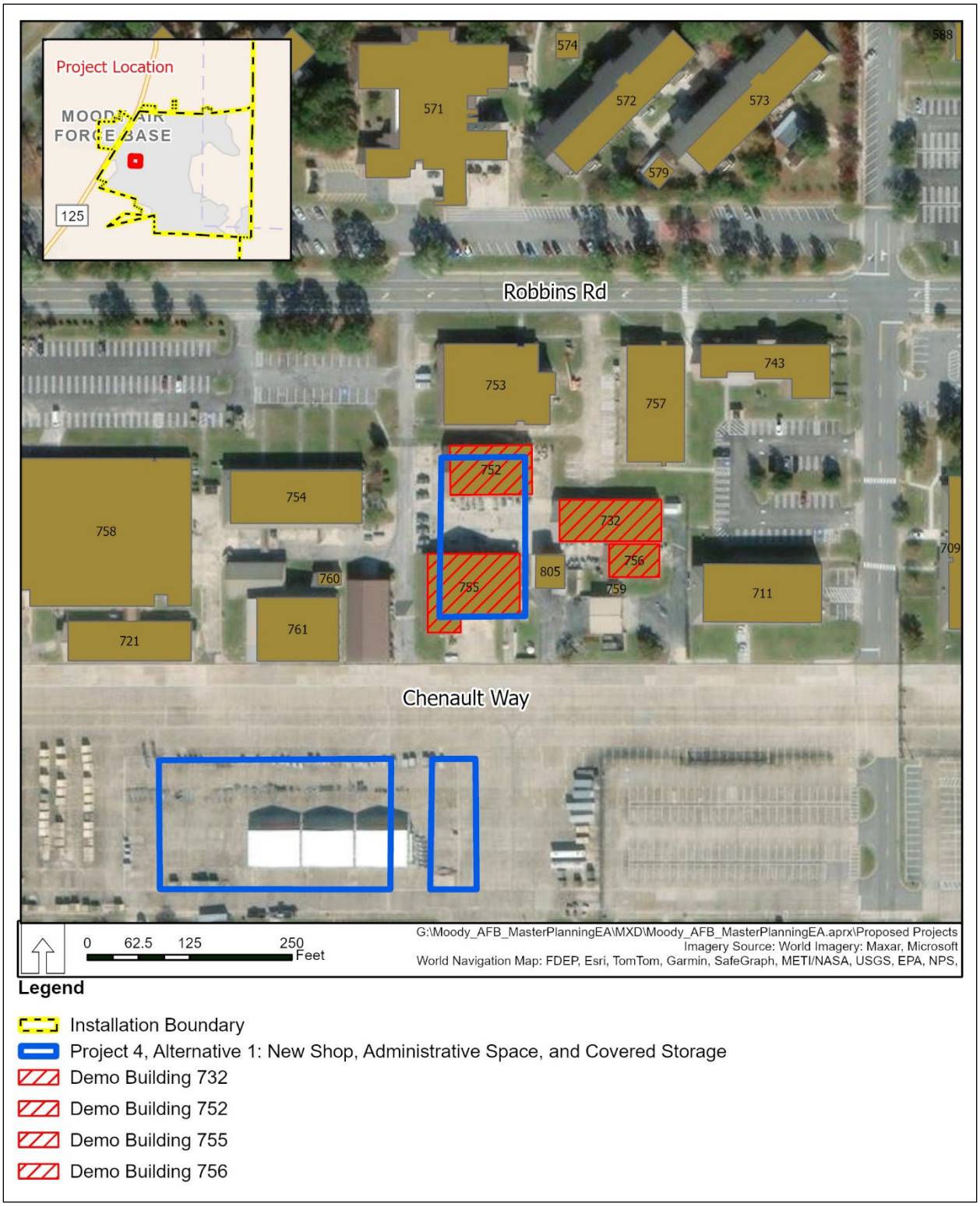


Figure 7. Project 4, Alternative 1 – Aerospace Ground Equipment Facility with New Shop, Administrative Space, and Covered Storage

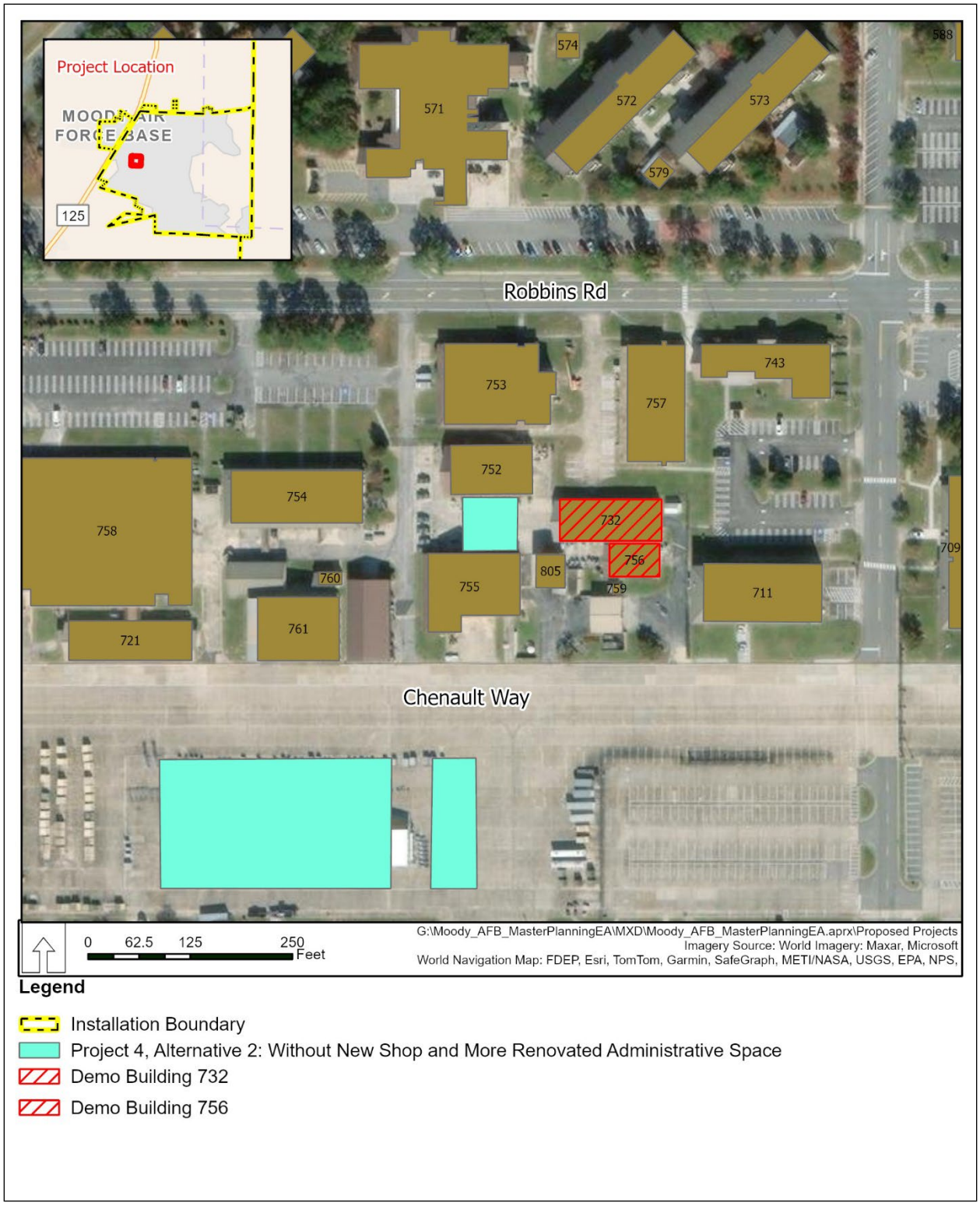


Figure 8. Project 4, Alternative 2 – Aerospace Ground Equipment Facility without New Shop and More Renovated Administrative Space



Figure 9. Project 5 – Burma Road Realignment



Figure 10. Project 6 – 38th Rescue Squadron Parking Lot Construction

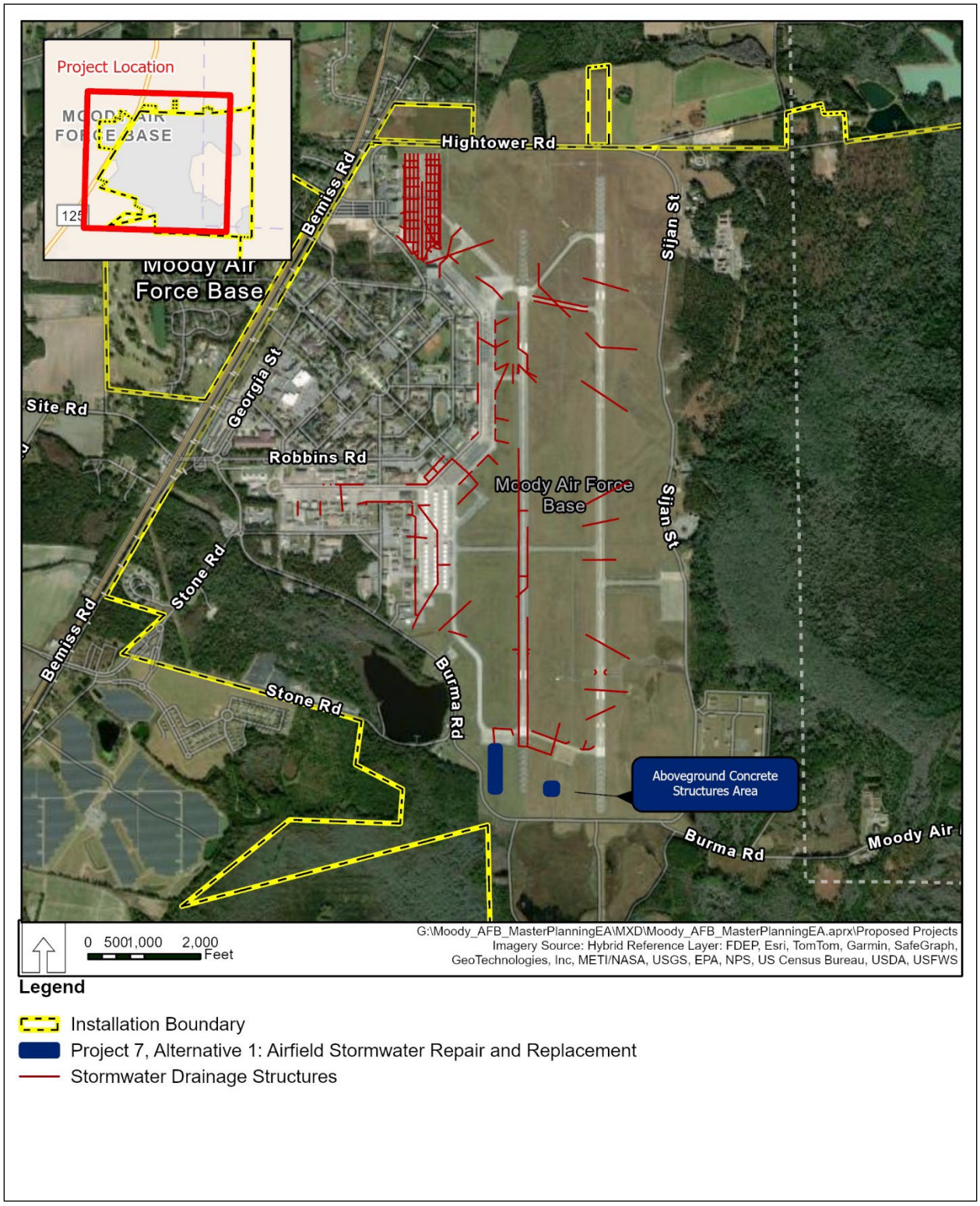


Figure 11. Project 7 – Airfield Stormwater Repair and Replacement

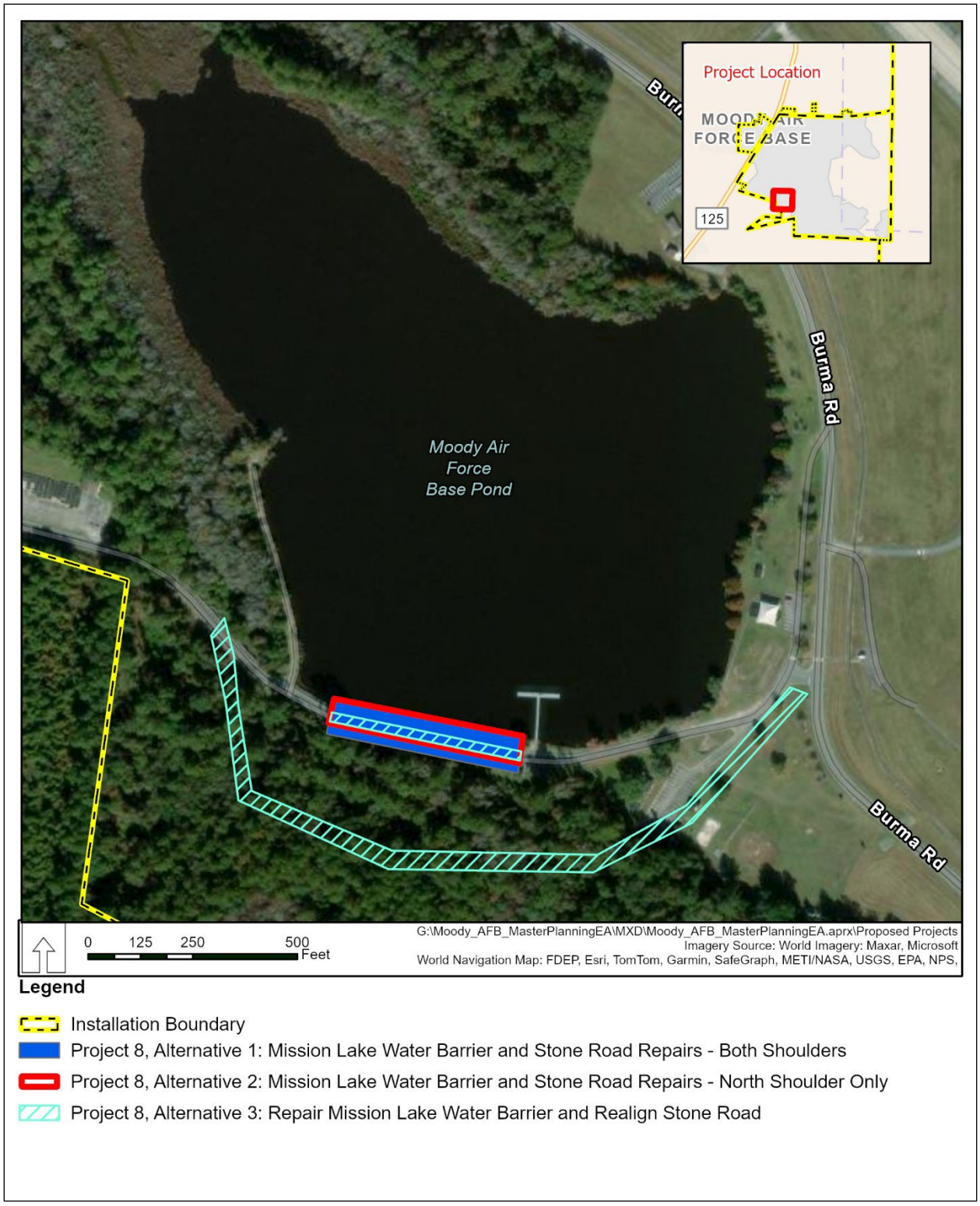


Figure 12. Project 8 – Mission Lake Water Barrier and Stone Road Repairs

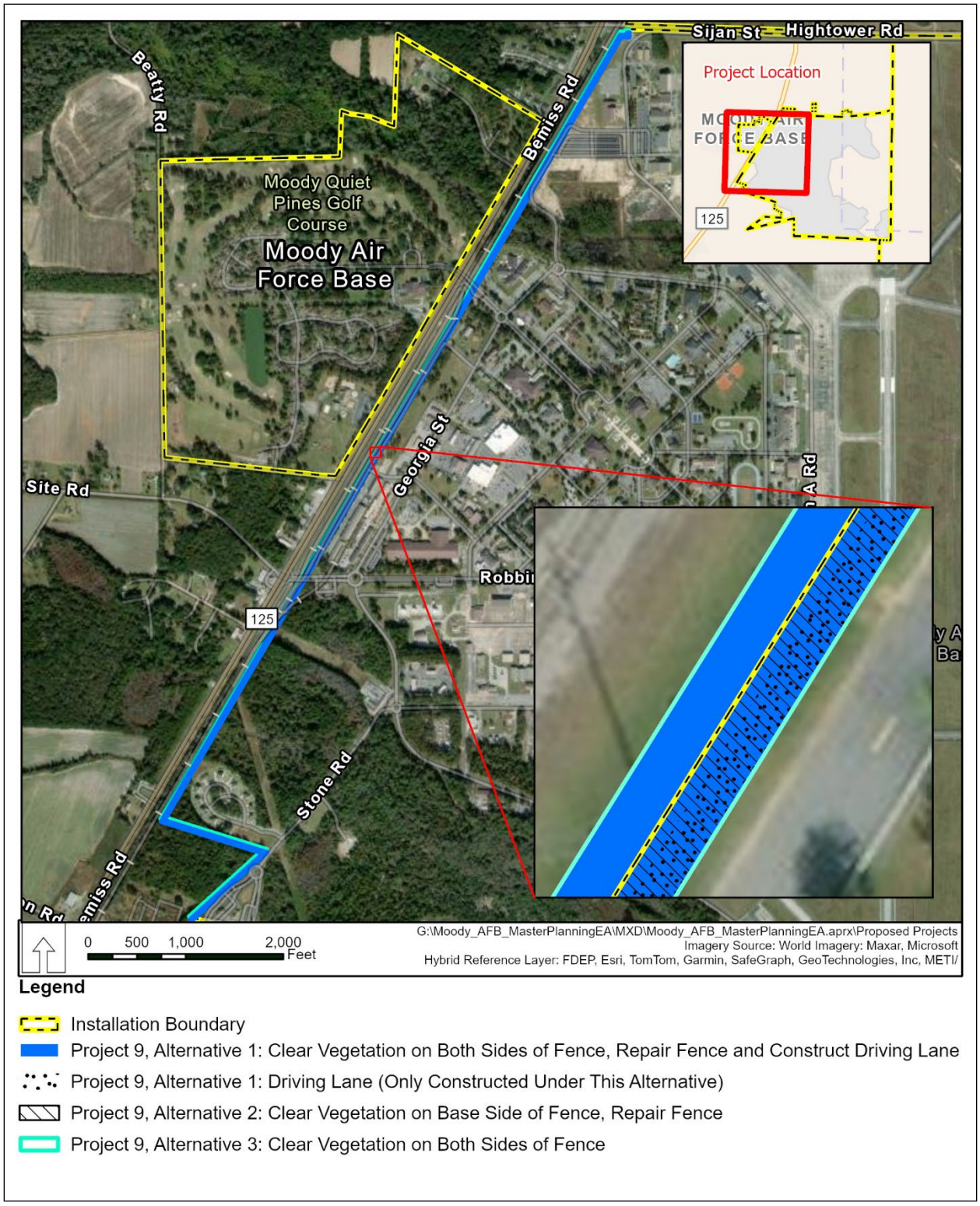


Figure 13. Project 9 – Boundary Fence Repair

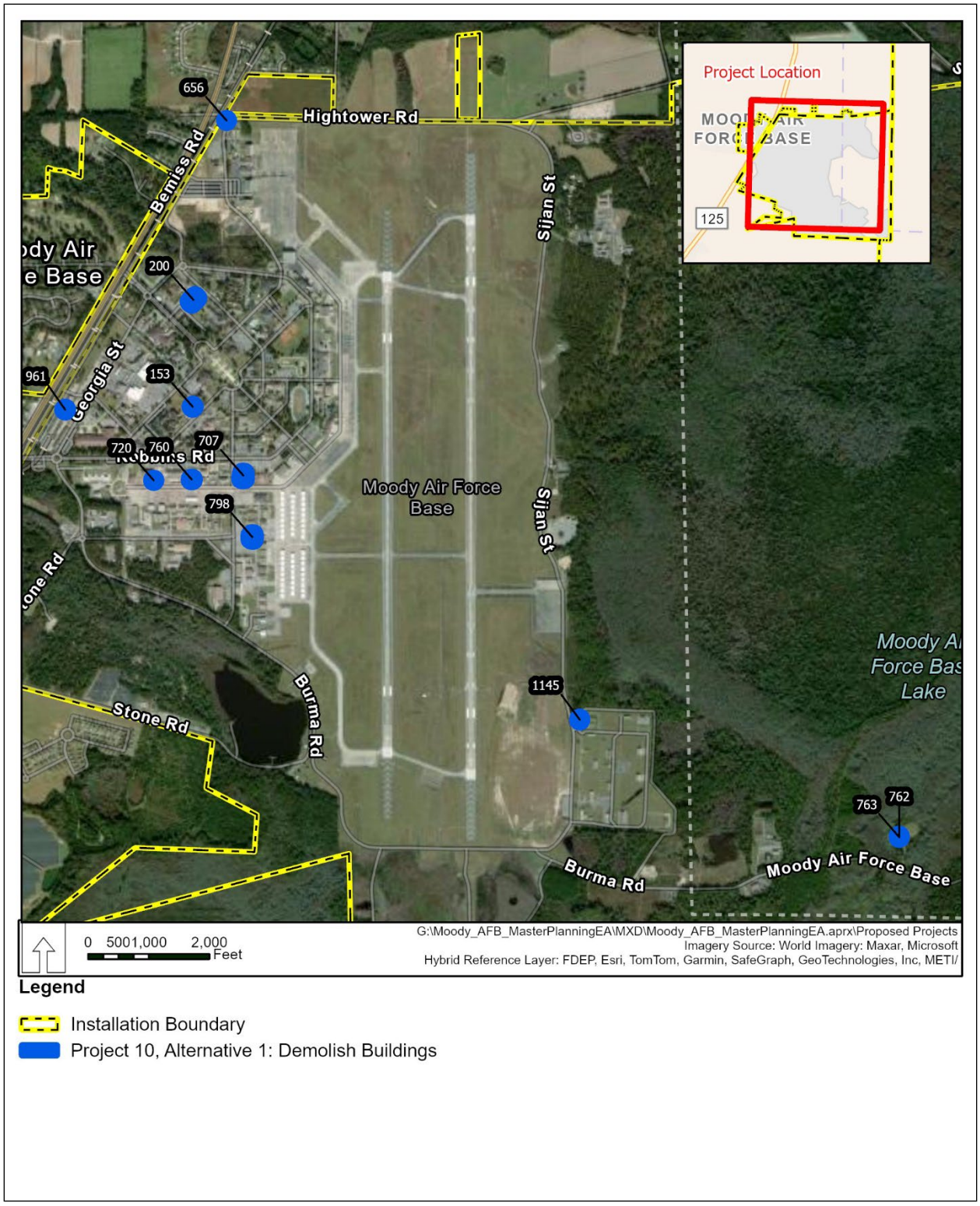


Figure 14. Project 10 – Building Demolition

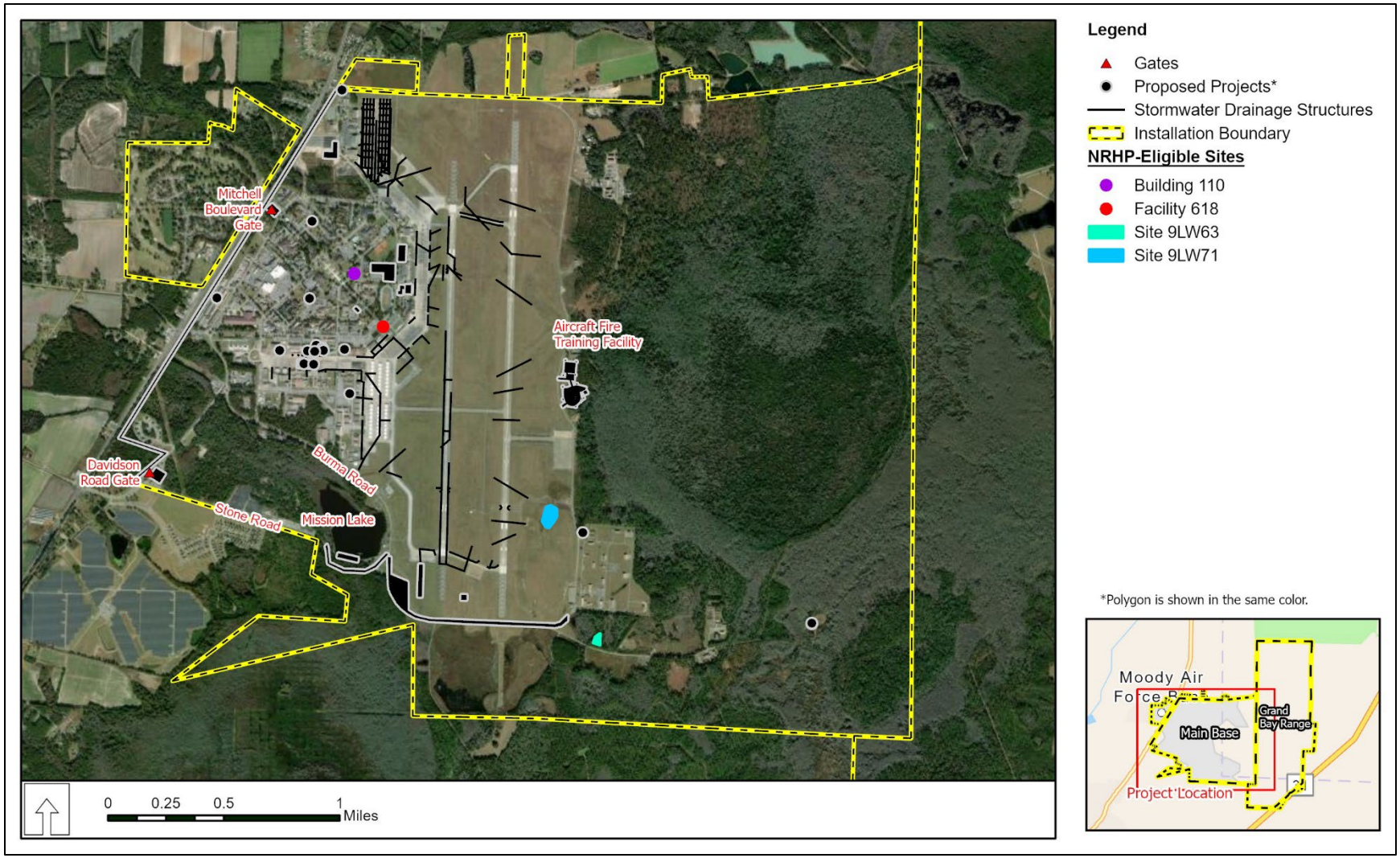


Figure 15. Locations of National Register of Historic Places-Eligible Sites

Table 1. National Register of Historic Places Status of Buildings to Be Demolished or Modified

Building Number	Year Built	Proposed Activity	NRHP Status	Area (square feet)
153	2005	Demolition	Not Evaluated/ < 50 years	440
200	1992	Demolition	Not Evaluated/ < 50 years	264
556	1941	Addition and Renovation	Evaluated/Not Eligible	9,925
656	1996	Demolition	Not Evaluated/ < 50 years	76
663	2000	Addition	Not Evaluated/ < 50 years	64,568
707	1987	Demolition	Not Evaluated/ < 50 years	3,042
720	1981	Demolition	Not Evaluated/ < 50 years	113
732	1997	Demolition	Not Evaluated/ < 50 years	5,584
752	1994	Demolition	Not Evaluated/ < 50 years	5,264
755	1962	Demolition	Evaluated/Not Eligible	7,958
756	1977	Demolition	Evaluation Pending	2,072
760	1984	Demolition	Not Evaluated/ < 50 years	429
762	1991	Demolition	Not Evaluated/ < 50 years	120
763	1988	Demolition	Not Evaluated/ < 50 years	120
798	2001	Demolition	Not Evaluated/ < 50 years	3,712
961	1953	Demolition	Evaluated/Not Eligible	297
1145	2003	Demolition	Not Evaluated/ < 50 years	242

NRHP – National Register of Historic Places

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

GEORGIA DEPARTMENT *of* COMMUNITY AFFAIRS

December 9 2024

John L. Eunice, III
Deputy Commander
Department of the Air Force
23rd Civil Engineer Squadron
3485 Georgia Street, Building 918
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, Moody AFB

RE: Moody AFB: Construct Squadron Operations Building, Sijan Street and Rehabilitate Buildings 556, 663, 606, 607, 609, Savannah Street, Valdosta Lowndes County, Georgia
HP-241115-003

Dear Mr. Eunice,

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force and Moody Air Force Base (AFB) in complying with provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project, designated by Moody AFB as Project 1/Guardian Angel Facility Construction and Renovation, consists of constructing a single, approximately 55,000 square feet (SF) building of unknown height and design with associated paved parking and subsurface utility and drainage infrastructure near Sijan Street on Moody AFB in Valdosta. It is also HPD's understanding that the project's scope of work (SOW) includes constructing an addition to and conducting unknown rehabilitation activities at the circa (ca.) 1941 Building 556, constructing an addition to and conducting unknown rehabilitation activities the ca. 2000 Building 663, and conducting unknown rehabilitation activities at the ca. 2005 Buildings 606 and 607 and the ca. 1941 Building 609 near Savannah Street on Moody AFB. Based on the information provided, HPD notes that Buildings 556 and 609 and the ca. 1969 Building 621 and ca. 1954 Building 658, all within the proposed project's area of potential effect (APE), have previously been determined not eligible for listing in the National Register of Historic Places (NRHP). Additionally, HPD finds the NRHP-eligibility of the ca. 1971 Building 622 and Building 67, also within the proposed project's area of APE, is currently unknown due to a lack of available information. However, HPD concurs that the subject project, as proposed, will have **no adverse effect** to historic properties within its APE, as defined in 36 CFR Part 800.5(d)(1), due to the scope and location of the work, existing modern intrusions, and previous ground disturbance.

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. It is important to remember that any changes to this project as it is currently proposed will require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic properties are adequately considered in project planning.

Please refer to project number **HP-241115-003** in any future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted]. or Noah Bryant, Compliance Review Archaeologist, at [redacted] or [redacted].

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

GEORGIA DEPARTMENT *of* COMMUNITY AFFAIRS

December 9, 2024

John L. Eunice, III
Deputy Commander
Department of the Air Force
23rd Civil Engineer Squadron
3485 Georgia Street, Building 918
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, Moody AFB

RE: Moody AFB: Construct Aircraft Fire Training Facility, Sijan Street, Valdosta
Lowndes County, Georgia
HP-241115-004

Dear Mr. Eunice,

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force and Moody Air Force Base (AFB) in complying with provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project, designated by Moody AFB as Project 2/Aircraft Fire Training Facility (AFTF) Improvements, consists of improving the circa (ca.) 1996 AFTF located on Sijan Street within Moody AFB in Valdosta, including constructing an approximately six (6)-acre concrete pad around the existing facility, constructing a roadway to connect the facility/pad to North Perimeter Road, demolishing and reconstructing the existing mock-up training aircraft, replacing five (5) existing fire hydrants, installing nine (9) stadium-style light poles at an unknown overall height, conducting unknown rehabilitation activities at the existing retention pond, relocating and replacing the existing propane gas tank, and potentially constructing an approximately 10,000 square-foot (SF) truck training facility and associated three (3)-acre concrete pad, along with installing/upgrading associated utility and drainage infrastructure. Based on the information provided, it is HPD's opinion that no historic properties that are listed or eligible for listing in the National Register of Historic Places (NRHP) will be affected by this undertaking, as defined in 36 CFR Part 800.4(d)(1).

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE). However, at this time it appears that they will not be impacted by the above-referenced project, due to the scope and location of the work and previous ground disturbance. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic resources are adequately considered in project planning.

Please refer to project number **HP-241115-004** in any future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted] or Noah Bryant, Compliance Review Archaeologist, at [redacted] or [redacted].

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

GEORGIA DEPARTMENT *of* COMMUNITY AFFAIRS

December 10, 2024

John L. Eunice, III
Deputy Commander
Department of the Air Force
23rd Civil Engineer Squadron
3485 Georgia Street, Building 918
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, Moody AFB

RE: Moody AFB: Construct Gate Overwatch Buildings, Davidson Road & Mitchell Boulevard, Valdosta Lowndes County, Georgia
HP-241115-005

Dear Mr. Eunice,

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force and Moody Air Force Base (AFB) in complying with provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project, designated by Moody AFB as Project 3/Gate Overwatch Position Construction, consists of constructing a two (2)-story overwatch building of unknown design at both the Davidson Road and Mitchell Boulevard entry gates to Moody AFB in Valdosta. Based on the information provided, it is HPD's opinion that no historic properties that are listed or eligible for listing in the National Register of Historic Places (NRHP) will be affected by this undertaking, as defined in 36 CFR Part 800.4(d)(1).

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE). However, at this time it appears that they will not be impacted by the above-referenced project, due to the scope and location of the work, existing modern intrusions, and previous ground disturbance. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic resources are adequately considered in project planning.

Please refer to project number **HP-241115-005** in any future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted] or Noah Bryant, Compliance Review Archaeologist, at [redacted] or [redacted].

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

Georgia® Department of Community Affairs

December 10, 2024

John L. Eunice, III
Deputy Base Civil Engineer
Department of the Air Force
23D Civil Engineer Squadron
3485 Georgia Street
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, NEPA/Environmental Planner

RE: Moody AFB: Demolition/New Construction, Buildings 732, 752, 755, 756, Chenault Way, Valdosta
Lowndes County, Georgia
HP-241115-006

Dear Mr. Eunice:

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force (Air Force) and Moody Air Force Base (AFB) in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project designated by Moody AFB as Project 4/Aerospace Ground Equipment (AGE) Facility Construction and Demolition, consists of demolishing the circa (ca.) 1997 Building 732, the ca. 1994 Building 752, the ca. 1965 Building 755, and the ca. 1977 Building 756 located along Chenault Way west of its intersection with Davis Road and constructing a new AGE facility of unknown size, design, height, and massing south of Chenault Way (Alternative 1) or demolishing Buildings 732 and 756 and conducting unknown rehabilitation activities at Buildings 752 and 755 (Alternative 2). Based on the information provided and desktop research, HPD finds that the eligibility of Building 755 is currently unknown for listing in the National Register of Historic (NRHP), due to a lack of available information. As an NRHP-unknown building, the property should be treated as eligible under Section 106 until such time as it is fully evaluated in accordance with 36 CFR Part 800.4. Therefore, it is HPD's opinion that the subject project constitutes an **adverse effect** to a historic property that is eligible for listing in the NRHP, as defined in 36 CFR Part 800.5(a)(2). Specifically, the demolition or potentially incompatible rehabilitation of a potentially eligible building is not consistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. If the SOW for this project changes so that it conforms to the Secretary's *Standards*, prior to drafting a Memorandum of Agreement (MOA), or if the NRHP-eligibility of Building 755 is appropriately assessed, please forward the updated SOW or eligibility assessment to HPD for review and comment, once available.

HPD would like to note that this determination of an adverse effect is not the end of the Section 106 consultation process. When an adverse effect to a historic property is found, as noted in Moody AFB's *Integrated Cultural Resources Management Plan* (ICRMP), the federal agency must notify the Advisory Council on Historic Preservation (ACHP) of the determination and draft a MOA in order to resolve the adverse effect. In accordance with Standard Operating Procedure (SOP) 7.2 of the ICRMP and 36 CFR Part 800.6, please provide documentation of all avoidance and minimization measures explored, the proposed mitigation to resolve the adverse effect, and the draft MOA. HPD will review the documentation and should be provided the opportunity to review any associated deliverables stipulated in the MOA, within 30 days of receipt.

We look forward to working with you as this project progresses and to receiving either a revised SOW, eligibility assessment, or a draft MOA with supporting documentation. Please refer to project number **HP-241115-006** in future correspondence regarding this project. If we may be of further assistance, please contact Stacy Rieke, Environmental Review Program Manager, at [redacted] or [redacted].

Sincerely,

Jennifer Flood, MHP, LEED Green Associate
Division Director
Deputy State Historic Preservation Officer

JAF/smr

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

GEORGIA DEPARTMENT *of* COMMUNITY AFFAIRS

December 10, 2024

John L. Eunice, III
Deputy Commander
Department of the Air Force
23rd Civil Engineer Squadron
3485 Georgia Street, Building 918
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, Moody AFB

RE: Moody AFB: Remove Trees, Realign/Repave Burma Road, Valdosta
Lowndes County, Georgia
HP-241115-007

Dear Mr. Eunice,

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force and Moody Air Force Base (AFB) in complying with provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project, designated by Moody AFB as Project 5/Burma Road Realignment, consists of removing approximately 4.6 acres of trees from within the Runway 18R/36L clear zone and realigning and repaving the section of Burma Road located at the south end of the runways on Moody AFB in Valdosta. Based on the information provided, it is HPD's opinion that no historic properties that are listed or eligible for listing in the National Register of Historic Places (NRHP) will be affected by this undertaking, as defined in 36 CFR Part 800.4(d)(1).

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE). However, at this time it appears that they will not be impacted by the above-referenced project, due to the scope and location of the work and previous ground disturbance. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic resources are adequately considered in project planning.

Please refer to project number **HP-241115-007** in any future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted] or Noah Bryant, Compliance Review Archaeologist, at [redacted] or [redacted].

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

GEORGIA DEPARTMENT *of* COMMUNITY AFFAIRS

December 10, 2024

John L. Eunice, III
Deputy Commander
Department of the Air Force
23rd Civil Engineer Squadron
3485 Georgia Street, Building 918
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, Moody AFB

RE: Moody AFB: Moody AFB: Demolish Track, Construct Parking Lot, Savannah Street, Dexter Street, Valdosta Lowndes County, Georgia
HP-241115-008

Dear Mr. Eunice,

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force and Moody Air Force Base (AFB) in complying with provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project, designated by Moody AFB as Project 6/38th Rescue Squadron Parking Lot Construction, consists of demolishing the circa (ca.) 2011 running track and outdoor training equipment area located on Dexter Street west of its intersection with Savannah Street on Moody AFB in Valdosta and constructing an approximately 20,000 square-foot (SF) paved parking lot and installing approximately 10 electric vehicle charging stations of unknown height, size, and design with associated utility and drainage infrastructure. Based on the information provided, it is HPD's opinion that no historic properties that are listed or eligible for listing in the National Register of Historic Places (NRHP) will be affected by this undertaking, as defined in 36 CFR Part 800.4(d)(1).

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE). However, at this time it appears that they will not be impacted by the above-referenced project, due to the scope and location of the work and previous ground disturbance. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic resources are adequately considered in project planning.

Please refer to project number **HP-241115-008** in any future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted] or Noah Bryant, Compliance Review Archaeologist, at [redacted] or [redacted].

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

GEORGIA DEPARTMENT *of* COMMUNITY AFFAIRS

December 10, 2024

John L. Eunice, III
Deputy Commander
Department of the Air Force
23rd Civil Engineer Squadron
3485 Georgia Street, Building 918
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, Moody AFB

RE: Moody AFB: Stormwater Drainage System Repair/Replacement, Various Locations Valdosta Lowndes County, Georgia
HP-241115-009

Dear Mr. Eunice,

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force and Moody Air Force Base (AFB) in complying with provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project, designated by Moody AFB as Project 7/Airfield Stormwater Repair and Replacement, consists of surveying the location of the subsurface stormwater drainage system installation-wide utilizing ground-penetrating radar, repairing or replacing approximately 1,500 linear feet (LF) of existing stormwater drainage pipes installation-wide utilizing unknown methods, removing two (2) concrete stormwater outfall structures located in the graded portion of the runway clear zone, replacing the concrete outfall structures with 700 LF if subsurface concrete, high-density polyethylene or corrugated metal drainage pipes on Moody AFB in Valdosta. Based on the information provided, it is HPD's opinion that no historic properties that are listed or eligible for listing in the National Register of Historic Places (NRHP) will be affected by this undertaking, as defined in 36 CFR Part 800.4(d)(1).

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE). However, at this time it appears that they will not be impacted by the above-referenced project, due to the scope and location of the work and previous ground disturbance. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic resources are adequately considered in project planning.

Please refer to project number **HP-241115-009** in any future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted] or Noah Bryant, Compliance Review Archaeologist, at [redacted] or [redacted].

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

GEORGIA DEPARTMENT *of* COMMUNITY AFFAIRS

December 10, 2024

John L. Eunice, III
Deputy Commander
Department of the Air Force
23rd Civil Engineer Squadron
3485 Georgia Street, Building 918
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, Moody AFB

RE: Moody AFB: Repair Mission Lake Water Barrier and Stone Road, Valdosta
Lowndes County, Georgia
HP-241115-010

Dear Mr. Eunice,

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force and Moody Air Force Base (AFB) in complying with provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project, designated by Moody AFB as Project 8/Mission Lake Water Barrier and Stone Road Repairs, consists of reinforcing the circa (ca.) 1941 Mission Lake/Moody AFB Pond barrier/dam and improving Stone Road on Moody AFB in Valdosta, including widening a 300-foot (ft.) section of Stone Road located west of its intersection with Burma Road on the Mission Lake water barrier/dam to add shoulders to one or both sides of the roadway and installing up to 3,500 cubic yards of riprap and up to 4,000 cubic yards of clay on both sides of the road to reinforce the water barrier/dam. Alternately, the project may consist of removing trees in order to realign Stone Road away from the water barrier/dam and south of Mission Lake and the surface of the water barrier/dam regrassed. Based on the information provided and desktop research, HPD finds the National Register of Historic Places (NRHP)-eligibility of Mission Lake and its associated water barrier/dam is currently unknown due to a lack of available information. However, it is HPD's opinion that no historic properties that are listed or eligible for listing in the National Register of Historic Places (NRHP) will be affected by this undertaking, as defined in 36 CFR Part 800.4(d)(1).

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE). However, at this time it appears that they will not be impacted by the above-referenced project, due to the scope and location of the work and previous ground disturbance. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic resources are adequately considered in project planning.

Please refer to project number **HP-241115-010** in any future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted] or Noah Bryant, Compliance Review Archaeologist, at [redacted] or [redacted].

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

GEORGIA DEPARTMENT *of* COMMUNITY AFFAIRS

December 10, 2024

John L. Eunice, III
Deputy Commander
Department of the Air Force
23rd Civil Engineer Squadron
3485 Georgia Street, Building 918
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, Moody AFB

RE: Moody AFB: Vegetation Removal, Repair West Boundary Fence, Georgia Street, Valdosta Lowndes County, Georgia
HP-241115-011

Dear Mr. Eunice,

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force and Moody Air Force Base (AFB) in complying with provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project, designated by Moody AFB as Project 9/Boundary Fence Repair, consists of removing vegetation along one or both sides of an approximately 10,000 linear foot (LF) section of the western installation boundary fence that runs parallel to Bemiss Road between Davidson Road and Sijan Road on Moody AFB in Valdosta to create a 16-foot (ft.) wide, vegetation-free corridor along the fence line, grading a road/driving lane through an existing wetland area on the base side of the fence, placing a culvert of unknown size and material in Beatty Branch, constructing a driveway over the Beatty Branch culvert, and selectively repairing the boundary fence in-kind based on condition. Based on the information provided and desktop research, HPD finds archaeological sites 9LW73 and 9LW220, within the proposed project's area of potential effect (APE), are not eligible for listing in the National Register of Historic Places (NRHP). Therefore, it is HPD's opinion that no historic properties that are listed or eligible for listing in the National Register of Historic Places (NRHP) will be affected by this undertaking, as defined in 36 CFR Part 800.4(d)(1).

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE). However, at this time it appears that they will not be impacted by the above-referenced project, due to the scope and location of the work and previous ground disturbance. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic resources are adequately considered in project planning.

Please refer to project number **HP-241115-011** in any future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted] or Noah Bryant, Compliance Review Archaeologist, at [redacted] or [redacted].

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

Georgia® Department of Community Affairs

December 10, 2024

John L. Eunice, III
Deputy Base Civil Engineer
Department of the Air Force
23D Civil Engineer Squadron
3485 Georgia Street
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, NEPA/Environmental Planner

RE: Moody AFB: Demolish 11 Buildings, Various Locations, Valdosta
Lowndes County, Georgia
HP-241115-012

Dear Mr. Eunice:

The Historic Preservation Division (HPD) has received the information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force (Air Force) and Moody Air Force Base (AFB) in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project designated by Moody AFB as Project 10/Building Demolition, consists of demolishing 11 buildings in various locations on Moody AFB in Valdosta, including the circa (ca.) 2005 Building 153, the ca. 2011 Building 200, the ca. 1996 Building 656, the ca. 1987 Building 707, the ca. 1981 Building 720, the ca. 1984 Building 760, the ca. 1991 Building 762, the ca. 1988 Building 763, the ca. 2001 Building 798, the ca. 1953 Building 961, and the ca. 2003 Building 1145. It is HPD's understanding that no new construction is planned at the various demolition sites. Based on the information provided and desktop research, HPD finds that the eligibility of Building 961 is currently unknown for listing in the National Register of Historic (NRHP), due to a lack of available information. As an NRHP-unknown building, the property should be treated as eligible under Section 106 until such time as it is fully evaluated in accordance with 36 CFR Part 800.4. Therefore, it is HPD's opinion that the subject project constitutes an **adverse effect** to a historic property that is eligible for listing in the NRHP, as defined in 36 CFR Part 800.5(a)(2). Specifically, the demolition of a potentially eligible building is not consistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. If the SOW for this project changes so that it conforms to the Secretary's *Standards*, prior to drafting a Memorandum of Agreement (MOA), or if the NRHP-eligibility of Building 961 is appropriately assessed, please forward the updated SOW or eligibility assessment to HPD for review and comment, once available.

HPD would like to note that this determination of an adverse effect is not the end of the Section 106 consultation process. When an adverse effect to a historic property is found, as noted in Moody AFB's *Integrated Cultural Resources Management Plan* (ICRMP), the federal agency must notify the Advisory Council on Historic Preservation (ACHP) of the determination and draft a MOA in order to resolve the adverse effect. In accordance with Standard Operating Procedure (SOP) 7.2 of the ICRMP and 36 CFR Part 800.6, please provide documentation of all avoidance and minimization measures explored, the proposed mitigation to resolve the adverse effect, and the draft MOA. HPD will review the documentation and should be provided the opportunity to review any associated deliverables stipulated in the MOA, within 30 days of receipt.

We look forward to working with you as this project progresses and to receiving either a revised SOW, eligibility assessment, or a draft MOA with supporting documentation. Please refer to project number **HP-241115-012** in future correspondence regarding this project. If we may be of further assistance, please contact Stacy Rieke, Environmental Review Program Manager, at [redacted] or [redacted].

Sincerely,

Jennifer Flood, MHP, LEED Green Associate
Division Director
Deputy State Historic Preservation Officer

JAF/smr

DEPARTMENT OF THE AIR FORCE
23D CIVIL ENGINEER SQUADRON (ACC)
MOODY AIR FORCE BASE GEORGIA

28 February 2025

Thomas E. Wahl
Deputy Base Civil Engineer
23d Civil Engineer Squadron
23 CES/CD
3485 Georgia Street
Bldg 918
Moody AFB GA 31699-1707

Georgia Department of Community Affairs
Jennifer Flood, MHP LEED Green Associate
Division Director
Deputy State Historic Preservation Officer
60 Executive Park South, NE
Atlanta GA 30329-2231

Subject: HP-241115-006, Proposed Project 4 – Aerospace Ground Equipment Facility Construction and Demolition

Dear Ms. Flood

Moody Air Force Base (AFB) is proposing 10 facility and infrastructure maintenance and repair projects on Moody AFB Main Base. Proposed Project 4 – Aerospace Ground Equipment (AGE) Facility Construction and Demolition would consolidate AGE facilities and operations at Moody AFB. Under proposed Project 4, the Department of the Air Force (DAF) would renovate and demolish existing AGE facilities within the existing AGE complex. The DAF has carried forward an analysis of two project-level alternatives for Project 4. Under Project 4 Alternative 1, the DAF would demolish Buildings 732, 752, 755, and 756 and construct a new consolidated AGE facility with warehouse area, administrative space, and covered storage. Under Project 4 Alternative 2, the DAF would demolish Buildings 732, and 756. Building 755 would be modified to create administrative areas (e.g., offices, break room, conference room), and Building 752 would be renovated for warehouse space. The DAF would construct a new parts-support section.

In accordance with the National Historic Preservation Act and its implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, the DAF advised you of this proposed undertaking as it may have the potential to affect historic properties. On 10 December 2024, the Historic Preservation Division (HPD) provided a written opinion that the demolition of Building 755, as proposed for Project 4 would constitute an adverse effect to a historic property that is eligible for listing in the National Register of Historic Places (NRHP) as defined by 36 CFR Part 800.5(a)(2). HPD also noted that, if the NRHP eligibility of Building 755 has been appropriately assessed, that documentation should be provided to HPD.

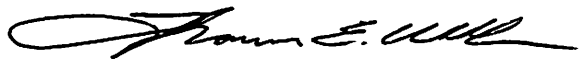
Building 755 was previously evaluated in 2011 as part of a World War II and Cold War-era historic property survey of Moody AFB (Hersch 2011, FP-110422-001). Building 755 was constructed in 1962 and originally measured 4,560 square feet, but with additions to the building in 1975, 1982, and

1995, the total size was increased to 9,398 square feet. At the time of the Hersch (2011) survey, Building 755 was less than 50 years old. Hersch (2011) noted that as a support structure intended to house airplane maintenance equipment, Building 755 lacked exceptional historical or architectural importance and lacked design or engineering merit. Building 755, although constructed during the Cold War, did not represent the philosophy, strategy, and/or technology associated with the Cold War. Building 755 has not made an exceptionally important contribution to broad patterns in our history, is not associated with the lives of persons of exceptional national importance, is not of exceptional architectural importance, and does not yield nor is likely to yield information of exceptional importance to human history or prehistory. Therefore, Hersch (2011) recommended that Building 755 was not eligible for NRHP inclusion under Criterion Consideration G. Further, based upon the function of the resource as a support structure for Moody AFB, and because Building 755 does not convey any other architectural or associative historic significance, Hersch (2011) noted that the resource had little potential of meeting the requirements for historic significance under Criteria A through D of the NRHP once it reached 50 years of age.

In 2017, Moody AFB completed an evaluation of the Installation's remaining Cold War-era facilities and unevaluated facilities that had reached 50 years of age to determine eligibility for listing in the NRHP (Reed et al. 2017, FP-170818-001). This August 2017 evaluation also included Building 755. The evaluation determined that Building 755 had been altered so significantly that it no longer possesses integrity and does not contribute to the historic environment. Upon a review requested by Moody AFB for concurrence with the August 2017 historical survey report, the Georgia State Historic Preservation Office concurred with the determinations on individual facilities, including Building 755 (Reed et al. 2017).

This letter requests concurrence with the DAF's determination of no effects to historic properties under proposed Project 4, including the proposed demolition of Building 755, which has been determined not to be eligible for listing in the NRHP. Please submit your written concurrence response or request for additional information within 30 days of receipt of this letter. Written responses can be sent to Mr. Lorence Busker, 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or by email to lorence.busker@us.af.mil. Thank you in advance.

Sincerely



THOMAS E. WAHL, RA, GS-14, DAF
Deputy Base Civil Engineer

References

Hersch, B. 2011. *Moody Air Force Base: World War II and Cold War-Era Historic Property Survey.* Report prepared by Geo-Marine Inc.

Reed, Mary Beth, Summer Ciomek, and Scott Morris. 2017. *Building and Structures Survey of Cold War Resources at Moody Air Force Base.*

Attachments

Copies of the two letters from SHPO accepting the historic surveys referenced in this letter.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION

MARK WILLIAMS
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

May 23, 2011

Marsha Prior, Ph.D.
Director, Historical Research Services
Geo-Marine, Inc.
2201 K Avenue, Suite A2
Plano, Texas 75074
mprior@geo-marine.com

RE: Moody AFB: World War II & Cold War-Era Historic Property Survey
Lowndes County, Georgia
FP-110422-001

Dear Dr. Prior:

The Historic Preservation Division (HPD) has reviewed the draft report entitled *Moody Air Force Base: World War II and Cold War-Era Historic Property Survey* prepared by Geo-Marine, Inc. and dated April 2011. Our comments are offered to assist the United States Air Force and Moody Air Force Base (AFB) in complying with the provisions of Section 110 of the National Historic Preservation Act of 1966, as amended.

Thank you for submitting this survey. Based on the information provided, HPD concurs with the recommendation that 40 of the 42 surveyed sites should be considered ineligible for inclusion in the National Register of Historic Places (NRHP). These include WWII Era resources 104, 112, 556, 617, 907, 908, 917, 918, 921, 976, 979 and 101 and Cold War-Era resources 23, 97, 108, 567, 571, 574, 623, 755, 757, 758, 769, 977, 988, 997, 1703-1705, 3148, 7001, and 7046 at Moody AFB and resources 2007, 2018, 2025, 20202, 20213, 20421, 20431, and 20441 at Grassy Pond Recreation Area. However, regarding Cold War Resources 451 (COMM Computer Training/former Disaster Preparedness) and 753 (Parachute Shop/Survival Equipment)at Moody AFB, we are unable to concur with the survey's finding that these buildings are not NRHP-eligible due to lack of architectural or historical significance and loss of integrity. In order to evaluate these resources, we need additional information. Specifically, we need historic photographs, views of all sides of the buildings, dates of alterations and context other than the buildings are not significant. In addition, regarding Resource 753, in our opinion a construction date of 1962 does not require that this building be evaluated under Criterion G.

Please refer to project number FP-110422-001 in future correspondence regarding this project. If we may be of further assistance, please do not hesitate to contact Elizabeth Shirk, Environmental Review Coordinator, at (404) 651-6624.

Sincerely,

Elizabeth Shirk

Karen Anderson-Cordova, Program Manager
Environmental Review & Preservation Planning

KAC/ECS

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION

MARK WILLIAMS
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

November 6, 2017

Michael U. Francis, Lt Col
Commander
Department of the Air Force
23D Civil Engineering Squadron (ACC)
Moody Air Force Base, Georgia
Attn: Greg Lee, Environmental Element Chief

RE: Moody AFB: Cold War Era Building Survey
Lowndes and Lanier Counties, Georgia
FP-170818-001

Dear Lt. Col. Francis:

The Historic Preservation Division (HPD) has reviewed the report entitled, *Moody Air Force Base, Building and Structure Survey of Cold War Resources at Moody Air Force Base,* dated August 2017. Our comments are offered to assist the US Department of the Air Force and Moody Air Force Base (AFB) in complying with the provisions of Section 110 of the National Historic Preservation Act (NHPA).

Based on the information contained in the report and subsequent information submitted, HPD concurs that the Chapel (110) and Water Tower (618) are eligible for listing in the National Register of Historic Places (NRHP). Additionally, HPD concurs that the remaining resources outlined in Table 1 (pages 21-27) are not individually eligible for listing in the NRHP. Furthermore, HPD concurs that Moody AFB does not appear to currently contain NRHP-eligible historic district(s).

Please refer to project number **FP-170818-001** in any future correspondence concerning this project. If we may be of further assistance, please do not hesitate to contact me at Jennifer.dixon@dnr.ga.gov or (770) 389-7851.

Sincerely,

Jennifer Dixon, MHP, LEED Green Associate
Program Manager
Environmental Review & Preservation Planning

Cc: Hank Santicola, Moody AFB

DEPARTMENT OF THE AIR FORCE
23D CIVIL ENGINEER SQUADRON (ACC)
MOODY AIR FORCE BASE GEORGIA

28 February 2025

Thomas E. Wahl
Deputy Base Civil Engineer
23d Civil Engineer Squadron
23 CES/CD
3485 Georgia Street
Bldg 918
Moody AFB GA 31699-1707

Georgia Department of Community Affairs
Jennifer Flood, MHP LEED Green Associate
Division Director
Deputy State Historic Preservation Officer
60 Executive Park South, NE
Atlanta GA 30329-2231

Subject: HP-241115-012, Proposed Project 10 – Building Demolition

Dear Ms. Flood

Moody Air Force Base (AFB) is proposing 10 facility and infrastructure maintenance and repair projects on Moody AFB Main Base. Proposed Project 10 – Building Demolition would demolish 11 buildings at various locations on Moody AFB. Under proposed Project 10, the Department of the Air Force (DAF) would demolish 11 buildings that have been determined to be underutilized or no longer needed (Buildings 153, 200, 656, 707, 720, 760, 762, 763, 798, 961, and 1145). All demolished materials and solid waste would be removed from Moody AFB using dump trucks and haul-off debris containers. All demolition debris and other associated solid waste would be transported to the Evergreen Landfill in Valdosta, Georgia. Demolished building locations would either be left with the foundation building pad in place, or the building foundations removed, and the soils revegetated and maintained as grass-covered space.

In accordance with the National Historic Preservation Act and its implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, the DAF advised you of this proposed undertaking, as it may have the potential to affect historic properties. On 10 December 2024, the Historic Preservation Division (HPD) provided a written opinion that the demolition of Building 961, as proposed for Project 10, would constitute an adverse effect to a historic property that is eligible for listing in the National Register of Historic Places (NRHP), as defined by 36 CFR Part 800.5(a)(2). HPD also noted that, if the NRHP eligibility of Building 961 has been appropriately assessed, that documentation should be provided to HPD.

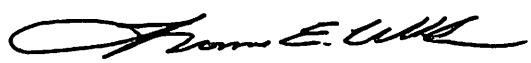
Building 961 was previously evaluated in 1999 as part of a survey of historic buildings and structures at Moody AFB (Messick 1999, HP990830-003). Building 961 is a Base Engineering Storage Covered Facility that was constructed in 1953 that provides environmentally controlled storage space and related operating space for the supplies and materials the Base Civil Engineer Squadron uses in its daily

operations. The building covers 320 square feet. Messick (1999) evaluated Building 961 as part of the inventory of Cold War-era buildings and structures at Moody AFB.

Messick (1999) found that, based on the type of military activities and mission at Moody AFB during the Cold War and the types of properties that were utilized, no buildings or structures were recommended as eligible for the NRHP under the context of the Cold War. Moody AFB does not meet the criteria for Cold War significance under Department of Defense guidance, nor does it meet the criteria of exceptional importance under NRHP guidelines. Because of the overall training role of the facility, the physical resources did not have a direct operational relationship to critical events or persons during this period. None of the buildings or structures appear to possess exceptional historical importance to the nation nor are they exceptional examples of scientific or technological achievement. Messick (1999) determined that these findings were consistent with the preliminary results of previous studies (Lewis et al. 1995; Patterson et al. 1997). On 20 September 1999, the Georgia State Historic Preservation Office concurred with the findings described by Messick (1999). Although the building was 46 years of age at the time of the original survey, given its small size (320 square feet) and original and current purpose (storage), the DAF has determined that the building's existing determination of ineligibility stands.

This letter requests concurrence with the DAF's determination of no effects to historic properties under proposed Project 10, including the proposed demolition of Building 961, which has been determined to not be eligible for listing in the NRHP. Please submit your written concurrence response or request for additional information within 30 days of receipt of this letter. Written responses can be sent to Mr. Lorence Busker, 23 CES/CEIE, 3485 Georgia Street, Moody AFB, Georgia 31699 or by email to lorence.busker@us.af.mil. Thank you in advance.

Sincerely



THOMAS E, WAHL, RA, GS-14, DAF
Deputy Base Civil Engineer

References

Messick, D. P. 1999. *Survey of Historic Buildings and Structures at Moody Air Force Base, Lowndes and Lanier Counties, Georgia.* Report submitted to the US Army Corps of Engineers, Savannah District, prepared by New South Associates, Stone Mountain.

Lewis, K., K. Roxlau, L. Rhodes, P. Boyer, and J. Murphey. 1995. *A Systematic Study of Air Combat Command Cold War Material Culture. Volume I: Historic Context and Methodology for Assessment.* Mariah Associates Inc., Albuquerque, New Mexico.

Patterson, P., D. P. Staley, and K. Roxlau. 1997. A Systematic Study of Air Combat Command Cold War Material Culture, Volume II-20: A Baseline Inventory of Cold War Material Culture at Moody Air Force Base. Mariah Associates, Inc., Albuquerque, New Mexico

Attachment

Copy of letter from SHPO accepting the 1999, *Survey of Historic Buildings and Structures at Moody Air Force Base, Lowndes and Lanier Counties, Georgia,* building survey.

A review of the history, mission, and property types at Moody suggests that the base does not meet the criteria for Cold War significance under DoD guidance, nor does it meet the criteria of exceptional importance under National Register guidelines. While individual properties from the Cold War era were not surveyed on a case-by-case basis, enough baseline documentary information was gathered to assess the overall role of the facility and to determine that the physical resources did not have a direct operational relationship to critical events or persons during this period. None of the buildings or structures appear to possess exceptional historical importance to the nation nor are they exceptional examples of scientific or technological achievement.

V. Recommendations and Conclusions

No areas on Moody Air Force Base have enough concentration of intact historic buildings or structures to delineate as a National Register eligible historic district. There are only 34 buildings or structures over 50 years of age, and all but 15 of these were temporary World War II construction. The individual properties are widely scattered, and nowhere is there a geographic proximity of even as many as three resources. These properties must therefore be evaluated individually. The following table summarizes recommendations for individual National Register eligibility for World War II permanent buildings and structures at Moody Air Force Base.

Table 3 - National Register Recommendations for World War II Permanent Buildings and Structures

Facility No.:	Construction Date:	NRHP Recommendations:
609	1941	Not Eligible - per SHPO concurrence letter dated 5/97
618	1941	Eligible - Criterion A - local significance
701	1941	Not Eligible - per SHPO concurrence letter dated 9/96
718	1941	Not Eligible - loss of integrity
723	1941	Not Eligible - lack of significance, loss of integrity
725	1941	Not Eligible - lack of significance, loss of integrity
733	1941	Not Eligible - lack of significance, loss of integrity
912	1941	Not Eligible - lack of significance
913	1941	Not Eligible - lack of significance, loss of integrity
934	1941	Not eligible - lack of significance
1000	1941	Not Eligible - lack of significance, loss of integrity
1004	1941	Not Eligible - lack of significance, loss of integrity
1005	1941	Not Eligible - lack of significance, loss of integrity
1100	1941	Not eligible - lack of significance
1106	1941	Not eligible - lack of significance

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION

MARK WILLIAMS
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

November 6, 2017

Michael U. Francis, Lt Col
Commander
Department of the Air Force
23D Civil Engineering Squadron (ACC)
Moody Air Force Base, Georgia
Attn: Greg Lee, Environmental Element Chief

RE: Moody AFB: Cold War Era Building Survey
Lowndes and Lanier Counties, Georgia
FP-170818-001

Dear Lt. Col. Francis:

The Historic Preservation Division (HPD) has reviewed the report entitled, *Moody Air Force Base, Building and Structure Survey of Cold War Resources at Moody Air Force Base,* dated August 2017. Our comments are offered to assist the US Department of the Air Force and Moody Air Force Base (AFB) in complying with the provisions of Section 110 of the National Historic Preservation Act (NHPA).

Based on the information contained in the report and subsequent information submitted, HPD concurs that the Chapel (110) and Water Tower (618) are eligible for listing in the National Register of Historic Places (NRHP). Additionally, HPD concurs that the remaining resources outlined in Table 1 (pages 21-27) are not individually eligible for listing in the NRHP. Furthermore, HPD concurs that Moody AFB does not appear to currently contain NRHP-eligible historic district(s).

Please refer to project number **FP-170818-001** in any future correspondence concerning this project. If we may be of further assistance, please do not hesitate to contact me at Jennifer.dixon@dnr.ga.gov or (770) 389-7851.

Sincerely,

Jennifer Dixon, MHP, LEED Green Associate
Program Manager
Environmental Review & Preservation Planning

Cc: Hank Santicola, Moody AFB

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

Georgia® Department of Community Affairs

March 24, 2025

John L. Eunice, III
Deputy Base Civil Engineer
Department of the Air Force
23D Civil Engineer Squadron
3485 Georgia Street
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, NEPA/Environmental Planner

RE: Moody AFB: Demolition/New Construction, Buildings 732, 752, 755, 756, Chenault Way, Valdosta
Lowndes County, Georgia
HP-241115-006

Dear Mr. Eunice:

The Historic Preservation Division (HPD) has received the additional information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force (Air Force) and Moody Air Force Base (AFB) in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project designated by Moody AFB as Project 4/Aerospace Ground Equipment (AGE) Facility Construction and Demolition, consists of demolishing the circa (ca.) 1997 Building 732, the ca. 1994 Building 752, the ca. 1965 Building 755, and the ca. 1977 Building 756 located along Chenault Way west of its intersection with Davis Road and constructing a new AGE facility of unknown size, design, height, and massing south of Chenault Way (Alternative 1) or demolishing Buildings 732 and 756 and conducting unknown rehabilitation activities at Buildings 752 and 755 (Alternative 2). The project was previously determined to have an adverse effect on Building 755, which was unknown for listing in the National Register of Historic (NRHP), due to the demolition or potentially incompatible rehabilitation of the potentially eligible building.

The current submitted information includes an eligibility assessment of Building 755. Based on the additional information provided, HPD concurs that Building 755 is not eligible for listing in the NRHP due to a lack of integrity. Therefore, it is HPD's opinion that the adverse effect no longer appears applicable. As such, it is HPD's opinion that no historic properties that are listed or eligible for listing in the NRHP will be affected by this undertaking, as defined in 36 CFR Part 800.4(d)(1).

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE). However, at this time it appears that they will not be impacted by the above-referenced project, due to the scope of work. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic resources are adequately considered in project planning.

Please refer to project number **HP-241115-006** in future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted]

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

Brian P. Kemp
Governor

Christopher Nunn
Commissioner

Georgia® Department of Community Affairs

March 24, 2025

John L. Eunice, III
Deputy Base Civil Engineer
Department of the Air Force
23D Civil Engineer Squadron
3485 Georgia Street
Moody Air Force Base, Georgia 31699-1707
Attn: Lorence Busker, NEPA/Environmental Planner

RE: Moody AFB: Demolish 11 Buildings, Various Locations, Valdosta
Lowndes County, Georgia
HP-241115-012

Dear Mr. Eunice:

The Historic Preservation Division (HPD) has received the additional information submitted concerning the above referenced project. Our comments are offered to assist the U.S. Department of the Air Force (Air Force) and Moody Air Force Base (AFB) in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

The subject project designated by Moody AFB as Project 10/Building Demolition, consists of demolishing 11 buildings in various locations on Moody AFB in Valdosta, including the circa (ca.) 2005 Building 153, the ca. 2011 Building 200, the ca. 1996 Building 656, the ca. 1987 Building 707, the ca. 1981 Building 720, the ca. 1984 Building 760, the ca. 1991 Building 762, the ca. 1988 Building 763, the ca. 2001 Building 798, the ca. 1953 Building 961, and the ca. 2003 Building 1145. It continues to be HPD's understanding that no new construction is planned at the various demolition sites. The project was previously determined to have an adverse effect on Building 961, which was unknown for listing in the National Register of Historic (NRHP), due to the demolition of the potentially eligible building.

The current submitted information includes an eligibility assessment of Building 961. Based on the additional information provided, HPD concurs that Building 961 is not eligible for listing in the NRHP due to a lack of significance and/or integrity. Therefore, it is HPD's opinion that the adverse effect no longer appears applicable. As such, it is HPD's opinion that no historic properties that are listed or eligible for listing in the NRHP will be affected by this undertaking, as defined in 36 CFR Part 800.4(d)(1).

This letter evidences consultation with our office for compliance with Section 106 of the NHPA. Please note that historic and/or archaeological resources may be located within the project's area of potential effect (APE). However, at this time it appears that they will not be impacted by the above-referenced project, due to the scope of work. It is important to remember that any changes to this project as it is currently proposed may require additional consultation. HPD encourages federal agencies and project applicants to discuss such changes with our office to ensure that potential effects to historic resources are adequately considered in project planning.

Please refer to project number **HP-241115-012** in future correspondence regarding this project. If we may be of further assistance, please contact me at [redacted] or [redacted].

Sincerely,

Stacy Rieke, MHP
Program Manager
Environmental Review & Preservation Planning

NOTICES OF AVAILABILITY

FORMAT PAGE

The Valdosta Daily Times

Your News. Your Voice. Your Times.

Volume 120, No. 45

Established 1869

The Valdosta Daily Times (USPS 655-160) is published Tuesday, Wednesday, Friday and Sunday at 201 N. Troup Street Valdosta, GA 31601. Periodical postage paid at Valdosta, GA. **Postmaster:** Send address changes to The Valdosta Daily Times, P.O. Box 968, Valdosta, GA 31603.

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Pottery's lasting impact

FROM THE TURNER CENTER FOR THE ARTS

VALDOSTA — Turner Center for the Arts offers several programs and classes for youth and adults. Among these are weekday pottery classes, with five weekly class times available for beginners to create using clay. Several of the center's repeat students shared their backgrounds and reasons for joining classes, and each expressed a common theme – that they wish they had joined the classes sooner.

In weekday pottery classes, students create functional and decorative pieces using clay through methods such as hand-building, throwing on the wheel, creating pots using coil techniques and more. From first thought to final glazing and kiln firing, Turner Center ceramics instructor Ramiro Santillan assists each student as they create work from their imagination or based on something that inspires them. Student Morgan Wood said Santillan has played a key part in helping her learn pottery.

"He has provided a great teaching experience – my classmates and I feel supported no matter what style of pottery we choose to make on a given day," Wood said.

Many students have become so advanced that they have had their own booths at the center's annual ARToberfest and have also displayed their work in the Turner Center galleries for past Spring Into Art and Glass and Ceramics Invitational Exhibitions.

Several students shared that they never believed they were artistic, but that friends recommended that they try pottery classes to relax, get out of the house or simply as something new.

Wood began taking classes with her cousin.

"I was hooked — the vibe, the art, the people!" Wood said, adding this was after just the first few classes. "Joining this class has been one of the best decisions I have ever made. It has allowed me the freedom to create some very fun art pieces but has also given me some of my best friends."

Jennifer Mixon shared that she joined classes after suffering the tragic loss of a daughter.

"It has brought me a tremendous amount of joy to be able to handmake gifts for my wonderful loving family," she said.

Mixon gave each of her children and grandchildren a flower name, which inspires the work she creates for them.

Sandy Jones, a pottery student since 2011 and a full-time biology professor at Valdosta State University, expressed a long-term fascination with leaves. She began collecting leaves, and using their impressions on her artwork, has created more than 200 tiles that now form a mosaic backsplash in her kitchen.

Wood enjoys creating burrito bowls, which she and her husband use for regular meals. Cheryl Jowers, a kindergarten teacher at Sallas Mahone Elementary, specializes in functional kitchenware – her work includes bread pans, butter crocks, and more.

When asked what they would tell anyone considering taking pottery classes, several students said they will wish they had joined the classes sooner.

"Pottery night is a time when I can unplug, unwind and create with others," Cheryl Jowers said. "Creating is something I must do — the Turner Center's weekly pottery class has filled that need in the most wonderful capacity. Now I can't imagine my life without clay in it."



Submitted photo

Weekday pottery student Cheryl Jowers practices wheel throwing techniques.

Jennifer Pardieck, a biomedical engineer and mother of two, said expression is essential, "so take the opportunity to create or experience art to see what speaks to you."

Jones said many tend to create a false dichotomy by labeling people as either artistic or not.

"This is especially wrong regarding pottery, because everyone can express themselves through playing with clay...in the studio, you will find people laughing and helping each other trying new techniques," Jones added.

To register for weekday pottery classes and other programs at the Turner Center, visit turnercenter.org/classes, or contact Turner Center Art Education Administrator Hailey Rathmann at hrathmann@turnercenter.org or 229-247-2787.

Registration open for art camps

STAFF REPORTS

VALDOSTA — Blast off into creativity at the Annette Howell Turner Center for the Arts 2025 Youth Summer Art Camps.

Campers ages 5-12 will travel through a galaxy of artistic mediums — ceramics, culinary arts, fiber arts, mixed media and painting — to create their own stellar masterpieces. Guided by experienced artists and educators in each class, students will launch their skills to new heights, exploring art in fun and innovative ways. Youth Summer Art Camps provide the perfect opportunity to inspire children to shoot for the stars and explore the limitless possibilities of their imagination.

This year, three Stars in every Stroke Youth Summer Art Camps will be offered:

• 10 a.m.-3 p.m., June 2-5; ages 5-12; $250 for non-members and $240 for members.

• 10 a.m.-4 p.m., June 11; ages 5-12; $125 for non-members and $115 for members.

• 10 a.m.-3 p.m., June 16-19; ages 5-12; $250 for non-members and $240 for members.

View all details and register at turnercenter.org/summer-camps/, or call 229-247-2787.

CHURCH BRIEFS

Annual Easter Sunrise Service, 6 a.m., Sunday, April 20, Magnolia Baptist Church, Hahira. Speaker is the Rev. Michael Bryant. Breakfast will be served.

Eighth Church Anniversary and Family and Friend's Day, 7 p.m., Wednesday, April 23 and 10 a.m., Sunday, April 27, at the Victory Church Inc., 619 North Lee St. Guest speakers are: April 23, Pastor Tony Jackson, Magnolia Baptist Church, Hahira; and April 27, Pastor J. Jordan, Hopewell Baptist Church.

2025 Women's Day Conference, "Stand Your Ground", 7 p.m., May 1-2, and 10 a.m. May 4, at Magnolia Missionary Baptist Church, 409 W. Main St., Hahira. Guess speakers: Thursday, Min. Dr. LaTronza Sanford, Church of Perfecting Saints, Quitman; Friday, Apostle Keisha Ferguson, Love and Kindness Fellowship Ministries, Nashville; Sunday, Elder Bonita Pratt, Joyful Sound Ministries, Valdosta.

First Anniversary Celebration of Reverend Jeffrey Gilmore, 10 a.m., May 4, 129 Bethlehem Church St., Howell. Guest speaker is Pastor Orson Burton Jr., Fresh Start Georgia Church, Albany. Lunch will be served immediately after the service.

155th Church Anniversary Celebration, 7 p.m., May 23; 3 p.m., May 25, New Prospect Missionary Baptist Church, 598 Hwy. 84 East, Stockton. Guest speakers: Friday, Bishop Enoch Brown Sr., Church Built on the Rock, Valdosta; and Sunday, D. John H. Manning Sr., St. Mark Missionary Baptist Church, Delmar.

CITY OF VALDOSTA
APPOINTMENTS FOR BOARDS, COMMISSIONS, AUTHORITIES & ADVISORY COMMITTEES

In accordance with the City of Valdosta's Appointment to Policy and to provide an opportunity for qualified citizens to be made aware of opportunities to serve on various Boards, Commissions, Authorities, and Advisory Committees, the City of Valdosta announces the following openings:

- Community Development Block Grant Advisory Committee (4)
- Greater Lowndes Planning Commission (1)
- MPO Citizens Advisory Committee (1) *
- Public Art Advisory Committee (3) **
- Valdosta Housing Authority – Resident Appointment (1) ***
- Valdosta-Lowndes Co. Airport Authority (2) ****
- Valdosta-Lowndes Co. Construction Board of Adjustments & Appeals (1)
- Valdosta-Lowndes Co. Land Bank Authority (1) *****
- Valdosta-Lowndes Co. Parks & Recreation Authority (1)
- Valdosta-Lowndes Co. Zoning Board (1)

Each person applying must review the Membership Requirements and Code of Ethics Booklet, complete a General Board Application, and sign a Code of Ethics form. The documents are available at www.valdostacity.com or contact Teresa S. Bolden, City Clerk, at City Hall, 216 East Central Avenue, Phone – (229) 259-3503, E-mail – tbolden@valdostacity.com. The closing date for submitting the General Board Application and Code of Ethics form to the City Clerk is Wednesday, May 14, 2025 at 5:00 p.m. These appointments will be made at the May 22, 2025 City Council Meeting.

* This appointment serves at will.
** One slot is for the LVAC Board Member, one slot is for the LVAC Professional Artist, and one slot is for the Community at Large.
*** The Mayor makes this appointment.
**** One of these slots is to fill an unexpired term ending 05/11/26.
***** This slot is to fill an unexpired term ending 01/31/28 and the Mayor makes this appointment.

NOTICE OF AVAILABILITY

Draft Environmental Assessment for Facility and Infrastructure Construction and Modernization, Moody Air Force Base, Georgia

A Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) have been prepared by the Department of the Air Force (DAF) to analyze the potential environmental impacts from select facility and infrastructure construction and modernization projects to support installation development over the next five fiscal years at Moody Air Force Base (AFB), Georgia.

The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. The Proposed Action is needed to conform with applicable antiterrorism/force protection criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and unnecessary risk to the mission due to inefficiencies. The EA analyzes a Proposed Action that would implement 10 construction, demolition, and modernization projects. The DAF could choose to implement all, none, or any combination of these 10 projects.

Printed copies of the Draft EA and Proposed FONSI/FONPA are available for review at the following locations:

- McMullen Southside Library, 527 Griffin Avenue, Valdosta, Georgia 31601
- Miller Lakeland Library, 18 South Valdosta Road, Lakeland, Georgia 31635

An electronic copy of the Draft EA and Proposed FONSI/FONPA is available at: https://www.moody.af.mil/Resources/Environmental-Initiative.

The DAF is soliciting comments from interested local, state, and federal elected officials and agencies, as well as interested members of the public. Although comments can be submitted to the DAF at any time during the EA process, comments are requested by 20 May 2025 to ensure full consideration in the process. Comments can be submitted to Mr. Lorence Busker, 23d Civil Engineer Squadron, 3485 Georgia Street, Moody AFB, Georgia 31699-1707; or via email at lorence.busker@us.af.mil.

Please note that in accordance with Privacy Act provisions, the DAF will not publish personal information of commenters, such as home addresses, e-mail addresses, or phone numbers.

OBITUARIES

Trevor Keith Daniels



SSG Trevor Keith Daniels, 39, passed away on March 31, 2025, in Colorado Springs, Colorado. Born on September 19, 1985, in Valdosta, Georgia, Trevor brought warmth and laughter into the lives of all he met.

Trevor proudly served his country as a medic in the United States Army. He enlisted on January 7, 2014, and through dedication and perseverance rose to the rank of Staff Sergeant (E6). In 2018, he was deployed in service to his nation. His commitment to his fellow soldiers and his role as a caregiver exemplified his deep compassion and sense of duty.

Trevor's life was marked by an easygoing nature and a vibrant sense of humor. He had an infectious optimism that lifted those around him. Whether sharing a good story or flashing his beautiful smile, Trevor had a way of making everyone feel like a friend. His kindness left a lasting impression on all who crossed his path.

He found joy in outdoor adventures with his wife, Natasha. Colorado was the perfect place for them to snowboard and engage in fitness activities. He and Natasha loved to travel and had many plans for the future. He was a lifelong Georgia Bulldog fan. Even though he loved the outdoors, he was perfectly content staying home. His sense of belonging followed him no matter the location!

Trevor was deeply loved by his family. He is survived by his wife, Natasha Daniels and her parents Noel and Elizabeth Flores of Vineville, KY. His children Autumn Daniels, Tyson Daniels, and Reid Daniels of Lenox; his parents Keith and Joanna (Cowart) Daniels of Tifton; Tracy (Harrison) and Kyle Weitala of Valdosta; his siblings Derieck Daniels, Tanner Daniels, Reina Daniels, and Gabriel Daniels; and honorary sister Any Chaffey. He also leaves behind grandparents Cathy Harrison and Johnny and Emily Cowart.

He was preceded in death by grandparents Charlie and Peggy Daniels; grandfather Jonathan "Farney" Harrison; and grandmother Linda Harrison Linton, all of Valdosta, GA.

Trevor's legacy is one of love, laughter, service, and strength. May his memory bring comfort to those who knew him and continue to inspire acts of kindness in the world he leaves behind.

To accommodate our South Georgia family and friends, a Celebration of Life is currently being planned as a farewell, for now, to our precious Trevor. Details to be announced in the future.

Lindsey earns Harley Langdale Jr. College of Business Administration Excellence Award

STAFF REPORTS

VALDOSTA — Michael James Lindsey Jr. of Valdosta is the recipient of the Spring 2025 President's Award for Academic Excellence for the Harley Langdale Jr. College of Business Administration at Valdosta State University.

The President's Award for Academic Excellence is presented to a high-performing graduating student in each of VSU's six colleges — Harley Langdale Jr. College of Business Administration, College of Nursing and Health Sciences, College of the Arts, James L. and Dorothy H. Dewar College of Education and Human Services, College of Science and Mathematics and College of Humanities and Social Sciences.

Lindsey will be recognized during VSU's 239th Commencement at 7 p.m. Saturday, May 10, on the main campus front lawn. He will graduate summa cum laude with a bachelor of business administration degree in accounting and a minor in entrepreneurship.

"I'm very grateful to be receiving this award, and it feels like a great way to end my undergraduate journey here at VSU," Lindsey said. "I don't feel like I could have done it without the support from all the great professors at the business college pushing me towards success. I'm looking forward to taking the lessons I've learned here out into the real world."

As a student at VSU, Lindsey was an active member of Beta Gamma Sigma, the international business honor society, and a Georgia HOPE scholar. His commitment to academic and leadership excellence resulted in him earning repeated dean's list honors and the Georgia Society of CPAs Academic Excellence Award.



Submitted photo

Michael Lindsey

After graduation Lindsey plans to pursue his professional credentials and work as a certified public accountant.

His supportive family includes grandparents Jesse and Mary Billingsley, mother Jenny Adams, and father Michael Lindsey Sr.

State senator announces run for governor

THE ASSOCIATED PRESS

ATLANTa (AP) — Georgia Democrat Jason Esteves announced on Monday that he's running for governor in 2026, entering a field that remains murky for his party after two top potential candidates backed away from a run.

The 41-year-old state senator, also a lawyer and business owner, remains largely unknown outside his state Senate district, which includes parts of Fulton and Cobb counties. An early announcement could help him to raise money and increase his visibility.

He's likely to emphasize his biography, including his young children and his past service as a public school teacher. Esteves has also served as treasurer of the state Democratic Party, giving him a network among Democratic activists.

In a video announcing his candidacy, Esteves sounded a note of opposition to Republican President Donald Trump while saying he would emphasize lowering the cost of living, including housing costs, as well as expanding health care, restoring abortion rights and increasing funding for schools.

"I'm running for Governor to make Georgia the number one place to work, start a business, and raise a family," Esteves said in a statement. "As extreme politicians in Georgia push Trump's reckless agenda and rig the system for special interests, Georgians pay the price."

Incumbent Republican Gov. Brian Kemp is term-limited after two terms and can't seek reelection in 2026.

Former Atlanta Mayor Keisha Lance Bottoms has said she plans to run for governor as a Democrat, but has not yet filed papers to create a campaign. Former DeKalb County CEO Michael Thurmond has also expressed interest, and two-time nominee Stacey Abrams could yet choose to run again.

On the Republican side, Attorney General Chris Carr announced his run for governor last year and Lt. Gov. Burt Jones is expected to announce his candidacy soon.

Esteves enters the race as two potential Democratic candidates step back to focus on family health concerns.

Former state Sen. Jason Carter, Democrats' 2014 nominee and grandson of the late former President Jimmy Carter, said he has no plans to seek the 2026 nomination because of his wife's cancer diagnosis. Kate Carter has glioblastoma, an aggressive form of brain cancer. The couple has two teenage sons.

A US citizen was held for pickup by ICE even after proving he was born in the country

THE ASSOCIATED PRESS

MIAMI (AP) — A U.S. citizen was arrested in Florida for allegedly being in the country illegally and held for pickup by immigration authorities even after his mother showed a judge her son's birth certificate and the judge dismissed charges.

Juan Carlos Lopez Gomez, 20, of Cairo, was in a car that was stopped just past the Georgia state line by the Florida Highway Patrol on Wednesday, said Thomas Kennedy, a spokesperson at the Florida Immigrant Coalition.

Gomez and others in the car were arrested under a new Florida law, which is on hold, making it a crime for people who are in the country illegally to enter the state.

It is unclear if Lopez Gomez showed documents proving he is a citizen to the arresting officers. He was held at Leon County Jail and released after his case received widespread media coverage.

The charge of illegal entry into Florida was dropped Thursday after his mother showed the judge his state identification card, birth certificate and Social Security card, said Kennedy, who attended the hearing.

Court records show Judge Lashawn Riggans found no basis for the charge.

Lopez Gomez briefly remained in custody after U.S. Immigration and Customs Enforcement requested he remain there for 48 hours, a common practice when the agency wants to take custody of someone. ICE did not respond to a request for comment.

The case drew widespread attention because ICE is not supposed to take custody of U.S.-born citizens. While the immigration agency can occasionally get involved in cases of naturalized citizens who committed offenses such as lying on immigration forms, it has no authority over people born in the U.S.

Adding to the confusion is a federal judge's ruling to put a hold on enforcement of the Florida law against people who are in the country illegally entering the state, which meant it should not have been enforced.

FSU: Continued from Page 1A

In the fall of that same year, Eriksen filed a civil libel-slander complaint against Jessica Ikner, along with several other family members. The complaint, which was later dismissed, accused them of harassing Eriksen and abusing Ikner's position at the sheriff's office.

In 2020, at age 15, the suspect received court approval to change his name from Christian Eriksen to Phoenix Ikner, court documents show. His old name was a constant reminder of a "tragedy" he suffered, in the words of administrative magistrate James Banks, who approved the request, NBC News reported.

Banks observed that Ikner was a "mentally, emotionally and physically mature young adult who is very articulate" and "very polite" said he chose the new name as a representation of "rising from the ashes anew."

Classmate says there were concerns

Reid Seybold and his classmates were working on a group project in a building located a short, three-minute walk from the student union when someone ran in and warned them about the gunfire. They huddled together, the 22-year-old said, frantically firing off what they thought might be their final text messages to loved ones.

When Seybold found out who the suspect in the shooting was — that it was someone he knows — he was overcome with anger. Seybold was the president of a club that Phoenix Ikner joined when they were both studying at the local community college, now called Tallahassee State College.

INNOVATORS: Continued from Page 1A

Students from Valdosta Middle School's STEM Academy were the last to present, showcasing two different projects that the young innovators had worked on. The first team presented the work and mindset that was used in a "Mars Rover" project, in which the team had to create a rover out of household objects to accomplish tasks. The second team showcased a rollercoaster project that blended engineering and creativity in a multimedia presentation.

The program also featured two key presentations highlighting local economic and workforce growth. Michael Fleming of Wiregrass Tech demonstrated how virtual reality is transforming workforce training at the AIM (Artificial Intelligence in Manufacturing) facility. Through immersive, game-like VR environments, students and employees alike are learning essential industry skills in a more engaging and effective way.

Josh Nichols of the Dennis Group offered an inside look at the upcoming Walmart dairy processing facility. The $350 million project is expected to bring 300 to 400 new jobs to the area and serve over 750 Walmart and Sam's Club locations across the Southeast. While the project is still not completed, Nichols stated that they will be able to start running product out of it by September of this year.

Following the event, Ogletree reflected on its overall purpose, impact, and future.

"The purpose is to show our local industries that we have a pipeline for workforce here in Lowndes County," stated Ogletree. "We have very talented students who know a great deal about engineering and processing, and so we really just wanted to facilitate an environment to connect those two worlds, so that we could grow that relationship."



Caison Kirkland | The Valdosta Daily Times

Niki Ogletree, president and CEO of the Development Authority, delivers opening remarks to kick off the Innovators Event.

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Please note that in accordance with Privacy Act provisions, the DAF will not publish personal information of commenters, such as home addresses, e-mail addresses, or phone numbers.

The Valdosta Daily Times | THOMASVILLE TIMES-ENTERPRISE

The Moultrie Observer | The Tifton Gazette

AFFIDAVIT

I, Laurie Gay, Publisher, do hereby certify that the Legal Advertisement(s) for
EA/FONSI/FONPA/MOODY AFB

THE VALDOSTA DAILY TIMES
was/were published in _____

04/19,22/2025
on _____

Subscribed and sworn to me, in the County of Lowndes in the State of Georgia on this
2ND **day of** JUNE, 2025

Notary Public Signature | **Publisher**

JAN MARIE GOCHENOUER NOTARY PUBLIC Exp. JAN. 25, 2028 LOWNDES COUNTY, GA

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Obituaries

Rev. Daniel Rayder 'Danny' Isaac

Rev. Daniel Rayder "Danny" Isaac, 78, of Homerville passed away Friday evening, April 11, 2025, at Riverbrook Healthcare after an extended illness.

He was born in Lanier County to the late Rayder Isaac and Louise Young Isaac Gilley. Rev. Isaac was a 1964 graduate of Lanier County High School. He was a Veteran of the U.S. Army. Rev. Isaac first pastored at Faith Chapel in Jesup, GA from 1980-1981, then pastored at Zoar Southern Congregational Methodist Church in Jacksonville, Fla. for thirty years. In Jacksonville, he was the Parts Manager at M.D. Moody & Sons, Inc. Along with preaching, he and Martha Ann were blessed to be foster parents for 30 years. They had over 300 children to come through their home. He moved to Homerville in 2011 and was a member of Shiloh Church. Rev. Isaac was an avid fisherman and was always joking with everyone.



Along with his parents he was preceded in death by his wife, Martha Smith Isaac; one son, Troy Smith; one sister, Carol Wetherington.

Survivors include four sons, Tommy Smith of Waycross, Charlie Isaac of California, Christopher "Chuck" Isaac (Cathi) of Houston, TX, and Cody Isaac of Homerville; one daughter, Cindy Pharr (Denny) of Jacksonville; four grandchildren, Ethan Isaac, Aiden Isaac, Jayden Isaac, and Bentley Blakenship; four sisters and brothers-in-law, Mary Lou and Duell Stone of Nashville, Patricia and Wayne Jones of Evans, GA, Wanda and James "Delmar" Adams of Homerville, and Martha Booth of Lakeland; two stepsisters, Wanda and Rev. Jimmy Futch of Homerville, and Carolyn Sherrod of Homerville; mother-in-law, Shirley Smith Finley of Homerville; sisters-in-law, Margaret (Lavern) Miller of Homerville, Teresa Smith of Homerville, Lori Reeves (Randy) of Irwinville, and Lavada Pitts (Gabby) of Homerville; brother-in-law, Jeffery Smith of Jacksonville, FL; ;numerous nieces, nephews, and other relatives.

A funeral service was held Saturday morning, April 19, 2025, at 11 am in the Chapel of Roundtree Funeral Home, with Rev. Dale Holton and Rev. W.G. Smith officiating. Burial was in Shiloh Cemetery.

Active pallbearers were Randy Cox, Alan Johnston, Laverne Miller, Dale Holton, Randy Holton, and Joe Goosby. Honorary pallbearers were members of the Lanier County Class of 1964.

The song "I'll See You at the House" was played and W.G. Smith sang "Go Rest High on That Mountain".

Sympathy may be expressed online at www.roundtreefuneralhome.net.

Roundtree Funeral Home was in charge of the arrangements.

NOTICE OF AVAILABILITY
Draft Environmental Assessment for Facility and Infrastructure Construction and Modernization, Moody Air Force Base, Georgia

A Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) have been prepared by the Department of the Air Force (DAF) to analyze the potential environmental impacts from select facility and infrastructure construction and modernization projects to support installation development over the next five fiscal years at Moody Air Force Base (AFB), Georgia.

The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted operations. The Proposed Action is needed to conform with applicable antiterrorism/force protection criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and unnecessary risk to the mission due to inefficiencies. The EA analyzes a Proposed Action that would implement 10 construction, demolition, and modernization projects. The DAF could choose to implement all, none, or any combination of these 10 projects.

Printed copies of the Draft EA and Proposed FONSI/FONPA are available for review at the following locations:

• McMullen Southside Library, 527 Griffin Avenue, Valdosta, Georgia 31601

• Miller Lakeland Library, 18 South Valdosta Road, Lakeland, Georgia 31635

An electronic copy of the Draft EA and Proposed FONSI/FONPA is available at: https://www.moody.af.mil/Resources/Environmental-Initiative.

The DAF is soliciting comments from interested local, state, and federal elected officials and agencies, as well as interested members of the public. Although comments can be submitted to the DAF at any time during the EA process, comments are requested by 20 May 2025 to ensure full consideration in the process. Comments can be submitted to Mr. Lorence Busker, 23d Civil Engineer Squadron, 3485 Georgia Street, Moody AFB, Georgia 31699-1707; or via email at lorence.busker@us.af.mil.

Please note that in accordance with Privacy Act provisions, the DAF will not publish personal information of commenters, such as home addresses, e-mail addresses, or phone numbers.

Sapelo Island conservation at stake in zoning lawsuit

By TyTygami
Capitol Beat News Service

The Georgia Supreme Court heard oral arguments Wednesday in cases that could decide in the near term whether large oceanfront houses can be built on a sleepy island while in the long term reverberating far from the coast.

The dispute is over the preservation of the Gullah-Geechee way of life lived in small bungalows on Sapelo Island, where officials in McIntosh County have voted to allow the construction of larger houses.

But it's also about whether Georgians everywhere can overrule their local governments on what is often a hotly contested topic: zoning.

The justices heard arguments in three cases Wednesday, but two are ancillary, concerning the local probate court judge who agreed to let voters hold a referendum to potentially overturn the county zoning decision.

The core case, Bailey et al. v. McInstosh County, asks whether the Georgia Constitution grants counties exclusive authority over zoning and, thus, immunity from referendums.

For the residents of Sapelo Island, it boils down to whether they can keep a longstanding zoning ordinance that restricts homes to a maximum of 1,400 square feet. They want to maintain a local culture that stretches back to the period when slavery ended for ancestors who then became small landowners and built modest houses.

The McIntosh County Commission voted to eliminate that size limit. Sapelo residents responded by securing approval from the probate court judge for a referendum on whether to restore the restriction. A superior court judge agreed to a county petition to halt the referendum but also paused enforcement of the zoning law pending the outcome of this appeal to the high court.

The state Supreme Court opened the door to challenging local government decisions by referendum two years ago by deciding that voters in Camden County could use one to prevent the purchase of land for a spaceport. The facility would have lobbed commercial rockets over the Cumberland Island National Seashore, prompting concerns about the health of the coastal marsh and about the quality of life for nearby residents.

In the McIntosh County case, the justices are tasked with deciding whether their authorization of that Camden County referendum also applies to zoning decisions.

To answer that question, they'll have to interpret ambiguity in the state constitution.

"The referendum power applies to zoning ordinances because all potentially relevant legislative power for counties to pass ordinances, resolutions, and regulations emanates from the home rule section of the constitution," said Philip M. Thompson, the attorney for the referendum proponents.

But Ken E. Jarrard, the attorney arguing for the county, said the state constitution grants counties special power over zoning that is separate from the constitutional basis for other local authority.

"The power of zoning and the home rule power are absolutely different, and there's a reason that they are different," he said. "It's on purpose, it's borne out in the evolution of the constitution."

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Lanier 4-H taking orders for Vidalia Onions fundraiser

Farm fresh Vidalia Onions will be harvested from Tapley Farms in Lyons, Georgia, during the middle of April and Lanier County 4-H is taking orders to sell them now.

This fundraiser supports Lanier County 4-H'ers with costs associated with summer camp. Lanier County 4-H'ers can take your onion orders or you can place your order with the Lanier County Extension office. Cash or Checks are accepted and all orders and money are due to the Lanier Extension office by Monday, April 28.

Prices: 10 lb bag - $10 | 25 lb bag - $20 | 50 lb bag - $35

Onions must be picked up from the Lanier Extension Office on the delivery day in early May (date will be announced later). Contact the Lanier Extension Office at (229) 482-3895 to place an order or questions.

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Affidavit of Publication

RE: Notice of Availability; Draft Environmental Assessment for Facility and Infrastructure Construction and Modernization, Moody Air Force Base, Georgia

State of Georgia
County of Lanier

Personally appeared before the undersigned, Allen I. Robbins, III, who having been duly sworn, on oath that he is Publisher of The Lanier County [illegible]ocate the legal or[illegible]y, Georgia, and that the attached legal advertisem[illegible] published in said [illegible] on the following date:

Wednesday, April 23, 2025

Allen I. Robbins, III
Publisher, The Lanier County Advocate

Affiant
Sworn to and subscribed before me this
29 day of MAY, 2025

Reilly Grace Robbins, Notary Public
My commission expires March 8, 2026.

FORMAT PAGE

DRAFT ENVIRONMENTAL ASSESSMENT PUBLIC COMMENTS

FORMAT PAGE

From: BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIEA
To: Eric Webb
Subject: [External] - FW: USFWS comments - draft Environmental Assessment for Facility and Infrastructure Construction and Modernization, Moody Air Force Base, Georgia
Date: Tuesday, May 20, 2025 1:40:40 PM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

From: Wikoff, Bill
Sent: Tuesday, May 13, 2025 12:40 PM
To: BUSKER, LORENCE T CIV USAF ACC 23 CES/CEIEA
Subject: [Non-DoD Source] USFWS comments - draft Environmental Assessment for Facility and Infrastructure Construction and Modernization, Moody Air Force Base, Georgia

The U.S. Fish and Wildlife Service (Service) has reviewed the Department of Air Force (DAF) draft Environmental Assessment (dEA) and proposed Finding of No Significant Impact / Finding of No Practicable Alternative evaluating potential environmental impacts associated with select facility and infrastructure construction and modernization projects to support installation development at Moody Air Force Base (AFB), Georgia, over the next five fiscal years. We provide the following comments in accordance with provisions of the Endangered Species Act (Act) of 1973, as amended; (16 U.S.C. 1531 *et seq*.).

As part of our section 7 Act consultation with the DAF for this action, on November 27, 2024, the Service provided comments that the tricolored bat *(Perimyotis subflavus)* does not have federal protection under the Act but is proposed for listing. We recommend bat protective measures for man-made structures. The Service considers all man-made structures as potential roost sites for the bat. Structures should be inspected for bat usage within two weeks of demolition, renovation, or facility repairs if it is safe to do so. If evidence of current bat usage is found, contact the U.S. Fish and Wildlife Service at GAES_Assistance@fws.gov for species consultation. In a letter dated December 13, 2024, the DAF agreed that: 'to ensure that tricolored bats are not present in human-made structures that would be renovated or demolished, a qualified biologist would inspect all structures before renovation and demolition activities. Therefore, the demolition of buildings under Projects 4 and 10 would not affect the tricolored bat.'

The dEA in section 3.9.2 Environmental Consequences, page 3-67 for project 4 and page

3-71 for project 10 do not include the above bat protective measure for the demolition of man-made structures that was agreed to in our section 7 consultation for these two projects.

We request that the dEA be edited to include the agreed upon protective measure for the tricolored bat.

Thank you for the invitation to review the documents and considering our comments.

Bill

Bill Wikoff fish & wildlife biologist

U.S. Fish and Wildlife Service
Ecological Services - Coastal Georgia Sub Office
4980 Wildlife Drive, NE
Townsend, Georgia 31331

Project Planning and Review Procedures: https://www.fws.gov/office/georgia-ecological-services/project-planning-review
NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

Draft Environmental Assessment
US Fish and Wildlife Service Comments and Department of the Air Force Responses

Comment Number	US Fish and Wildlife Service Comment	Department of the Air Force Response
USFWS - 1	As part of our section 7 Act consultation with the DAF for this action, on November 27, 2024, the Service provided comments that the tricolored bat (*Perimyotis subflavus*) does not have federal protection under the Act but is proposed for listing. We recommend bat protective measures for man-made structures. The Service considers all man-made structures as potential roost sites for the bat. Structures should be inspected for bat usage within two weeks of demolition, renovation, or facility repairs if it is safe to do so. If evidence of current bat usage is found, contact the U.S. Fish and Wildlife Service at GAES_Assistance@fws.gov for species consultation. In a letter dated December 13, 2024, the DAF agreed that: 'to ensure that tricolored bats are not present in humanmade structures that would be renovated or demolished, a qualified biologist would inspect all structures before renovation and demolition activities. Therefore, the demolition of buildings under Projects 4 and 10 would not affect the tricolored bat.' The dEA in section 3.9.2 Environmental Consequences, page 3-67 for project 4 and page 3-71 for project 10 do not include the above bat protective measure for the demolition of man-made structures that was agreed to in our section 7 consultation for these two projects. We request that the dEA be edited to include the agreed upon protective measure for the tricolored bat.	The following was added to Section 3.9.2.9 for proposed Project 4 to address potential effects on the tricolored bat from building demolition: Tricolored bats do not typically utilize buildings for roosting in the Tricolored Bat Year-Round Active Zone 2 (USFWS 2024b), which includes Moody AFB. To ensure that tricolored bats are not present in human-made structures that would be demolished under Project 4, Alternative 1, a qualified biologist would inspect all structures for the presence of tricolored bats before demolition activities. Therefore, the demolition of buildings would not affect the tricolored bat. The following was added to Section 3.9.2.26 for proposed Project 10 to address potential effects on the tricolored bat from building demolition: Tricolored bats do not typically utilize buildings for roosting in Tricolored Bat Year-Round Active Zone 2 (USFWS 2024b), which includes Moody AFB. To ensure that tricolored bats are not present in human-made structures that would be demolished under Project 10, Alternative 1, a qualified biologist would inspect all structures for the presence of tricolored bats before demolition activities. Therefore, the demolition of buildings would not affect the tricolored bat.

FORMAT PAGE

APPENDIX B. WETLAND DELINEATION VERIFICATION

FORMAT PAGE

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT
100 W. OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3604

June 27, 2024

Regulatory Division
SAS-2024-00413

Mr. Lorence Busker
Department of the Air Force
23d Civil Engineer Squadron
3485 Georgia Street
Moody AFB, Georgia

Dear Mr. Busker:

I refer to a letter dated May 2024, submitted on your behalf by Vernadero Group Inc., requesting an Aquatic Resources Delineation Review (ARDR) for sites located on Moody AFB, Lowndes and Lanier Counties, Georgia (Latitude 30.9730, Longitude -83.2073). This project has been assigned number SAS-2024-00413 and it is important that you refer to this number in all communication concerning this matter.

We have completed an ARDR for this site. Any wetlands on-site were delineated in accordance with criteria contained in the 1987 "Corps of Engineers Wetland Delineation Manual," as amended by the most recent regional supplements to the manual. The enclosed exhibit entitled, "Figure 4-1 through 4-5, Potential State jurisdictional wetland and Waters of the United States within the Boundary Fence Project Area", "Figure 4-6. Potential Jurisdictional Wetland and Waters of the United States within the Mission Lake Barrier and Stone Road Repairs Area" and "Figure 4-7. Potential Jurisdictional Wetland and Waters of the United States within the Guardian Angel Facility Construction and Renovation Project Area", dated May 2024, accurately identifies the delineated limits of all aquatic resources located within the review area.

The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

If you intend to sell property that is part of a project that requires Department of the Army Authorization, it may be subject to the Interstate Land Sales Full Disclosure Act. The Property Report required by Housing and Urban Development Regulation must

state whether, or not a permit for the development has been applied for, issued or denied by the U.S. Army Corps of Engineers (Part 320.3(h) of Title 33 of the CFR).

This communication does not convey any property rights, either in real estate or material, or any exclusive privileges. It does not authorize any injury to property, invasion of rights, or any infringement of federal, state or local laws, or regulations. It does not obviate your requirement to obtain state or local assent required by law for the development of this property. If the information you have submitted, and on which the U.S. Army Corps of Engineers has based its determination is later found to be in error, this decision may be revoked.

Thank you in advance for completing our on-line Customer Survey Form located at https://regulatory.ops.usace.army.mil/customer-service-survey/. We value your comments and appreciate your taking the time to complete a survey each time you have interaction with our office.

If you have any questions, please contact me, by telephone at [redacted] or by email at [redacted].

Sincerely,

Terry C. Kobs
Program Manager, Coastal Branch

Copy Furnished: [redacted]

Enclosures



Figure 1-1. Location of Moody Air Force Base, Georgia



Figure 4-1. Potential Jurisdictional Wetland and Waters of the United States within the Boundary Fence Project Area

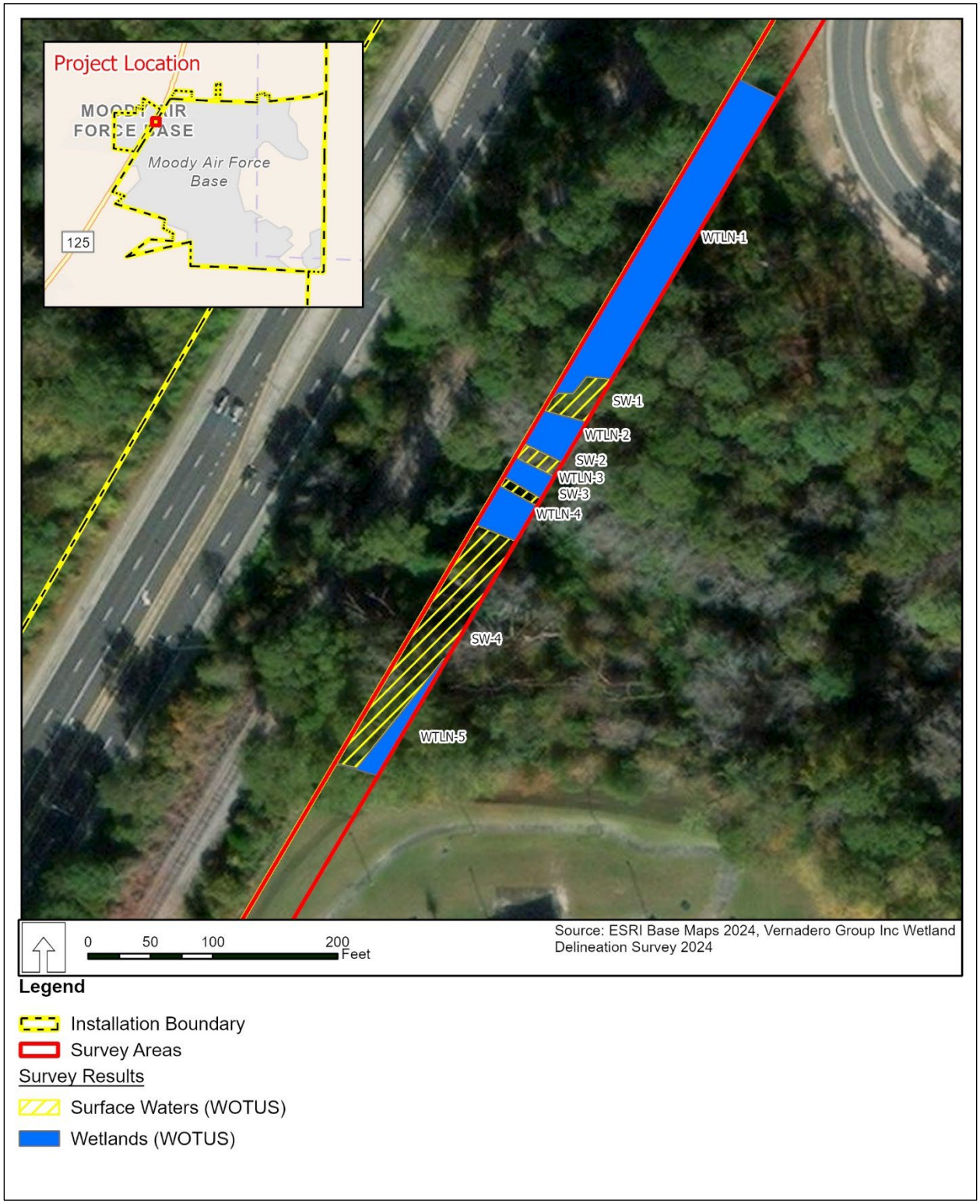


Figure 4-2. Potential Jurisdictional Wetland and Waters of the United States within the Boundary Fence Project Area

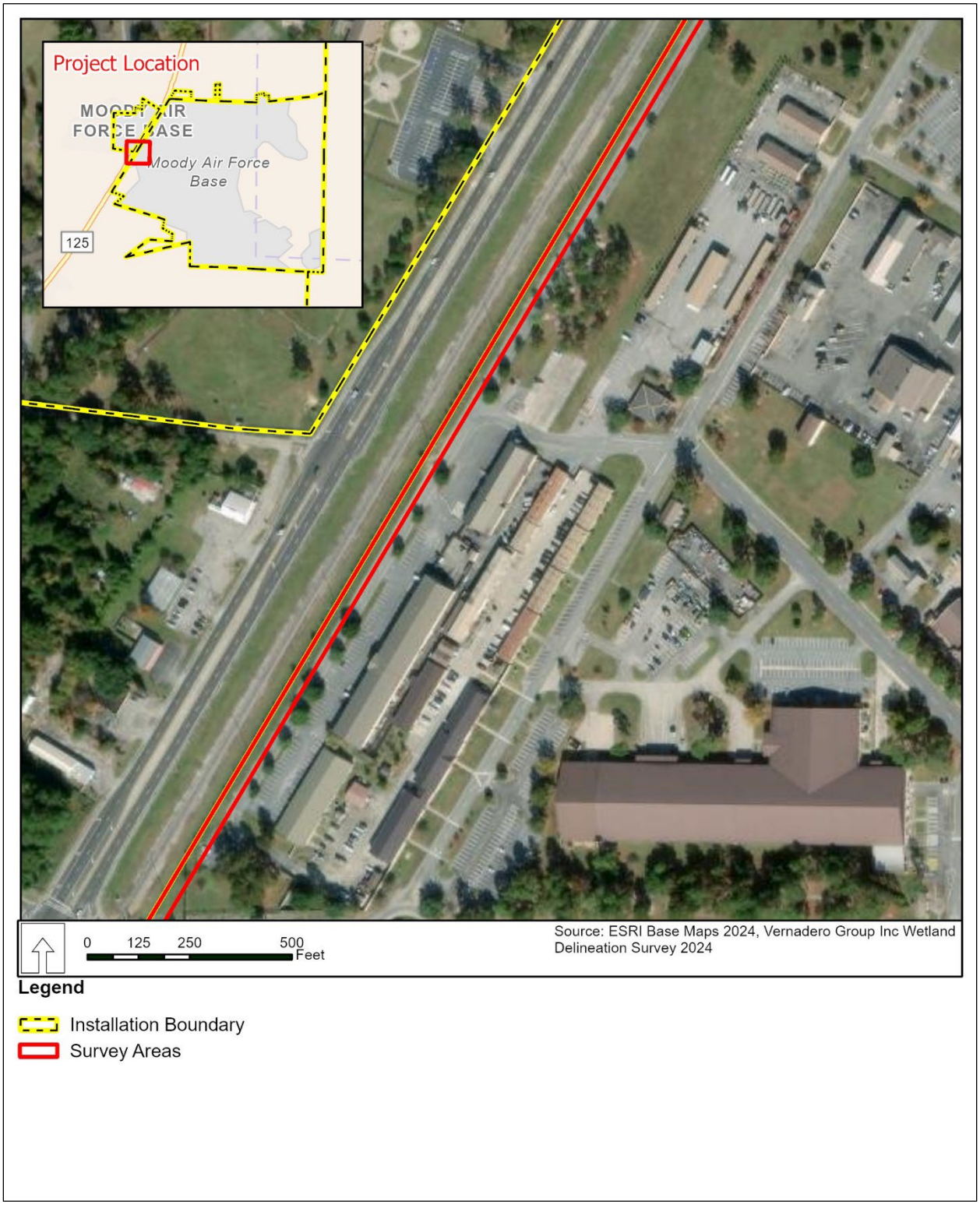


Figure 4-3. Potential Jurisdictional Wetland and Waters of the United States within the Boundary Fence Project Area



Figure 4-4. Potential Jurisdictional Wetland and Waters of the United States within the Boundary Fence Project Area



Figure 4-5. Potential State Jurisdictional Wetland and Waters of the United States within the Boundary Fence Project Area

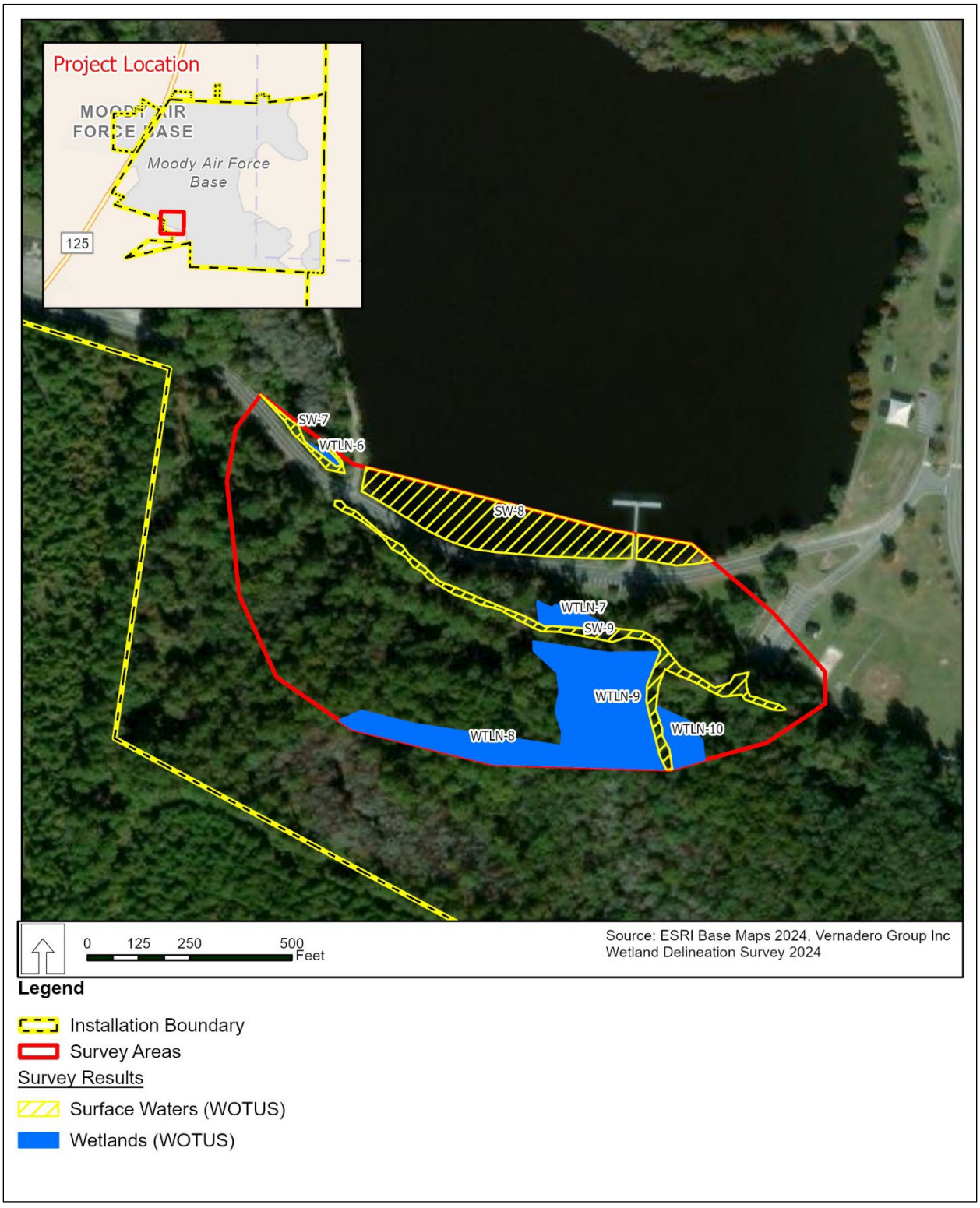


Figure 4-6. Potential Jurisdictional Wetland and Waters of the United States within the Mission Lake Barrier and Stone Road Repairs Area



Figure 4-7. Potential Jurisdictional Wetland and Waters of the United States within the Guardian Angel Facility Construction and Renovation Project Area

APPENDIX C. DEFINITION OF SELECT RESOURCES

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APPENDIX C-1. DEFINITION OF LAND USE

The term “land use” refers to real property classifications that indicate either natural conditions or the types of human activities occurring on a defined parcel of land. In many cases, land use descriptions are codified in local zoning laws.

Land use planning ensures orderly growth and compatibility between nearby property parcels or land areas. Land use planning in the Department of Defense (DoD) is guided by Air Force Instruction (AFI) 32-1015, *Integrated Installation Planning*. This document sets forth the responsibilities and requirements for comprehensive planning and describes procedures for developing, implementing, and integrating an Installation Development Plan with Activity Management Plans. In addition, land use guidelines established by the US Department of Housing and Urban Development and based on findings of the Federal Interagency Committee on Noise are used to recommend acceptable levels of noise exposure for land use.

Recreational resources are often considered as part of land use. Recreational resources include federal, state, and local parks, trails, scenic areas, beaches, indoor and outdoor community recreation centers, and playgrounds. Recreation areas are primarily limited to running and bicycle trails, ballfields, swimming pools, bowling alleys, theatres, playgrounds for children, and gymnasium facilities.

Military airfield, training areas, military facilities, recreation complexes, and open spaces compose most of the visual environment at Moody Air Force Base (AFB). Prominent visual features include aircraft, maintenance and support facilities, hangars, and office buildings.

Moody AFB is not located within a designated coastal zone; therefore, the land use regulations associated with the Coastal Zone Management Act do not apply.

APPENDIX C-2. DEFINITION OF NOISE

Noise is often defined as unwanted sound that can interfere with normal activities or otherwise diminish the quality of the environment. Depending on the noise level, it has the potential to disrupt sleep, interfere with speech communication, or cause temporary or permanent changes in hearing sensitivity in humans and wildlife. Noise sources can be continuous (e.g., constant noise from traffic or air conditioning units) or transient (e.g., a jet overflight or an explosion) in nature. Noise sources also have a broad range of frequency content (pitch) and can be nondescript, such as noise from traffic, or be specific and readily definable, such as a whistle or a horn. The way the acoustic environment is perceived by a receptor (animal or person) is dependent on the hearing capabilities of the receptor at the frequency of the noise and the receptor’s perception of the noise.

The amplitude of sound is described in a unit called the decibel (dB). Because the human ear hears a broad range of encountered sound pressures, dBs are measured on a quasi-logarithmic scale. The dB scale simplifies this range of sound pressures and allows the measurement of sound to be more easily understood.

There are many methods for quantifying noise, depending on the potential impacts in question and on the type of noise. One useful noise measurement in determining the effects of noise is the one-hour average sound level (L_{eq1H}). The L_{eq1H} can be thought of in terms of *equivalent* sound; that is, if a L_{eq1H} is 45.3 dB, this is what would be measured if a sound measurement device were placed in a sound field of 45.3 dB for one hour. The L_{eq1H} is usually A-weighted (dBA) unless specified otherwise. A-weighting is a standard filter used in acoustics that approximates human hearing and in some cases is the most appropriate weighting filter when investigating the impacts of noise on wildlife as well as humans. Examples of L_{eq1H} A-weighted noise levels for various common noise sources are shown in **Table C-1.**

Table C-1. Comparative A-Weighted Sound Levels

Noise Level (dBA)	Common Noise Levels	
	Indoor	Outdoor
100–110	Rock band inside New York subway	Jet flyover at 1,000 feet
90–100	Food blender at 3 feet	Gas lawnmower at 3 feet
80–90	Garbage disposal at 3 feet	Diesel truck at 50 feet; noisy urban daytime
70–80	Shouting at 3 feet; vacuum cleaner at 10 feet	Gas lawnmower at 100 feet
60–70	Normal speech at 3 feet	Commercial area heavy traffic at 330 feet
50–60	Large business office; dishwasher next room	
40–50	Small theater or large conference room (background)	Quiet urban nighttime
30–40	Library (background)	Quiet suburban nighttime
20–30	Bedroom at night	Quiet rural nighttime
10–20	Broadcast and recording studio (background)	-
0–10	Threshold of hearing	-

dBA – A-weighted decibel

APPENDIX C-3. DEFINITION OF AIR QUALITY AND GREENHOUSE GASES

Air quality is affected by the type of pollutants emitted by numerous natural and human-made sources and by their concentration levels in the air. As mandated under the Clean Air Act, the US Environmental Protection Agency (USEPA) set the National Ambient Air Quality Standards (NAAQS) (40 Code of Federal Regulations [CFR] Part 50) for select pollutants that are known to affect human health and the environment. The NAAQS are currently established for six criteria air pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter (including particulates equal to or less than 10 microns in diameter [PM_{10}] and particulates equal to or less than 2.5 microns in diameter [$PM_{2.5}$]), and lead (Pb). Criteria pollutants, such as CO and SO_2, are directly emitted into the air, but O_3 is formed in the

atmosphere because of complex chemical reactions of pollutants in the presence of heat and sunlight. Nitrogen oxides (NO_x) and volatile organic compounds (VOCs) that are emitted from various sources are primarily responsible for O_3 formation and are also referred to as "ozone precursors."

The USEPA has established Air Quality Control Regions (AQCRs) throughout the United States to evaluate compliance with the NAAQS. Each AQCR has regulatory areas that are designated as an attainment or nonattainment area for each of the criteria pollutants depending on whether it meets or exceeds the NAAQS. Attainment areas that were reclassified from a previous nonattainment status to attainment are called maintenance areas and are required to prepare a maintenance plan for air quality.

Stationary sources of air pollution are required to obtain permits prior to starting new construction or major modifications. New Source Review (NSR) Prevention of Significant Deterioration (PSD) approval would be required if the proposed project was a new source having the potential to emit 250 tons per year (tpy) or more of an criteria pollutant. The approval would also be required if the proposed project was an existing major source of emissions making a major modification in an attainment area and would result in a net emission increase above a specified level.

Federal actions in NAAQS nonattainment and maintenance areas are required to comply with USEPA's General Conformity Rule (40 CFR Part 93). These regulations ensure that federal actions do not impede local efforts to achieve or maintain attainment with the NAAQS. Proposed federal actions are evaluated to determine if the total indirect and direct net emissions from the action would be below *de minimis* levels for each of the pollutants as specified in 40 CFR 93.153. If the *de minimis* levels would not be exceeded for any of the pollutants, no further evaluation is required. However, if net emissions from a proposed action would exceed the *de minimis* thresholds for one or more of the specified pollutants, a demonstration of conformity, as prescribed in the General Conformity Regulations (40 CFR Parts 51 and 93), is required.

Greenhouse Gases. Greenhouse gases (GHGs) are gases, occurring from natural processes and human activities, that trap heat in the atmosphere. GHGs are generally not a concern to human health at normal ambient levels and can only potentially cause warming of the climatic system at a cumulative global scale.

Human activities are altering the carbon cycle both by adding more carbon dioxide CO_2) to the atmosphere and by influencing the ability of natural sinks, like forests and soils, to (remove and store CO_2 from the atmosphere (USEPA 2024a). Emissions from GHGs are expressed in terms of the carbon dioxide equivalent emissions (CO_2e), which is a measure used to compare the emissions from various GHGs based upon their Global Warming Potential (GWP). The GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO_2. The larger the GWP, the more a given gas warms the earth compared to CO_2 over the same time period. Analysts cumulatively compare emission estimates of different gases using standardized GWPs.

C-3.1 Air Quality

This appendix presents an overview of the Clean Air Act (CAA) and the relevant Georgia air quality regulations and standards. It also includes the assumptions used for the air quality analyses presented in the Air Quality sections of this Environmental Assessment (EA).

C-3.1.1 Air Quality Program Overview

To protect public health and welfare, the USEPA has developed numerical concentration-based standards, or NAAQS, for six "criteria" pollutants (based on health-related criteria) under the provisions of the CAA Amendments of 1970. There are two kinds of NAAQS: Primary and secondary standards. Primary standards prescribe the maximum permissible concentration in the ambient air to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards prescribe the maximum concentration or level of air quality required to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings (40 CFR Part 50).

The CAA gives states the authority to establish air quality rules and regulations. The Air Protection Branch of Georgia Environmental Protection Division (GEPD) is responsible for protecting Georgia's air quality through the regulation of emissions from industrial and mobile sources. Georgia has also adopted the federal NAAQS standards.

Based on measured ambient air pollutant concentrations, the USEPA designates areas of the United States as having air quality better than (attainment) the NAAQS, worse than (nonattainment) the NAAQS, and unclassifiable. The areas that cannot be classified (on the basis of available information) as meeting or not meeting the NAAQS for a particular pollutant are "unclassifiable" and are treated as attainment until proven otherwise. Attainment areas can be further classified as "maintenance" areas, which are areas previously classified as nonattainment but where air pollutant concentrations have been successfully reduced to below the standard. Maintenance areas are under special maintenance plans and must operate under some of the nonattainment area plans to ensure compliance with the NAAQS.

Section 176(c) (1) of the CAA contains legislation that ensures federal activities conform to relevant State Implementation Plans (SIPs) and thus do not hamper local efforts to control air pollution. Conformity to a SIP is defined as conformity to a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. As such, a general conformity analysis is required for areas of nonattainment or maintenance where a federal action is proposed.

The action can be shown to conform by demonstrating that the total direct and indirect emissions are below the *de minimis* levels (**Table C-2**), and/or showing that the Proposed Action emissions are within the state- or tribe-approved budget of the facility as part of the SIP or Tribal Implementation Plan. A conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of that pollutant equal or exceed its *de minimis* rates (40 CFR § 93.153).

Table C-2. General Conformity Rule *de Minimis* Emission Thresholds

Pollutant	Attainment Classification	Tons per Year
Ozone (VOC and NO_x)	Serious nonattainment	50
	Severe nonattainment	25
	Extreme nonattainment	10
	Other areas outside an ozone transport region (applicable to all three airport alternatives)	100
Ozone (NO_x)	Marginal and moderate nonattainment inside an ozone transport region	100
	Maintenance	100
Ozone (VOC)	Marginal and moderate nonattainment inside an ozone transport region	50
	Maintenance within an ozone transport region	50
	Maintenance outside an ozone transport region	100
Carbon Monoxide, SO_2 and NO_2	All nonattainment and maintenance	100
PM_{10}	Serious nonattainment	70
	Moderate nonattainment and maintenance	100
$PM_{2.5}$ Direct emissions, SO_2, NO_x, VOC, and ammonia	All nonattainment and maintenance	100
Lead	All nonattainment and maintenance	25

Source: USEPA 2017

NO_2 = nitrogen dioxide; NO_x = nitrogen oxides; $PM_{2.5}$ = particulates equal to or less than 2.5 microns in diameter; PM_{10} = particulates equal to or less than 10 microns in diameter; SO_2 = sulfur dioxide; VOC = volatile organic compound

Direct emissions are those that occur as a direct result of the action. For example, emissions from new equipment that are a permanent component of the completed action (e.g., boilers, heaters, generators, paint booths) are considered direct emissions. Indirect emissions are those that occur at a later time or at a distance from the Proposed Action. For example, increased vehicular/commuter traffic because of the action is considered an indirect emission. Construction emissions must also be considered. For example, the emissions from vehicles and equipment used to clear and grade building sites, build new buildings, and construct new roads must be evaluated. These types of emissions are considered direct.

Georgia is required to develop a SIP that sets forth how CAA provisions will be imposed within the state. The SIP is the primary means for the implementation, maintenance, and enforcement of the measures needed to attain and maintain the NAAQS within each state and includes control measures, emissions limitations, and other provisions required to attain and maintain the ambient air quality standards. The purpose of the SIP is twofold. First, it must provide a control strategy that will result in the attainment and maintenance of the NAAQS. Second, it must demonstrate that progress is being made in attaining the standards in each nonattainment area.

The GEPD operates and maintains an ambient air monitoring network that uses the methods and procedures approved by the USEPA. The purpose is to monitor, assess, and provide information on statewide ambient air quality conditions and trends as specified by the state and federal CAA. The Air Quality Monitoring Program works in conjunction with local air pollution agencies and some industries, measuring air quality throughout the state.

The air quality monitoring network is used to identify areas where the ambient air quality standards are being violated and plans are needed to reduce pollutant concentration levels to be in attainment with the standards. Also included are areas where the ambient standards are being met, but plans are necessary to ensure maintenance of acceptable levels of air quality in the face of anticipated population or industrial growth.

The USEPA has specific requirements for a minimum number of monitoring sites, known as national air monitoring sites. Locations of these monitoring sites are determined by factors such as emissions sources, population density, permitting needs, modeling results, and site accessibility. The ambient monitoring program maintains a network of 34 air monitoring sites throughout the state of Georgia, measuring 200 air pollutants.

The result of this attainment/maintenance analysis is the development of local and statewide strategies for controlling emissions of criteria air pollutants from stationary and mobile sources. The first step in this process is the annual compilation of the ambient air monitoring results, and the second step is the analysis of the monitoring data for general air quality, exceedances of air quality standards, and pollutant trends.

Under the CAA, new stationary emissions sources are subject to NSR in order to obtain a construction permit. Permits are required for new major sources or sources making major modifications. In areas that meet the NAAQS the permits are referred to as Prevention of Significant Deterioration (PSD) permits and the process to obtain permit approval is called PSD review. In nonattainment areas the permitting process is referred to as nonattainment NSR. The purpose of PSD review is to ensure that sources are constructed without causing significant adverse deterioration to clean air in the area. Nonattainment NSR purpose is to ensure new sources do not impede a region’s progress to achieve compliance with NAAQS through the use of emission control technology and by offsetting the emission increases.

Moody AFB must comply with GEPD requirements when constructing new facilities, such as controlling fugitive dust and open burning. All persons responsible for any operation, process, handling, transportation, or storage facility that could result in fugitive dust would take

reasonable precautions to prevent such dust from becoming airborne. Reasonable precautions might include using water to control dust from building construction, road grading, or land clearing, and covering, at all times when in motion, open-bodied trucks, transporting materials likely to give rise to airborne dusts. In addition, the Proposed Action would proceed in full compliance with current state air quality regulations. The Georgia Environmental Protection Agency (EPA) regulations includes the Fugitive Dust Rule (391-3-1-.02.(2)(n)) and construction contractors would need to review Georgia regulations to ensure compliance with all applicable air pollution control regulations.

C-3.1.2 Assumptions

The following are assumptions were used in the air quality analysis for the proposed alternative actions:

1. Modeling using Air Conformity Applicability Model (ACAM) was completed for all relevant activities associated with the 10 proposed projects and associated alternatives.

2. For air quality analysis, the proposed construction projects are assumed to occur within a single calendar year to provide a conservative estimate of emissions. The duration of the construction project is assumed to be 12 months from the assumed start date of January 2025. For operational emissions, the start date is assumed to be the beginning of the year following completion of construction (January 2026) and would occur indefinitely.

3. The calculations assumed there were no controls used to reduce fugitive emissions. It is assumed that reasonable mitigation measures would be used during construction and demolition activities to reduce particulate matter emissions.

4. Construction phase emissions for the Proposed Action Alternative 1 are included for demolition, grading, trenching, construction, architectural coating, and paving. Operational emissions are for comfort heating and a backup diesel generator that are proposed for installation at the new facilities for some Project Alternatives. No distinction has been made between new construction and renovation/addition.

5. In the absence of square footage data for demolition, an estimate of the area proposed for demolition was derived from available diagrams and maps or were estimated based on engineering judgment.

6. If the square footage for construction, renovation, or land disturbance was available, then it was used for ACAM modeling. In the absence of square footage data for construction, an estimate of the area proposed for construction was derived from design diagrams and online maps.

7. Duration of construction phase activities was estimated based on the area proposed for construction or renovation. The duration of the project provided by the facility was taken into consideration for estimating the timeline for construction for each phase.

8. Typically, area proposed for grading was assumed to be twice the total area proposed for construction or renovation.

9. For grading, if data on the amount of material hauled in and hauled out (in cubic yards) was provided by the facility, then it was used in ACAM. In the absence of this data, it has been estimated using the assumed depth and graded area. Fill depth for gravel and grading depth is assumed based on the type of project.

10. In the absence of trenching data, trenching in linear feet for utility was derived based on the size of the project. An estimated trench depth and trench width is assumed based on the nature of the project.

11. Emissions from personnel commute is not performed as no new personnel will be working at the new facilities upon completion of construction of this project.

C-3.1.3 Regulatory Comparisons

The conformity requirement under CAA section 176(c), and the implementing regulations under 40 CFR Part 93, subpart B, for general federal actions, requires federal agencies to demonstrate that their proposed activities would conform to the applicable SIP for attainment of the NAAQS. General conformity applies only to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area equal or exceed annual *de minimis* thresholds identified in the rule, a formal conformity determination is required for that action. The thresholds are more restrictive as the severity of the nonattainment status of the region increases.

APPENDIX C-4. DEFINITION OF SOILS

Soils are the unconsolidated materials overlying bedrock or other parent material. Soils typically are described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses. In appropriate cases, soil properties must be examined for their compatibility with particular construction activities or types of land use.

APPENDIX C-5. DEFINITION OF WATER RESOURCES

Water resources include surface waters, groundwater, and floodplains. Surface waters include all lakes, ponds, rivers, streams, impoundments, and wetlands within a defined area or watershed. Wetlands are transitional areas between terrestrial and aquatic systems with land covered by shallow surface water. Groundwater resources include water contained in soils, permeable and porous rock, or unconsolidated substrate. Floodplains are areas that are flooded periodically by the lateral overflow of surface water bodies.

Surface waters, as defined in 33 CFR 328.3, are regulated under Sections 401 and 404 of the Clean Water Act (CWA; 33 United States Code [USC] § 1251 et seq.) and Section 10 of the Rivers and Harbors Act. The CWA regulates discharges of pollutants in surface waters of the

US. Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into waters of the US, including wetlands. The US Army Corps of Engineers defines wetlands as “those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions” (Environmental Laboratory 1987). Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328). Federal protection of wetlands is also promulgated under Executive Order (EO) 11990, *Protection of Wetlands,* the purpose of which is to reduce adverse impacts associated with the destruction or modification of wetlands. This order directs federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands.

The CWA provides the authority to establish water quality standards, control discharges into surface and subsurface waters (including groundwater), develop waste treatment management plans and practices, and issue permits for discharges. A National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the CWA is required for discharges into surface waters. The USEPA oversees the issuance of NPDES permits at federal facilities as well as water quality regulations (Section 401 of the CWA) for both surface and groundwater within states.

Under Section 438 of the Energy Independence and Security Act of 2007 (EISA), federal agencies are required to reduce stormwater runoff from development and redevelopment projects implemented by the federal government in order to protect water resources. Federal agencies can comply with Section 438 of EISA by implementing a variety of stormwater management practices, such as green infrastructure or low-impact development practices. Examples of these stormwater management practices include reducing impervious surfaces by using increased vegetation cover on surface, implementing porous pavements, integrating cisterns, and building green roofs (USEPA 2024b).

Groundwater is water that occurs in the saturated zone beneath the earth’s surface and includes underground streams and aquifers. It is an essential resource that functions to recharge surface water and can be used for drinking, irrigation, and industrial processes. Groundwater typically can be described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations. The susceptibility of aquifers to groundwater contamination relates to geology, depth to groundwater, infiltration rates, and solubility of contaminants. Groundwater resources are regulated on the federal level by the USEPA under the Safe Drinking Water Act, 42 USC § 300f et seq. The USEPA’s Sole Source Aquifer Program, authorized by the Safe Drinking Water Act, further protects aquifers that are designated as critical to water supply and makes any proposed federal or federal financially assisted project that has the potential to contaminate the aquifer subject to USEPA review.

Floodplains are areas of low-level ground along rivers, stream channels, or coastal waters that provide a broad area to inundate and temporarily store floodwaters. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body. Floodplains are subject to periodic or infrequent inundation due to rain or melting snow.

Risk of flooding typically hinges on local topography, the frequency of precipitation events, and the size of the watershed above the floodplain. Flood potential is evaluated and mapped by the Federal Emergency Management Agency, which defines the 100-year (regulatory) floodplain. The 100-year floodplain is the area that has a 1 percent chance of inundation by a flood event in a given year. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety.

EO 11988, *Floodplain Management*, provides guidelines that agencies should carry out as part of their decision making on projects that have potential impacts to or within the floodplain. This EO requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

APPENDIX C-6. DEFINITION OF BIOLOGICAL RESOURCES

Biological resources include native or invasive plants and animals, sensitive and protected floral and faunal species, and the habitats, such as wetlands, forests, and grasslands, in which they exist. Habitat can be defined as the resources and conditions in an area that support a defined suite of organisms. The following is a description of the primary federal statutes that form the regulatory framework for the evaluation of biological resources.

Endangered Species Act (ESA). The ESA of 1973 (16 USC § 1531 et seq.) established protection over and conservation of threatened and endangered species and the critical habitat upon which they depend. Sensitive and protected biological resources include plant and animal species listed as threatened, endangered, or special status by the USFWS and the National Marine Fisheries Service. Under the ESA (16 USC § 1536), an “endangered species” is defined as any species in danger of extinction throughout all, or a large portion, of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future. The USFWS maintains a list of species considered to be candidates for possible listing under the ESA. The ESA also allows the designation of geographic areas as critical habitat for threatened or endangered species. Although candidate species receive no statutory protection under the ESA, the USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and may warrant protection under the ESA.

Section 4(a)(3)(B)(i) of the ESA was amended by the National Defense Authorization Act (NDAA) of 2004 to preclude the Secretaries of Interior (USFWS) and Commerce (National Marine Fisheries Service) from designating critical habitat on any lands or other geographical areas owned or controlled by the Department of Defense (DoD), or designated for its use, that are subject to an approved DoD Integrated Natural Resource Management Plan (INRMP) developed under the Sikes Act Improvement Act of 1997 (16 USC §670a), provided that the appropriate Secretaries certify in writing that the INRMP benefits the federally listed species.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act of 1918 makes it unlawful for anyone to take migratory birds or their parts, nests, or eggs unless permitted to do so by regulations. Per the Migratory Bird Treaty Act, “take” is defined as “pursue, hunt, shoot, wound, kill, trap, capture, or collect” (50 CFR 10.12). Migratory birds include nearly all avian species in the US, with the exception of some upland game birds and nonnative species.

EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds,* requires all federal agencies undertaking activities that may negatively impact migratory birds to follow a prescribed set of actions to further implement the Migratory Bird Treaty Act. EO 13186 directs federal agencies to develop a Memorandum of Understanding with the USFWS that promotes the conservation of migratory birds.

The National Defense Authorization Act for fiscal year 2003 (Public Law 107-314, 116 Stat. 2458) provided the Secretary of the Interior with the authority to prescribe regulations to exempt the armed forces from the incidental take of migratory birds during authorized military readiness activities. Congress defined military readiness activities as all training and operations of the US armed forces that relate to combat and the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use.

In December 2017, the US Department of the Interior issued M-Opinion 37050, which concluded that the take of migratory birds from an activity is not prohibited by the Migratory Bird Treaty Act when the underlying purpose of that activity is not the take of a migratory bird. However, Solicitor Opinion M-37050 was revoked and withdrawn on 8 March 2021. On 4 October 2021, the USFWS published a final rule to allow for implementing the MBTA as prohibiting incidental take and applying enforcement discretion, consistent with agency practice prior to 2017.

Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act of 1940 (16 USC § 668-668c) prohibits the “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” “Take” is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb," and “disturb” is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, injury to an eagle, a decrease in productivity by substantially interfering with the eagle’s normal breeding, feeding or sheltering behavior, or nest abandonment by substantially interfering with the eagle’s normal breeding, feeding or sheltering behavior.” The Bald and Golden Eagle Protection Act also prohibits activities around an active or inactive nest site that could result in an adverse impact on the eagle.

APPENDIX C-7. DEFINITION OF CULTURAL RESOURCES

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. These resources are protected and identified under several federal laws and EOs. Cultural resources include the following subcategories:

- Archaeological (i.e., prehistoric or historic sites where human activity has left physical evidence of that activity but no structures remain standing)
- Architectural (i.e., buildings or other structures or groups of structures, or designed landscapes that are of historic or aesthetic significance)
- Traditional cultural properties (resources of traditional, religious, or cultural significance to Native American tribes)

Significant cultural resources are those that have been listed on the National Register of Historic Places (NRHP), or determined to be eligible for listing. To be eligible for the NRHP, properties must be 50 years old and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey their historical significance and meet at least one of four criteria:

- Associated with events that have made a significant contribution to the broad patterns of our history (Criterion A)
- Associated with the lives of persons significant in our past (Criterion B)
- Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C)
- Have yielded or be likely to yield information important in prehistory or history (Criterion D)

Properties that are less than 50 years old can be considered eligible for the NRHP under Criterion Consideration G if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP criteria (A, B, C, or D). The term “historic property” refers to national historic landmarks and to NRHP-listed and NRHP-eligible cultural resources.

Federal laws protecting cultural resources include the Archaeological and Historic Preservation Act of 1960 as amended, the American Indian Religious Freedom Act of 1978, the Archaeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act of 1990, and the NHPA, as amended through 2016, and associated regulations (36 CFR 800). The NHPA requires federal agencies to consider the effects of federal undertakings on historic properties prior to making a decision or taking an action and to integrate historic preservation values into their decision-making process. Federal agencies fulfill this requirement by completing the Section 106 consultation process, as set forth in 36 CFR 800. Section 106 of the NHPA also requires agencies to consult with federally recognized Indian tribes with a vested interest in the undertaking.

Section 106 of the NHPA requires all federal agencies to seek to avoid, minimize, or mitigate adverse effects on these properties (36 CFR 800.1[a]). For cultural resource analysis, the Area of Potential Effect (APE) is used as the Region of Influence (ROI). APE is defined as the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR

800.16[d]), and thereby diminish their historic integrity. The APE for direct effects includes the footprint of the 10 proposed projects composing the Proposed Action (areas of potential direct disturbance), which is provided in Table 3-1 in the EA. For architectural resources, the APE for indirect effects is a 1,000-foot buffer around the Proposed Action areas.

C-7.1 Previous Cultural Resources Investigations

Several archaeological surveys have been conducted on Moody AFB and its associated properties. In 1985 an archaeological survey of 350 acres of the Grand Bay Range focused on areas of high probability and four sites (Wright 1985). The National Park Service (NPS) conducted archaeological investigations over the entirety of Moody AFB (including the Grassy Pond area) in 1986 and recorded one site (NPS 1986). A cultural resources survey of the Grand Bay Ordnance Range at Moody AFB in 1995 surveyed 5,981 acres; 21 sites and 39 isolated finds were recorded (Wright 1995). In 1998 a Phase I survey of 49.5 acres was located south of the base's south gate, east of Bemiss Road; two sites were recorded during this survey (Morgan 1998).

An archaeological survey of approximately 10 percent (350 acres) of the proposed Winnersville Range at Moody AFB (now the Grand Bay Range) focused on areas of high probability and four sites were located: 9LN2, 9LN3, 9LN4, and 9LN5 (Wright 1985). The NPS performed a preliminary cultural resource reconnaissance of Moody AFB and the associated Grassy Pond Recreation Area in May 1986 and recorded one site (9LN6) that was determined to be ineligible for listing on the National Register of Historic Places (NRHP).

Panamerican Consultants Inc. conducted a cultural resources survey of the Grand Bay Ordnance Range and Moody AFB from 1994 to 1995 (Grover et al. 1996). Approximately 3,600 acres were surveyed; 21 sites and 39 isolated finds were recorded. The sites include 9LN4, 9LN12, 9LN13, 9LN14, 9LN15, 9LN16, 9LN17, 9LN18, 9LW51, 9LW52, 9LW62, 9LW63, 9LW64, 9LW65, 9LW66, 9LW67, 9LW68, 9LW69, 9LW70, 9LW71, and 9LW72. Five of these sites were considered potentially eligible for listing on the NRHP (Sites 9LW62, 9LW52, 9LW67, 9LN17, and 9LW71).

In 1998 the Savannah District of the US Army Corps of Engineers contracted a Phase I survey of 49.5 acres of state-owned property given to Moody (Morgan 1998). The property is located south of the base's south gate, east of Bemiss Road. One historic site (Site 9LW73) and one prehistoric isolated find (9LW74) were recorded during this survey. Neither were considered eligible for listing on the NRHP.

In 1998 and 1999 Moody AFB initiated Phase II archaeological testing at Site 9LW71. Panamerican Consultants Inc. conducted the fieldwork. These Phase II investigations were initiated in response to recommendations from the 1995 cultural resources survey. The results of the investigations determined that Sites 9LW70 and 9LW71 are connected and can be considered one site, identified in future contexts as Site 9LW71. Site 9LW71 was identified as being well stratified and multicomponent. Late Paleoindian, Early Archaic, and Woodland components were identified from these investigations. In addition to the prehistoric components, a historic artifact scatter was identified dating to the late 19th and early 20th centuries

associated with navel stores industry. The Phase II investigations determined that Site 9LW71 is recommended eligible for inclusion in the NRHP under Criterion D (Jones et al. 1999).

In 2006, Moody AFB contracted a Phase II investigation of 9LN17 to Geo-Marine and New South Associates through the US Army Corps of Engineers. This investigation determined that Site 9LN17 was ineligible for inclusion in the NRHP (Warhop et al. 2007). Additional Phase II investigations were conducted in 2009 for 9LW63 and 9LW67 through the same contract. Site 9LW63 was determined to be eligible for the NRHP under Criterion D (Warhop et al. 2010) while the results for 9LW67 were inconclusive with additional testing recommended (Warhop and Raymer 2010).

As recommended in the 2006 report conducted by Geo-Marine and New South Associates, additional Phase II testing was conducted in March 2013 to evaluate both 9LW52 and 9LW67 for NRHP eligibility (Schneider et al. 2013). Due to the mixing of components, lack of features, and questionable radiocarbon dates, the contextual integrity at both sites was considered suspect and additional excavations would not reveal any additional research value therefore, both sites were recommended as not eligible for listing on the NRHP.

In 2011, an archaeological investigation of a 25-acre parcel immediately north of the C-130 Ramp was completed as part of the preparation of an EA for the Personnel Recovery Campus Project (Lindemuth and Somers 2011). No archaeological sites were recorded during the survey. One isolated occurrence of a single secondary chert flake was recorded. No additional archaeological work was recommended for the parcel, which has since been purchased by Moody AFB and is part of the installation property.

In 2016, an archaeological investigation of approximately 106 acres of private property southwest of the Moody AFB airfield was completed as part of an EA for the Southwest Land Purchase project (Lowrey 2017). Two isolated archaeological finds were recorded during this investigation. Neither find was recommended as eligible for listing on the NRHP.

To date, archaeological investigations at Moody have located 27 archaeological sites and 43 isolated finds. Two of the 27 archaeological sites (9LW63 and 9LW71) have been determined eligible for the NRHP (Department of the Air Force [DAF] 2024).

From December 2020 to May 2021, Wood Environment & Infrastructure Solutions Inc. (Wood) conducted a Phase I archaeological survey of 3,119 acres on Moody AFB and at the Grassy Pond Recreation Annex (Grassy Pond) (Reynolds et al. 2022). A total of 40 new archaeological sites were identified and recorded. A total of 36 of those sites were recommended as not eligible for the NRHP due to a low density of artifacts, lack of evidence for intact deposits such as features, few to no diagnostic material, or in some cases the presence of extensive modern disturbances to the site. Additional testing was recommended for the four remaining newly recorded sites to determine NRHP eligibility. These four sites, all located at Grassy Pond, included Sites 9LW230, 9LW231, 9LW235, and 9LW237.

C-7.2 Historic Architecture

Moody AFB has completed multiple historic architectural studies to evaluate base facilities constructed through World War II and the Cold War. All base facilities that were at least 50

years of age as of 2018 have been evaluated. The Base Chapel and the Base Water Tower are the only two structures on Moody AFB that have been determined eligible for inclusion on the NRHP.

The first historic facility inventories were conducted by Mariah Associates, Inc., in 1995 and 1997. These inventories documented Cold War era resources for the installation (Lewis et al. 1995; Patterson et al. 1997). Lewis et al.'s 1995 report was a historic context and methodology for assessment of Air Combat Command Cold War material culture.

Patterson et al.'s 1997 report was a baseline inventory of Cold War resources at Moody AFB and included an inventory of 137 Cold War resources. These selections were inventoried based on the importance of the resource to the base, the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. This inventory revealed that no buildings or structures were determined to be significant to the Cold War era. In addition, two records collections relevant to the Cold War history of Moody AFB, including real property records and engineering drawings, were identified as having potential significance.

In 1996 and 1997 Moody AFB consulted with the Georgia Historic Preservation Division (HPD) on the eligibility of several structures where additions and renovations were proposed, including Buildings 701, 609, and 621. The Georgia HPD determined that none of the buildings met the criteria of eligibility for the NRHP.

Moody AFB conducted a comprehensive survey of historic buildings and structures in 1999. This inventory evaluated the historical significance of the buildings, structures, and landscapes at Moody AFB that were over 50 years of age or were associated with the Cold War era. This survey did not include the Grand Bay Weapons Range or the Grassy Pond Recreational Annex. Messick (1999) evaluated 34 buildings and structures 50 years and older, and 189 buildings and structures constructed during the Cold War era (between 1946 and 1989). The only facility on base considered eligible for the NRHP based on Messick's survey was LW-M-3, Building 618, the base water tower. Built in 1941, this is a 200,000–gallon-capacity steel water tower with elevated tank, and it was considered eligible under Criterion A for its association with World War II mobilization and training activities (Messick 1999). The Georgia HPD concurred with the findings of the report, including the eligibility of the water tower.

In 2011, Hersch (2011) evaluated 42 resources for historical significance. Of the 42 resources inventoried, 26 were constructed between ca. 1940 and 1961, with the remaining 16 resources built between 1961 and 1965. All of these resources were recommended ineligible for the NRHP, and the Georgia HPD concurred with those findings.

As part of the EA for the Northeast Training Campus, Moody AFB consulted with the Georgia HPD in 2016 on the eligibility of two structures (Buildings 1500 and 1501). Although these facilities had previously been determined to not be eligible for listing on the NRHP based on Cold War-era criteria, they were reevaluated for historical significance based on local and state criteria (Scherer 2015). The Georgia SHPO concurred with the installation's finding that these two facilities were not eligible for listing on the NRHP based on these criteria.

In 2016, Moody AFB consulted with the Georgia HPD on the eligibility of several structures where additions and renovations were proposed. Buildings 325, 328, 621, 658, 704, 753, 785, and 901 were constructed between 1954 and 1970, and were assessed as though over 50

years of age using the four primary NRHP criteria. None of these facilities were recommended as eligible for listing on the NRHP because they lacked a significant and direct association with any of the themes for significance and because several lacked material integrity and integrity of association and feel (Amec Foster Wheeler Environment & Infrastructure Inc., 2016).

In support of the Moody Installation Development Plan EA (Moody AFB 2018), the base conducted an inventory and evaluation of all facilities and structures to consider Cold War era significance under Criterion G, and reevaluate Cold War era facilities that had reached 45 years of age for historical significance under Criteria A-D (Reed et al. 2017). This survey included facilities and structures on Moody AFB, Grand Bay Weapons Range, the Grassy Pond Recreational Annex, and the Stockton NEXRAD Radar Site. A total of 210 buildings and structures were proposed for evaluation during this effort, which determined that 25 of the facilities are no longer extant. Of the 185 extant facilities evaluated, only one facility, Building 110, the Base Chapel, was recommended as eligible to the NRHP under Criterion C in the area of architecture. In coordination with the Georgia SHPO, and addendum was executed that evaluated the potential for any historic districts on the installation. Areas studied included the AFB's main cantonment, flight line, munitions storage, CATM/Explosive Ordnance Disposal, 820 BDG, and Grassy Pond military recreation area. The addendum concluded that due to the continual pace of construction and refurbishment on the installation that there were no historic districts located at Moody AFB due to the "continual pace of construction and refurbishment" (DAF 2024:48). In addition, consultation with the SHPO concluded that both NRHP-eligible structures (water tower and chapel) had lost integrity of setting due to the ongoing demolition and new construction at the installation (DAF 2024:48). Georgia SHPO site forms were completed for all evaluated facilities and were submitted to the SHPO with the final report. The SHPO concurred with the findings by letter on 6 November 2017.

APPENDIX C-8. DEFINITION OF INFRASTRUCTURE

Infrastructure consists of the systems and structures that enable a population in a specified area to function. Infrastructure is wholly human made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as developed. The availability of infrastructure and its capacity to support more users and residential and commercial expansion are generally regarded as essential to the economic growth of an area.

The infrastructure components include transportation, utilities, and solid waste management. Transportation is defined as the system of roadways, highways, and transit services that are in the vicinity of the installation and could be reasonably expected to be potentially affected by the Proposed Action. Utilities include electrical, natural gas, liquid fuel, water supply, sanitary sewage/wastewater, and communications systems. Solid waste management primarily relates to the availability of landfills to support a population's residential, commercial, and industrial needs.

APPENDIX C-9. DEFINITION OF HAZARDOUS MATERIALS AND WASTES, ENVIRONMENTAL RESTORATION PROGRAM, AND TOXIC SUBSTANCES

Hazardous Materials and Wastes. The Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act and the Toxic Substances Control Act, defines hazardous materials.

Hazardous materials are defined as any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that might cause an increase in mortality, serious irreversible illness, or incapacitating reversible illness, or that might pose a substantial threat to human health or the environment. Occupational Safety and Health Administration (OSHA) is responsible for enforcement and implementation of federal laws and regulations pertaining to worker health and safety under 29 CFR 1910. OSHA also includes the regulation of hazardous materials in the workplace and ensures appropriate training in their handling.

The Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (RCRA), which was further amended by the Hazardous and Solid Waste amendments, defines hazardous wastes. Hazardous waste is defined as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes, that pose a substantial present or potential hazard to human health or the environment. In general, both hazardous materials and hazardous wastes include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, might present substantial danger to public health and welfare or the environment when released or otherwise improperly managed.

Air Force Policy Directive 32-70 establishes the policy that the DAF is committed to the following:

- Cleaning up environmental damage resulting from its past activities
- Meeting all environmental standards applicable to its present operations
- Planning its future activities to minimize environmental impacts
- Responsibly managing the irreplaceable natural and cultural resources it holds in public trust
- Eliminating pollution from its activities wherever possible

Air Force Manual (AFMAN) 31-1067, *Water and Fuel Systems*, implements Air Force Policy Directive 32-70 and identifies compliance requirements for underground storage tanks (USTs), and aboveground storage tanks (ASTs), and associated piping that store petroleum products and hazardous substances. Evaluation of hazardous materials and hazardous wastes focuses on USTs and ASTs, as well as the storage, transport, and use of pesticides, fuels, oils, and lubricants. Evaluation might also extend to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site of a proposed action. In addition to being a threat to humans, the improper release of hazardous materials and hazardous wastes can threaten the health and well-being of wildlife species, botanical habitats, soil systems, and water resources. In the event of release of hazardous materials or hazardous wastes, the extent of contamination varies based on type of soil, topography, weather conditions, and water resources.

AFMAN 32-7002, *Environmental Compliance and Pollution Prevention*, establishes procedures and standards that govern management of hazardous materials throughout the Air Force. It applies to all Air Force personnel who authorize, procure, issue, use, or dispose of hazardous materials, and to those who manage, monitor, or track any of those activities.

Through the Environmental Restoration Program (ERP) initiated in 1980, a subcomponent of the Defense ERP that became law under the Superfund Amendments and Reauthorization Act (formerly the Installation Restoration Program), each DoD installation is required to identify, investigate, and clean up hazardous waste disposal or release sites. Remedial activities for ERP sites follow the Hazardous and Solid Waste Amendment of 1984 under the Resource Conservation and Recovery Act Corrective Action Program. The ERP provides a uniform, thorough methodology to evaluate past disposal sites, control the migration of contaminants, minimize potential hazards to human health and the environment, and clean up contamination through a series of stages until it is decided that no further remedial action is warranted.

The description of ERP activities provides a useful gauge of the condition of soils, water resources, and other resources that might be affected by contaminants. It also aids in identification of properties and their usefulness for given purposes (e.g., to complete remediation, activities that are dependent on groundwater usage might be foreclosed where a groundwater contaminant plume remains).

Toxic substances might pose a risk to human health but are not regulated as contaminants under the hazardous waste statutes. Included in this category are asbestos-containing materials (ACMs), lead-based paint (LBP), radon, and polychlorinated biphenyls (PCBs). The presence of special hazards or controls over them might affect, or be affected by, a proposed action. Information on special hazards describing their locations, quantities, and condition assists in determining the significance of a proposed action.

Asbestos. AFI 32-1001, *Civil Engineer Operations*, provides the direction for asbestos management at Air Force installations. This instruction incorporates by reference applicable requirements of 29 CFR 669 et seq., 29 CFR 1910.1025, 29 CFR 1926.58, 40 CFR 61.3.80, Section 112 of the Clean Air Act, and other applicable AFIs and DoD directives. AFI 32-1052 requires bases to develop an Asbestos Management Plan to maintain a permanent record of the status and condition of ACMs in installation facilities, as well as documenting asbestos management efforts. In addition, the instruction requires installations to develop an Asbestos Operating Plan detailing how the installation accomplishes asbestos-related projects. Asbestos is regulated by the USEPA with the authority promulgated under OSHA, 29 USC § 669 et seq. Section 112 of the Clean Air Act regulates emissions of asbestos fibers to ambient air. USEPA policy is to leave asbestos in place if disturbance or removal could pose a health threat.

Lead-Based Paint. Human exposure to lead has been determined to be an adverse health risk by agencies such as OSHA and the USEPA. Sources of exposure to lead are dust, soils, and paint. In 1973, the Consumer Product Safety Commission established a maximum lead content in paint of 0.5 percent by weight in a dry film of newly applied paint. In 1978, under the Consumer Product Safety Act (Public Law 101-608, as implemented by 16 CFR 1303), the Consumer Product Safety Commission lowered the allowable lead level in paint to 0.06 percent (600 parts per million [ppm]). The act also restricted the use of LBP in nonindustrial facilities. The DoD implemented a ban of LBP use in 1978; therefore, it is possible that facilities constructed prior to or during 1978 may contain LBP.

Radon. The US Surgeon General defines radon as an invisible, odorless, and tasteless gas, with no immediate health symptoms, that comes from the breakdown of naturally occurring uranium inside the earth (US Surgeon General 2005). Radon that is present in soil can enter a building through small spaces and openings, accumulating in enclosed areas such as basements. No federal or state standards are in place to regulate residential radon exposure at the present time, but guidelines were developed. Although 4.0 picocuries per liter (pCi/L) is considered an "action" limit, any reading over 2 pCi/L qualifies as a "consider action" limit. The USEPA and the US Surgeon General have evaluated the radon potential around the country to organize and assist building code officials in deciding whether radon-resistant features are applicable in new construction. Radon zones can range from 1 (high) to 3 (low).

Polychlorinated Biphenyls. Moody AFB has been PCB free since 1991. This resource is not discussed further.

APPENDIX C-10. DEFINITION OF SOCIOECONOMICS

Socioeconomics is the relationship between economics and social elements, such as population levels and economic activity. Several factors can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region.

APPENDIX C-11. DEFINITION OF HEALTH AND SAFETY

A safe environment is necessary to prevent or reduce the potential for death, serious injury and illness, or property damage. Safety and human health issues address workers safety and health during construction, as well as employee safety during the daily operations of the facilities. The OSHA's program purpose is to protect personnel from occupational deaths, injuries, or illnesses; OSHA safety guidance published in the Department of Labor 29 series CFR governs general safety requirements relating to general industry practices (Section 1910), construction (Section 1926), and elements for federal employees (Section 1960). These standards include guidance for entry into areas in which a hazard may exist.

AFI 91-202, *Air Force Mishap Prevention Program*, and AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, implement Air Force Policy Directive 91-2, *Safety Programs.* AFI 91-202 establishes mishap prevention program requirements, assigns responsibilities for program elements, and contains program management information. The purpose of the Air Force Mishap Prevention Program is to minimize loss of Air Force resources and to protect Air Force personnel from occupational deaths, injuries, or occupational illnesses by managing risks on and off duty. AFI 91-203 consolidates all Air Force Occupational Safety and Health standards and defines the Air Force's minimum safety, fire protection, and occupational health standards, and assigns responsibilities to individuals or functions to help Commanders manage

their safety and health programs to ensure they comply with OSHA and Air Force guidance. These instructions apply to all Air Force activities.

APPENDIX C-12. APPENDIX C REFERENCES

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APPENDIX D. AIR QUALITY MODELING RESULTS

FORMAT PAGE

D.1 ACAM SUMMARY REPORTS – ALTERNATIVE 1

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

Report generated with ACAM version: 5.0.23a

a. Action Location:
Base: MOODY AFB
State: Georgia
County(s): Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: ENVIRONMENTAL ASSESSMENT FOR FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION - MOODY AIR FORCE BASE, GEORGIA

c. Project Number/s (if applicable): n/a

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes 10 facility and infrastructure construction, demolition, and modernization projects to be performed within approximately the next five years (Fiscal Year 2025 through Fiscal Year 2030).

The Proposed Action consists of the following proposed project alternatives:

Project 1: Guardian Angel Facility Construction and Renovation, (Two Alternatives);
Project 2: Aircraft Fire Training Facility Improvements, (Two Alternatives);
Project 3: Gate Overwatch Position Construction, (One Alternative);
Project 4: aerospace Ground Equipment Facility Construction and Demolition, (Two Alternatives);
Project 5: Burma Road Realignment, (One Alternative);
Project 6: 38th Rescue Squadron Parking Lot Construction, (One Alternatives);
Project 7: Airfield Stormwater Repair and Replacement, (One Alternative);
Project 8: Mission Lake Water Barrier and Stone Road Repairs, (Three Alternatives);
Project 9: Boundary Fence Repair, (Three Alternatives); and
Project 10: Building Demolition (One Alternative).
Each project is independent of the others. The DAF could choose to implement all, none, or any combination of these projects.

f. Point of Contact:
Name: Radhika Narayanan
Title: Air Quality Scientist
Organization: Versar Global Solutions
Email: rnarayanan@versar.com
Phone Number: -

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the GCR are:

____ applicable
__X__ not applicable

Total reasonably foreseeable net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving "steady state" (no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the *USAF Air Emissions Guide for Air Force Stationary Sources*, the *USAF Air Emissions Guide for Air Force Mobile Sources*, and the *USAF Air Emissions Guide for Air Force Transitory Sources*.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of the proposed Action's potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (not exceeding any National Ambient Air Quality Standard (NAAQS)). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators and are summarized below.

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.619	250	No
NOx	8.753	250	No
CO	11.381	250	No
SOx	0.018	250	No
PM 10	30.858	250	No
PM 2.5	0.315	250	No
Pb	0.000	25	No
NH3	0.034	250	No

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.045	250	No
NOx	0.662	250	No
CO	0.548	250	No
SOx	0.013	250	No
PM 10	0.057	250	No
PM 2.5	0.057	250	No
Pb	0.000	25	No
NH3	0.000	250	No

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.045	250	No
NOx	0.662	250	No
CO	0.548	250	No
SOx	0.013	250	No
PM 10	0.057	250	No
PM 2.5	0.057	250	No
Pb	0.000	25	No
NH3	0.000	250	No

None of the estimated annual net emissions associated with this action are above the insignificance indicators; therefore, the action will not cause or contribute to an exceedance of one or more NAAQS and will have an insignificant impact on air quality. No further air assessment is needed.

Radhika Narayanan, Air Quality Scientist May 10 2024

Name, Title **Date**

D.2 ACAM SUMMARY REPORTS – ALTERNATIVE 2

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

Report generated with ACAM version: 5.0.23a

a. Action Location:
Base: MOODY AFB
State: Georgia
County(s): Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: ENVIRONMENTAL ASSESSMENT FOR FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION - MOODY AIR FORCE BASE, GEORGIA

c. Project Number/s (if applicable): n/a

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes 10 facility and infrastructure construction, demolition, and modernization projects to be performed within approximately the next five years (Fiscal Year 2025 through Fiscal Year 2030).

The Proposed Action consists of the following proposed project alternatives:

Project 1: Guardian Angel Facility Construction and Renovation, (Two Alternatives);
Project 2: Aircraft Fire Training Facility Improvements, (Two Alternatives);
Project 3: Gate Overwatch Position Construction, (One Alternative);
Project 4: aerospace Ground Equipment Facility Construction and Demolition, (Two Alternatives);
Project 5: Burma Road Realignment, (One Alternative);
Project 6: 38th Rescue Squadron Parking Lot Construction, (One Alternatives);
Project 7: Airfield Stormwater Repair and Replacement, (One Alternative);
Project 8: Mission Lake Water Barrier and Stone Road Repairs, (Three Alternatives);
Project 9: Boundary Fence Repair, (Three Alternatives); and
Project 10: Building Demolition (One Alternative).
Each project is independent of the others. The DAF could choose to implement all, none, or any combination of these projects.

f. Point of Contact:

Name: Radhika Narayanan
Title: Air Quality Scientist
Organization: Versar Global Solutions
Email: rnarayanan@versar.com
Phone Number: -

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the GCR are:

____ applicable
_X_ not applicable

Total reasonably foreseeable net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving “steady state” (no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the *USAF Air Emissions Guide for Air Force Stationary Sources*, the *USAF Air Emissions Guide for Air Force Mobile Sources*, and the *USAF Air Emissions Guide for Air Force Transitory Sources*.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of the proposed Action’s potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (not exceeding any National Ambient Air Quality Standard (NAAQS)). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action’s net emissions for every year through achieving steady state were compared against the Insignificance Indicators and are summarized below.

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.452	250	No
NOx	7.837	250	No

CO	10.119	250	No
SOx	0.016	250	No
PM 10	22.031	250	No
PM 2.5	0.287	250	No
Pb	0.000	25	No
NH3	0.028	250	No

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.045	250	No
NOx	0.659	250	No
CO	0.545	250	No
SOx	0.013	250	No
PM 10	0.057	250	No
PM 2.5	0.057	250	No
Pb	0.000	25	No
NH3	0.000	250	No

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.045	250	No
NOx	0.659	250	No
CO	0.545	250	No
SOx	0.013	250	No
PM 10	0.057	250	No
PM 2.5	0.057	250	No
Pb	0.000	25	No
NH3	0.000	250	No

None of the estimated annual net emissions associated with this action are above the insignificance indicators; therefore, the action will not cause or contribute to an exceedance of one or more NAAQS and will have an insignificant impact on air quality. No further air assessment is needed.

Radhika Narayanan, Air Quality Scientist — May 10 2024

Name, Title — **Date**

D.3 ACAM SUMMARY REPORTS – ALTERNATIVE 3

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

Report generated with ACAM version: 5.0.23a

a. Action Location:
Base: MOODY AFB
State: Georgia
County(s): Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: ENVIRONMENTAL ASSESSMENT FOR FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION - MOODY AIR FORCE BASE, GEORGIA

c. Project Number/s (if applicable): n/a

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes 10 facility and infrastructure construction, demolition, and modernization projects to be performed within approximately the next five years (Fiscal Year 2025 through Fiscal Year 2030).

The Proposed Action consists of the following proposed project alternatives:

Project 1: Guardian Angel Facility Construction and Renovation, (Two Alternatives);
Project 2: Aircraft Fire Training Facility Improvements, (Two Alternatives);
Project 3: Gate Overwatch Position Construction, (One Alternative);
Project 4: aerospace Ground Equipment Facility Construction and Demolition, (Two Alternatives);
Project 5: Burma Road Realignment, (One Alternative);
Project 6: 38th Rescue Squadron Parking Lot Construction, (One Alternatives);
Project 7: Airfield Stormwater Repair and Replacement, (One Alternative);
Project 8: Mission Lake Water Barrier and Stone Road Repairs, (Three Alternatives);
Project 9: Boundary Fence Repair, (Three Alternatives); and
Project 10: Building Demolition (One Alternative).
Each project is independent of the others. The DAF could choose to implement all, none, or any combination of these projects.

f. Point of Contact:
Name: Radhika Narayanan
Title: Air Quality Scientist
Organization: Versar Global Solutions
Email: rnarayanan@versar.com
Phone Number: -

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the GCR are:

____ applicable
__X__ not applicable

Total reasonably foreseeable net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving “steady state” (no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the *USAF Air Emissions Guide for Air Force Stationary Sources*, the *USAF Air Emissions Guide for Air Force Mobile Sources*, and the *USAF Air Emissions Guide for Air Force Transitory Sources*.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of the proposed Action's potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (not exceeding any National Ambient Air Quality Standard (NAAQS)). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators and are summarized below.

Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	4.745	250	No
NOx	9.776	250	No
CO	12.525	250	No
SOx	0.020	250	No
PM 10	26.838	250	No
PM 2.5	0.355	250	No
Pb	0.000	25	No
NH3	0.035	250	No

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.045	250	No
NOx	0.662	250	No
CO	0.548	250	No
SOx	0.013	250	No
PM 10	0.057	250	No
PM 2.5	0.057	250	No
Pb	0.000	25	No
NH3	0.000	250	No

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.045	250	No
NOx	0.662	250	No
CO	0.548	250	No
SOx	0.013	250	No
PM 10	0.057	250	No
PM 2.5	0.057	250	No
Pb	0.000	25	No

NH3	0.000	250	No

None of the estimated annual net emissions associated with this action are above the insignificance indicators; therefore, the action will not cause or contribute to an exceedance of one or more NAAQS and will have an insignificant impact on air quality. No further air assessment is needed.

Radhika Narayanan, Air Quality Scientist May 10 2024

Name, Title **Date**

D.4 ACAM GHG REPORT – ALTERNATIVE 1

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to estimate GHG emissions. The analysis was performed in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide. This report provides a summary of GHG emissions analysis.

Report generated with ACAM version: 5.0.23a

a. Action Location:
Base: MOODY AFB
State: Georgia
County(s): Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: ENVIRONMENTAL ASSESSMENT FOR FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION - MOODY AIR FORCE BASE, GEORGIA

c. Project Number/s (if applicable): n/a

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes 10 facility and infrastructure construction, demolition, and modernization projects to be performed within approximately the next five years (Fiscal Year 2025 through Fiscal Year 2030).

The Proposed Action consists of the following proposed project alternatives:

Project 1: Guardian Angel Facility Construction and Renovation, (Two Alternatives);
Project 2: Aircraft Fire Training Facility Improvements, (Two Alternatives);
Project 3: Gate Overwatch Position Construction, (One Alternative);
Project 4: aerospace Ground Equipment Facility Construction and Demolition, (Two Alternatives);
Project 5: Burma Road Realignment, (One Alternative);
Project 6: 38th Rescue Squadron Parking Lot Construction, (One Alternatives);
Project 7: Airfield Stormwater Repair and Replacement, (One Alternative);
Project 8: Mission Lake Water Barrier and Stone Road Repairs, (Three Alternatives);
Project 9: Boundary Fence Repair, (Three Alternatives); and
Project 10: Building Demolition (One Alternative).
Each project is independent of the others. The DAF could choose to implement all, none, or any combination of these projects.

f. Point of Contact:
Name: Radhika Narayanan
Title: Air Quality Scientist
Organization: Versar Global Solutions
Email: rnarayanan@versar.com
Phone Number: -

2. Analysis: Total combined direct and indirect GHG emissions associated with the action were estimated through ACAM on a calendar-year basis from the action start through the expected life cycle of the action. The life

cycle for Air Force actions with "steady state" emissions (SS, net gain/loss in emission stabilized and the action is fully implemented) is assumed to be 10 years beyond the SS emissions year or 20 years beyond SS emissions year for aircraft operations related actions.

GHG Emissions Analysis Summary:

GHGs produced by fossil-fuel combustion are primarily carbon dioxide (CO2), methane (CH4), and nitrous oxide (NO2). These three GHGs represent more than 97 percent of all U.S. GHG emissions. Emissions of GHGs are typically quantified and regulated in units of CO2 equivalents (CO2e). The CO2e takes into account the global warming potential (GWP) of each GHG. The GWP is the measure of a particular GHG's ability to absorb solar radiation as well as its residence time within the atmosphere. The GWP allows comparison of global warming impacts between different gases. All GHG emissions estimates were derived from various emission sources using the methods, algorithms, emission factors, and GWPs from the most current Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and/or Air Emissions Guide for Air Force Transitory Sources.

The Air Force has adopted the Prevention of Significant Deterioration (PSD) threshold for GHG of 75,000 ton per year (ton/yr) of CO2e (or 68,039 metric ton per year, mton/yr) as an indicator or "threshold of insignificance" for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant (de minimis, too trivial or minor to merit consideration). Actions with a net change in GHG (CO2e) emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Note that actions with a net change in GHG (CO2e) emissions above the insignificance indicator (threshold) are only considered potentially significant and require further assessment to determine if the action poses a significant impact. For further detail on insignificance indicators see Level II, Air Quality Quantitative Assessment, Insignificance Indicators (April 2023).

The following table summarizes the action-related GHG emissions on a calendar-year basis through the projected life cycle of the action.

Action-Related Annual GHG Emissions (mton/yr)						
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**	**Threshold**	**Exceedance**
2025	1,868	0.07005062	0.04978992	1,885	68,039	No
2026	675	0.01279774	0.01266165	676	68,039	No
2027 [SS Year]	675	0.01279774	0.01266165	676	68,039	No
2028	675	0.01279774	0.01266165	676	68,039	No
2029	675	0.01279774	0.01266165	676	68,039	No
2030	675	0.01279774	0.01266165	676	68,039	No
2031	675	0.01279774	0.01266165	676	68,039	No
2032	675	0.01279774	0.01266165	676	68,039	No
2033	675	0.01279774	0.01266165	676	68,039	No
2034	675	0.01279774	0.01266165	676	68,039	No
2035	675	0.01279774	0.01266165	676	68,039	No
2036	675	0.01279774	0.01266165	676	68,039	No
2037	675	0.01279774	0.01266165	676	68,039	No

The following U.S. and State's GHG emissions estimates (next two tables) are based on a five-year average (2016 through 2020) of individual state-reported GHG emissions (Reference: State Climate Summaries 2022, NOAA National Centers for Environmental Information, National Oceanic and Atmospheric Administration. https://statesummaries.ncics.org/downloads/).

State's Annual GHG Emissions (mton/yr)				
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**
2025	134,190,406	447,000	21,205	134,658,611

2026	134,190,406	447,000	21,205	134,658,611
2027 [SS Year]	134,190,406	447,000	21,205	134,658,611
2028	134,190,406	447,000	21,205	134,658,611
2029	134,190,406	447,000	21,205	134,658,611
2030	134,190,406	447,000	21,205	134,658,611
2031	134,190,406	447,000	21,205	134,658,611
2032	134,190,406	447,000	21,205	134,658,611
2033	134,190,406	447,000	21,205	134,658,611
2034	134,190,406	447,000	21,205	134,658,611
2035	134,190,406	447,000	21,205	134,658,611
2036	134,190,406	447,000	21,205	134,658,611
2037	134,190,406	447,000	21,205	134,658,611

U.S. Annual GHG Emissions (mton/yr)				
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**
2025	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2026	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2027 [SS Year]	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2028	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2029	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2030	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2031	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2032	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2033	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2034	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2035	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2036	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2037	5,136,454,179	25,626,912	1,500,708	5,163,581,798

GHG Relative Significance Assessment:

A Relative Significance Assessment uses the rule of reason and the concept of proportionality along with the consideration of the affected area (global, national, and regional) and the degree (intensity) of the proposed action's effects. The Relative Significance Assessment provides real-world context and allows for a reasoned choice against alternatives through a relative comparison analysis. The analysis weighs each alternative's annual net change in GHG emissions proportionally against (or relative to) global, national, and regional emissions.

The action's surroundings, circumstances, environment, and background (context associated with an action) provide the setting for evaluating the GHG intensity (impact significance). From an air quality perspective, context of an action is the local area's ambient air quality relative to meeting the NAAQS, expressed as attainment, nonattainment, or maintenance areas (this designation is considered the attainment status). GHGs are non-hazardous to health at normal ambient concentrations and, at a cumulative global scale, action-related GHG emissions can only potentially cause warming of the climatic system. Therefore, the action-related GHGs generally have an insignificant impact to local air quality.

However, the affected area (context) of GHG is global. Therefore, the intensity or degree of the proposed action's GHG effects are gauged through the quantity of GHG associated with the action as compared to a baseline of the state, U.S., and global GHG inventories. Each action (or alternative) has significance, based on their annual net change in GHG emissions, in relation to or proportionally to the global, national, and regional annual GHG emissions.

To provide real-world context to the GHG effects on a global scale, an action's net change in GHG emissions is compared relative to the state (where action will occur) and U.S. annual emissions. The following table provides a

relative comparison of an action's net change in GHG emissions vs. state and U.S. projected GHG emissions for the same time period.

Total GHG Relative Significance (mton)					
		CO2	CH4	N2O	CO2e
2025-2037	State Total	1,744,475,272	5,810,999	275,667	1,750,561,938
2025-2037	U.S. Total	66,773,904,327	333,149,852	19,509,199	67,126,563,378
2025-2037	Action	9,966	0.223623	0.20173	9,999
Percent of State Totals		0.00057129%	0.00000385%	0.00007318%	0.00057118%
Percent of U.S. Totals		0.00001493%	0.00000007%	0.00000103%	0.00001490%

From a global context, the action's total GHG percentage of total global GHG for the same time period is: 0.00000200%.*

* Global value based on the U.S. emits 13.4% of all global GHG annual emissions (2018 Emissions Data, Center for Climate and Energy Solutions, accessed 7-6-2023, https://www.c2es.org/content/international-emissions).

Radhika Narayanan, Air Quality Scientist May 10 2024

Name, Title **Date**

D.5 ACAM GHG REPORT – ALTERNATIVE 2

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to estimate GHG emissions associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide. This report provides a summary of GHG emissions analysis.

Report generated with ACAM version: 5.0.23a

a. Action Location:
Base: MOODY AFB
State: Georgia
County(s): Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: ENVIRONMENTAL ASSESSMENT FOR FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION - MOODY AIR FORCE BASE, GEORGIA

c. Project Number/s (if applicable): n/a

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes 10 facility and infrastructure construction, demolition, and modernization projects to be performed within approximately the next five years (Fiscal Year 2025 through Fiscal Year 2030).

The Proposed Action consists of the following proposed project alternatives:

Project 1: Guardian Angel Facility Construction and Renovation, (Two Alternatives);
Project 2: Aircraft Fire Training Facility Improvements, (Two Alternatives);
Project 3: Gate Overwatch Position Construction, (One Alternative);
Project 4: aerospace Ground Equipment Facility Construction and Demolition, (Two Alternatives);
Project 5: Burma Road Realignment, (One Alternative);
Project 6: 38th Rescue Squadron Parking Lot Construction, (One Alternatives);
Project 7: Airfield Stormwater Repair and Replacement, (One Alternative);
Project 8: Mission Lake Water Barrier and Stone Road Repairs, (Three Alternatives);
Project 9: Boundary Fence Repair, (Three Alternatives); and
Project 10: Building Demolition (One Alternative).
Each project is independent of the others. The DAF could choose to implement all, none, or any combination of these projects.

f. Point of Contact:
Name: Radhika Narayanan
Title: Air Quality Scientist
Organization: Versar Global Solutions
Email: rnarayanan@versar.com
Phone Number: -

2. Analysis: Total combined direct and indirect GHG emissions associated with the action were estimated through ACAM on a calendar-year basis from the action start through the expected life cycle of the action. The life

cycle for Air Force actions with "steady state" emissions (SS, net gain/loss in emission stabilized and the action is fully implemented) is assumed to be 10 years beyond the SS emissions year or 20 years beyond SS emissions year for aircraft operations related actions.

GHG Emissions Analysis Summary:

GHGs produced by fossil-fuel combustion are primarily carbon dioxide (CO2), methane (CH4), and nitrous oxide (NO2). These three GHGs represent more than 97 percent of all U.S. GHG emissions. Emissions of GHGs are typically quantified and regulated in units of CO2 equivalents (CO2e). The CO2e takes into account the global warming potential (GWP) of each GHG. The GWP is the measure of a particular GHG's ability to absorb solar radiation as well as its residence time within the atmosphere. The GWP allows comparison of global warming impacts between different gases; the higher the GWP. All GHG emissions estimates were derived from various emission sources using the methods, algorithms, emission factors, and GWPs from the most current Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and/or Air Emissions Guide for Air Force Transitory Sources.

The Air Force has adopted the Prevention of Significant Deterioration (PSD) threshold for GHG of 75,000 ton per year (ton/yr) of CO2e (or 68,039 metric ton per year, mton/yr) as an indicator or "threshold of insignificance" for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant (de minimis, too trivial or minor to merit consideration). Actions with a net change in GHG (CO2e) emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Note that actions with a net change in GHG (CO2e) emissions above the insignificance indicator (threshold) are only considered potentially significant and require further assessment to determine if the action poses a significant impact. For further detail on insignificance indicators see Level II, Air Quality Quantitative Assessment, Insignificance Indicators (April 2023).

The following table summarizes the action-related GHG emissions on a calendar-year basis through the projected life cycle of the action.

Action-Related Annual GHG Emissions (mton/yr)						
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**	**Threshold**	**Exceedance**
2025	1,649	0.06228418	0.04121585	1,663	68,039	No
2026	671	0.01272046	0.01258437	672	68,039	No
2027 [SS Year]	671	0.01272046	0.01258437	672	68,039	No
2028	671	0.01272046	0.01258437	672	68,039	No
2029	671	0.01272046	0.01258437	672	68,039	No
2030	671	0.01272046	0.01258437	672	68,039	No
2031	671	0.01272046	0.01258437	672	68,039	No
2032	671	0.01272046	0.01258437	672	68,039	No
2033	671	0.01272046	0.01258437	672	68,039	No
2034	671	0.01272046	0.01258437	672	68,039	No
2035	671	0.01272046	0.01258437	672	68,039	No
2036	671	0.01272046	0.01258437	672	68,039	No
2037	671	0.01272046	0.01258437	672	68,039	No

The following U.S. and State's GHG emissions estimates (next two tables) are based on a five-year average (2016 through 2020) of individual state-reported GHG emissions (Reference: State Climate Summaries 2022, NOAA National Centers for Environmental Information, National Oceanic and Atmospheric Administration. https://statesummaries.ncics.org/downloads/).

State's Annual GHG Emissions (mton/yr)				
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**
2025	134,190,406	447,000	21,205	134,658,611

2026	134,190,406	447,000	21,205	134,658,611
2027 [SS Year]	134,190,406	447,000	21,205	134,658,611
2028	134,190,406	447,000	21,205	134,658,611
2029	134,190,406	447,000	21,205	134,658,611
2030	134,190,406	447,000	21,205	134,658,611
2031	134,190,406	447,000	21,205	134,658,611
2032	134,190,406	447,000	21,205	134,658,611
2033	134,190,406	447,000	21,205	134,658,611
2034	134,190,406	447,000	21,205	134,658,611
2035	134,190,406	447,000	21,205	134,658,611
2036	134,190,406	447,000	21,205	134,658,611
2037	134,190,406	447,000	21,205	134,658,611

U.S. Annual GHG Emissions (mton/yr)				
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**
2025	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2026	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2027 [SS Year]	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2028	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2029	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2030	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2031	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2032	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2033	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2034	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2035	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2036	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2037	5,136,454,179	25,626,912	1,500,708	5,163,581,798

GHG Relative Significance Assessment:

A Relative Significance Assessment uses the rule of reason and the concept of proportionality along with the consideration of the affected area (global, national, and regional) and the degree (intensity) of the proposed action's effects. The Relative Significance Assessment provides real-world context and allows for a reasoned choice against alternatives through a relative comparison analysis. The analysis weighs each alternative's annual net change in GHG emissions proportionally against (or relative to) global, national, and regional emissions.

The action's surroundings, circumstances, environment, and background (context associated with an action) provide the setting for evaluating the GHG intensity (impact significance). From an air quality perspective, context of an action is the local area's ambient air quality relative to meeting the NAAQS, expressed as attainment, nonattainment, or maintenance areas (this designation is considered the attainment status). GHGs are non-hazardous to health at normal ambient concentrations and, at a cumulative global scale, action-related GHG emissions can only potentially cause warming of the climatic system. Therefore, the action-related GHGs generally have an insignificant impact to local air quality.

However, the affected area (context) of GHG is global. Therefore, the intensity or degree of the proposed action's GHG effects are gauged through the quantity of GHG associated with the action as compared to a baseline of the state, U.S., and global GHG inventories. Each action (or alternative) has significance, based on their annual net change in GHG emissions, in relation to or proportionally to the global, national, and regional annual GHG emissions.

To provide real-world context to the GHG effects on a global scale, an action's net change in GHG emissions is compared relative to the state (where action will occur) and U.S. annual emissions. The following table provides a

relative comparison of an action's net change in GHG emissions vs. state and U.S. projected GHG emissions for the same time period.

Total GHG Relative Significance (mton)					
		CO2	**CH4**	**N2O**	**CO2e**
2025-2037	State Total	1,744,475,272	5,810,999	275,667	1,750,561,938
2025-2037	U.S. Total	66,773,904,327	333,149,852	19,509,199	67,126,563,378
2025-2037	Action	9,697	0.21493	0.192228	9,727
Percent of State Totals		0.00055589%	0.00000370%	0.00006973%	0.00055567%
Percent of U.S. Totals		0.00001452%	0.00000006%	0.00000099%	0.00001449%

From a global context, the action's total GHG percentage of total global GHG for the same time period is: 0.00000194%.*

* Global value based on the U.S. emits 13.4% of all global GHG annual emissions (2018 Emissions Data, Center for Climate and Energy Solutions, accessed 7-6-2023, https://www.c2es.org/content/international-emissions).

Radhika Narayanan, Air Quality Scientist May 10 2024

Name, Title **Date**

D.6 ACAM GHG REPORT – ALTERNATIVE 3

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to estimate GHG emissions associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide. This report provides a summary of GHG emissions analysis.

Report generated with ACAM version: 5.0.23a

a. Action Location:
Base: MOODY AFB
State: Georgia
County(s): Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: ENVIRONMENTAL ASSESSMENT FOR FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION - MOODY AIR FORCE BASE, GEORGIA

c. Project Number/s (if applicable): n/a

d. Projected Action Start Date: 1 / 2025

e. Action Description:

The Proposed Action includes 10 facility and infrastructure construction, demolition, and modernization projects to be performed within approximately the next five years (Fiscal Year 2025 through Fiscal Year 2030).

The Proposed Action consists of the following proposed project alternatives:

Project 1: Guardian Angel Facility Construction and Renovation, (Two Alternatives);
Project 2: Aircraft Fire Training Facility Improvements, (Two Alternatives);
Project 3: Gate Overwatch Position Construction, (One Alternative);
Project 4: aerospace Ground Equipment Facility Construction and Demolition, (Two Alternatives);
Project 5: Burma Road Realignment, (One Alternative);
Project 6: 38th Rescue Squadron Parking Lot Construction, (One Alternatives);
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Project 8: Mission Lake Water Barrier and Stone Road Repairs, (Three Alternatives);
Project 9: Boundary Fence Repair, (Three Alternatives); and
Project 10: Building Demolition (One Alternative).
Each project is independent of the others. The DAF could choose to implement all, none, or any combination of these projects.

f. Point of Contact:
Name: Radhika Narayanan
Title: Air Quality Scientist
Organization: Versar Global Solutions
Email: rnarayanan@versar.com
Phone Number: -

2. Analysis: Total combined direct and indirect GHG emissions associated with the action were estimated through ACAM on a calendar-year basis from the action start through the expected life cycle of the action. The life

cycle for Air Force actions with "steady state" emissions (SS, net gain/loss in emission stabilized and the action is fully implemented) is assumed to be 10 years beyond the SS emissions year or 20 years beyond SS emissions year for aircraft operations related actions.

GHG Emissions Analysis Summary:

GHGs produced by fossil-fuel combustion are primarily carbon dioxide (CO2), methane (CH4), and nitrous oxide (NO2). These three GHGs represent more than 97 percent of all U.S. GHG emissions. Emissions of GHGs are typically quantified and regulated in units of CO2 equivalents (CO2e). The CO2e takes into account the global warming potential (GWP) of each GHG. The GWP is the measure of a particular GHG's ability to absorb solar radiation as well as its residence time within the atmosphere. The GWP allows comparison of global warming impacts between different gases; the higher the GWP. All GHG emissions estimates were derived from various emission sources using the methods, algorithms, emission factors, and GWPs from the most current Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and/or Air Emissions Guide for Air Force Transitory Sources.

The Air Force has adopted the Prevention of Significant Deterioration (PSD) threshold for GHG of 75,000 ton per year (ton/yr) of CO2e (or 68,039 metric ton per year, mton/yr) as an indicator or "threshold of insignificance" for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant (de minimis, too trivial or minor to merit consideration). Actions with a net change in GHG (CO2e) emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Note that actions with a net change in GHG (CO2e) emissions above the insignificance indicator (threshold) are only considered potentially significant and require further assessment to determine if the action poses a significant impact. For further detail on insignificance indicators see Level II, Air Quality Quantitative Assessment, Insignificance Indicators (April 2023).

The following table summarizes the action-related GHG emissions on a calendar-year basis through the projected life cycle of the action.

Action-Related Annual GHG Emissions (mton/yr)						
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**	**Threshold**	**Exceedance**
2025	2,050	0.07733478	0.05197969	2,068	68,039	No
2026	675	0.01279774	0.01266165	676	68,039	No
2027 [SS Year]	675	0.01279774	0.01266165	676	68,039	No
2028	675	0.01279774	0.01266165	676	68,039	No
2029	675	0.01279774	0.01266165	676	68,039	No
2030	675	0.01279774	0.01266165	676	68,039	No
2031	675	0.01279774	0.01266165	676	68,039	No
2032	675	0.01279774	0.01266165	676	68,039	No
2033	675	0.01279774	0.01266165	676	68,039	No
2034	675	0.01279774	0.01266165	676	68,039	No
2035	675	0.01279774	0.01266165	676	68,039	No
2036	675	0.01279774	0.01266165	676	68,039	No
2037	675	0.01279774	0.01266165	676	68,039	No

The following U.S. and State's GHG emissions estimates (next two tables) are based on a five-year average (2016 through 2020) of individual state-reported GHG emissions (Reference: State Climate Summaries 2022, NOAA National Centers for Environmental Information, National Oceanic and Atmospheric Administration. https://statesummaries.ncics.org/downloads/).

State's Annual GHG Emissions (mton/yr)				
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**
2025	134,190,406	447,000	21,205	134,658,611

2026	134,190,406	447,000	21,205	134,658,611
2027 [SS Year]	134,190,406	447,000	21,205	134,658,611
2028	134,190,406	447,000	21,205	134,658,611
2029	134,190,406	447,000	21,205	134,658,611
2030	134,190,406	447,000	21,205	134,658,611
2031	134,190,406	447,000	21,205	134,658,611
2032	134,190,406	447,000	21,205	134,658,611
2033	134,190,406	447,000	21,205	134,658,611
2034	134,190,406	447,000	21,205	134,658,611
2035	134,190,406	447,000	21,205	134,658,611
2036	134,190,406	447,000	21,205	134,658,611
2037	134,190,406	447,000	21,205	134,658,611

U.S. Annual GHG Emissions (mton/yr)				
YEAR	**CO2**	**CH4**	**N2O**	**CO2e**
2025	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2026	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2027 [SS Year]	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2028	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2029	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2030	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2031	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2032	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2033	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2034	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2035	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2036	5,136,454,179	25,626,912	1,500,708	5,163,581,798
2037	5,136,454,179	25,626,912	1,500,708	5,163,581,798

GHG Relative Significance Assessment:

A Relative Significance Assessment uses the rule of reason and the concept of proportionality along with the consideration of the affected area (global, national, and regional) and the degree (intensity) of the proposed action's effects. The Relative Significance Assessment provides real-world context and allows for a reasoned choice against alternatives through a relative comparison analysis. The analysis weighs each alternative's annual net change in GHG emissions proportionally against (or relative to) global, national, and regional emissions.

The action's surroundings, circumstances, environment, and background (context associated with an action) provide the setting for evaluating the GHG intensity (impact significance). From an air quality perspective, context of an action is the local area's ambient air quality relative to meeting the NAAQS, expressed as attainment, nonattainment, or maintenance areas (this designation is considered the attainment status). GHGs are non-hazardous to health at normal ambient concentrations and, at a cumulative global scale, action-related GHG emissions can only potentially cause warming of the climatic system. Therefore, the action-related GHGs generally have an insignificant impact to local air quality.

However, the affected area (context) of GHG is global. Therefore, the intensity or degree of the proposed action's GHG effects are gauged through the quantity of GHG associated with the action as compared to a baseline of the state, U.S., and global GHG inventories. Each action (or alternative) has significance, based on their annual net change in GHG emissions, in relation to or proportionally to the global, national, and regional annual GHG emissions.

To provide real-world context to the GHG effects on a global scale, an action's net change in GHG emissions is compared relative to the state (where action will occur) and U.S. annual emissions. The following table provides a

relative comparison of an action's net change in GHG emissions vs. state and U.S. projected GHG emissions for the same time period.

Total GHG Relative Significance (mton)					
		CO2	**CH4**	**N2O**	**CO2e**
2025-2037	State Total	1,744,475,272	5,810,999	275,667	1,750,561,938
2025-2037	U.S. Total	66,773,904,327	333,149,852	19,509,199	67,126,563,378
2025-2037	Action	10,148	0.230908	0.20392	10,182
Percent of State Totals		0.00058174%	0.00000397%	0.00007397%	0.00058164%
Percent of U.S. Totals		0.00001520%	0.00000007%	0.00000105%	0.00001517%

From a global context, the action's total GHG percentage of total global GHG for the same time period is: 0.00000203%.*

* Global value based on the U.S. emits 13.4% of all global GHG annual emissions (2018 Emissions Data, Center for Climate and Energy Solutions, accessed 7-6-2023, https://www.c2es.org/content/international-emissions).

Radhika Narayanan, Air Quality Scientist May 10 2024

Name, Title **Date**

D.7 ACAM DETAIL REPORT EXAMPLE – ALTERNATIVE 1

1. General Information

- Action Location
Base: MOODY AFB
State: Georgia
County(s): Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: ENVIRONMENTAL ASSESSMENT FOR FACILITY AND INFRASTRUCTURE CONSTRUCTION AND MODERNIZATION - MOODY AIR FORCE BASE, GEORGIA

- Project Number/s (if applicable): n/a

- Projected Action Start Date: 1 / 2025

- Action Purpose and Need:
The purpose of the Proposed Action is to address deficiencies of function and capabilities in Moody AFB facilities and infrastructure to ensure efficient, uninterrupted
operations.
The Proposed Action is needed to conform with applicable antiterrorism/force protection criteria, to meet DAF space optimization requirements, and to reduce wasted person-hours and unnecessary risk to the mission due to inefficiencies.

- Action Description:
The Proposed Action includes 10 facility and infrastructure construction, demolition, and modernization projects to be performed within approximately the next five years (Fiscal Year 2025 through Fiscal Year 2030).

The Proposed Action consists of the following proposed project alternatives:

Project 1: Guardian Angel Facility Construction and Renovation, (Two Alternatives);
Project 2: Aircraft Fire Training Facility Improvements, (Two Alternatives);
Project 3: Gate Overwatch Position Construction, (One Alternative);
Project 4: aerospace Ground Equipment Facility Construction and Demolition, (Two Alternatives);
Project 5: Burma Road Realignment, (One Alternative);
Project 6: 38th Rescue Squadron Parking Lot Construction, (One Alternatives);
Project 7: Airfield Stormwater Repair and Replacement, (One Alternative);
Project 8: Mission Lake Water Barrier and Stone Road Repairs, (Three Alternatives);
Project 9: Boundary Fence Repair, (Three Alternatives); and
Project 10: Building Demolition (One Alternative).
Each project is independent of the others. The DAF could choose to implement all, none, or any combination of these projects.

- Point of Contact
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Report generated with ACAM version: 5.0.23a

- Activity List:

Activity Type		Activity Title
2.	Construction / Demolition	PROJECT 1. Guardian Angel Facility Construction and Renovation-North Site - Alternative 1
3.	Construction / Demolition	PROJECT 2. Aircraft Fire Training Facility Improvements with Truck Driving Training - Alternative 1
4.	Construction / Demolition	PROJECT 3. Gate Overwatch Position at Davidson Rd. and Mitchell Rd. Gates - Alternative 1
5.	Construction / Demolition	PROJECT 4. AGE Facility C&D with New Shop, Administrative Space and Covered Storage - Alternative 1
6.	Construction / Demolition	PROJECT 5. Burma Road Realignment - Alternative 1
7.	Construction / Demolition	PROJECT 6. 38th Rescue Squadron Parking Lot Construction with Conventional Asphalt - Alternative 1
8.	Construction / Demolition	PROJECT 7. Airfield Stormwater Repair and Replacement - Alternative 1
9.	Construction / Demolition	PROJECT 8. Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders -Alternative 1
10.	Construction / Demolition	PROJECT 9. Boundary Fence Repair with Driving Lane - Alternative 1
11.	Construction / Demolition	PROJECT 10. Demolish Eleven Buildings - Alternative 1
12.	Heating	PROJECT 1. Guardian Angel Facility Construction and Renovation-North Site - Alternative 1
13.	Emergency Generator	PROJECT 1. Guardian Angel Facility Construction and Renovation-North Site -Alternative 1
14.	Heating	PROJECT 2. AFTF Improvements with Truck Driving Training - Alternative 1
15.	Heating	PROJECT 3. Gate Overwatch Position Construction at Davidson Rd. and Mitchell Rd. Gates - Alternative 1
16.	Heating	PROJECT 4. AGE Facility C&D with New Shop, Administrative Space and Covered Storage - Alternative 1
17.	Heating	PROJECT 4. AGE Facility C&D with New Shop, Admin Space and Covered Storage - Alternative 1
18.	Emergency Generator	PROJECT 4. AGE Facility C&D with New Shop, Administrative Space and Covered Area -Alternative 1
19.	Heating	PROJECT 10. Demolish Eleven Buildings -Alternative 1

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Construction / Demolition

2.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 1. Guardian Angel Facility Construction and Renovation-North Site - Alternative 1

- Activity Description:
Construction of a new squadron operations facility, additional pavement, and retaining wall. Construction of Building 556 and Building 663 additions and proposed renovation of Buildings 606, 607, and 609.

Total square feet (sf) for project activities:
Grading - 337,346
Trenching - 300
Construction - 245,666
Paving - 5,000
Architectural Coating - 240,666

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 11
End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	3.005032
SO_x	0.003742
NO_x	1.817077
CO	2.246268

Pollutant	Total Emissions (TONs)
PM 10	6.787126
PM 2.5	0.063789
Pb	0.000000
NH_3	0.007401

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.015972
N_2O	0.013539

Pollutant	Total Emissions (TONs)
CO_2	434.934876
CO_2e	439.367799

-

2.1 Site Grading Phase

2.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

2.1.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 337346
Amount of Material to be Hauled On-Site (yd^3): 93
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	1	8
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Graders Composite [HP: 148] [LF: 0.41]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.33951	0.00490	2.85858	3.41896	0.15910	0.14637
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.29762	0.00487	2.89075	3.51214	0.17229	0.15851
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02382	0.00476	587.13772	589.15263
Graders Composite [HP: 148] [LF: 0.41]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02155	0.00431	531.19419	533.01712
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**

Emission Factors	0.02141	0.00428	527.74261	529.55369
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

2.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

2.2 Trenching/Excavating Phase

2.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 3
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

2.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 300
Amount of Material to be Hauled On-Site (yd^3): 33
Amount of Material to be Hauled Off-Site (yd^3): 0

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.2.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49122	0.00542	3.71341	4.67487	0.13603	0.12515
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02382	0.00476	587.13772	589.15263
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02385	0.00477	588.02637	590.04433
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3

LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

2.2.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase
$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

2.3 Building Construction Phase

2.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 10
Number of Days: 0

2.3.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 245666
Height of Building (ft): 15
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	7

Forklifts Composite	2	7
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

2.3.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.20113	0.00487	1.94968	1.66287	0.07909	0.07277
Forklifts Composite [HP: 82] [LF: 0.2]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.26944	0.00487	2.55142	3.59881	0.13498	0.12418
Generator Sets Composite [HP: 14] [LF: 0.74]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.54223	0.00793	4.34662	2.86938	0.17681	0.16267
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119
Welders Composite [HP: 46] [LF: 0.45]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49757	0.00735	3.67618	4.52476	0.11274	0.10373

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02140	0.00428	527.58451	529.39505
Forklifts Composite [HP: 82] [LF: 0.2]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02138	0.00428	527.10822	528.91712
Generator Sets Composite [HP: 14] [LF: 0.74]				

	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02305	0.00461	568.32220	570.27253
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105
Welders Composite [HP: 46] [LF: 0.45]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02305	0.00461	568.30078	570.25105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

2.3.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

2.4 Architectural Coatings Phase

2.4.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 11
Start Quarter: 1
Start Year: 2025

- Phase Duration

Number of Month: 1
Number of Days: 0

2.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 240666
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.4.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

2.4.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase
$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

2.5 Paving Phase

2.5.1 Paving Phase Timeline Assumptions

- Phase Start Date
Start Month: 7
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 1
Number of Days: 0

2.5.2 Paving Phase Assumptions

- General Paving Information
Paving Area (ft^2): 5000

- Paving Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Rollers Composite	1	7
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC

POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.5.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.55317	0.00854	4.19957	3.25548	0.16367	0.15057
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.24787	0.00486	2.64574	3.44523	0.13933	0.12819
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.56682	0.00541	3.67816	4.11298	0.16639	0.15308
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02313	0.00463	570.17504	572.13174
Pavers Composite [HP: 81] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02136	0.00427	526.53742	528.34436
Rollers Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02381	0.00476	586.90234	588.91644
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026

HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

2.5.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft^2)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_P = (2.62 * PA) / 43560 / 2000$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft^2)
43560: Conversion Factor square feet to acre (43560 ft2 / acre)^2 / acre)
2000: Conversion Factor square pounds to TONs (2000 lb / TON)

3. Construction / Demolition

3.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 2. Aircraft Fire Training Facility Improvements with Truck Driving Training - Alternative 1

- Activity Description:
Construction of concrete pads around AFTF and for truck driving training. Construction of a training facility, removal and installation of a new mockup training aircraft for fire training, installation of new fire hydrants, utility installation, renovation of the existing retention pond, replacement of the propane gas tank and concrete capping of contaminated soils.

Total square feet (sf) for project activities:
Grading - 20,000
Trenching - 7,965
Construction - 407,292
Architectural Coating - 10,000

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 11
End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.354466

Pollutant	Total Emissions (TONs)
PM 10	0.630678

SO_x	0.004316
NO_x	2.046022
CO	2.695176

PM 2.5	0.068332
Pb	0.000000
NH_3	0.010611

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.018750
N_2O	0.018424

Pollutant	Total Emissions (TONs)
CO_2	520.610616
CO_2e	526.568299

3.1 Site Grading Phase

3.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

3.1.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 20000
Amount of Material to be Hauled On-Site (yd^3): 2800
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

3.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.33951	0.00490	2.85858	3.41896	0.15910	0.14637
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.29762	0.00487	2.89075	3.51214	0.17229	0.15851
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02155	0.00431	531.19419	533.01712
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02141	0.00428	527.74261	529.55369
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

3.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase
$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

3.2 Trenching/Excavating Phase

3.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

3.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 7965
Amount of Material to be Hauled On-Site (yd^3): 1864
Amount of Material to be Hauled Off-Site (yd^3): 973

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

3.2.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49122	0.00542	3.71341	4.67487	0.13603	0.12515
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02382	0.00476	587.13772	589.15263
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02385	0.00477	588.02637	590.04433
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**NH_3**
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	**N_2O**	**CO_2**	**CO_2e**
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

3.2.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL}* 0.002205) / 2000

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
VMT_{VE} = (HA_{OnSite} + $HA_{OffSite}$) * (1 / HC) * HT

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

3.3 Building Construction Phase

3.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 2
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 9
Number of Days: 0

3.3.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 407292
Height of Building (ft): 12
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: No
Average Day(s) worked per week: 5

- Construction Exhaust

Equipment Name	Number Of Equipment	Hours Per Day
Aerial Lifts Composite	1	4
Air Compressors Composite	1	4
Cranes Composite	1	7
Excavators Composite	1	4
Forklifts Composite	2	7
Generator Sets Composite	1	8
Pumps Composite	2	4
Skid Steer Loaders Composite	1	4
Tractors/Loaders/Backhoes Composite	3	8
Welders Composite	3	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 40

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

3.3.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour)

Aerial Lifts Composite [HP: 46] [LF: 0.31]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.15354	0.00542	2.87672	3.08611	0.02068	0.01903
Air Compressors Composite [HP: 37] [LF: 0.48]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.54469	0.00735	3.75559	4.85195	0.11675	0.10741
Cranes Composite [HP: 367] [LF: 0.29]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.20113	0.00487	1.94968	1.66287	0.07909	0.07277
Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Forklifts Composite [HP: 82] [LF: 0.2]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.26944	0.00487	2.55142	3.59881	0.13498	0.12418
Generator Sets Composite [HP: 14] [LF: 0.74]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.54223	0.00793	4.34662	2.86938	0.17681	0.16267
Pumps Composite [HP: 11] [LF: 0.74]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.57436	0.00812	4.33445	3.00123	0.18067	0.16621
Skid Steer Loaders Composite [HP: 71] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.13914	0.00488	1.86188	3.24884	0.05631	0.05180
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119
Welders Composite [HP: 46] [LF: 0.45]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49757	0.00735	3.67618	4.52476	0.11274	0.10373

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour)

Aerial Lifts Composite [HP: 46] [LF: 0.31]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02381	0.00476	586.90005	588.91415
Air Compressors Composite [HP: 37] [LF: 0.48]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02306	0.00461	568.36286	570.31334
Cranes Composite [HP: 367] [LF: 0.29]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02140	0.00428	527.58451	529.39505
Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02382	0.00476	587.13772	589.15263
Forklifts Composite [HP: 82] [LF: 0.2]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02138	0.00428	527.10822	528.91712

Generator Sets Composite [HP: 14] [LF: 0.74]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02305	0.00461	568.32220	570.27253
Pumps Composite [HP: 11] [LF: 0.74]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02305	0.00461	568.24381	570.19388
Skid Steer Loaders Composite [HP: 71] [LF: 0.37]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02143	0.00429	528.37420	530.18744
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02149	0.00430	529.86270	531.68105
Welders Composite [HP: 46] [LF: 0.45]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02305	0.00461	568.30078	570.25105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

3.3.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

3.4 Architectural Coatings Phase

3.4.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 11
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 1
Number of Days: 0

3.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 10000
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

3.4.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

3.4.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase
$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

4. Construction / Demolition

4.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 3. Gate Overwatch Position at Davidson Rd. and Mitchell Rd. Gates - Alternative 1

- Activity Description:
Construction of two-story overwatch buildings at Moody AFB gates with utilities.

Total square feet (sf) for project activities:
Grading - 5,000
Trenching - 200
Construction - 2,500
Architectural Coating - 2,500

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 6

End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.083191
SO_x	0.000887
NO_x	0.469342
CO	0.601277

Pollutant	Total Emissions (TONs)
PM 10	0.124254
PM 2.5	0.019129
Pb	0.000000
NH_3	0.000883

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.004021
N_2O	0.000998

Pollutant	Total Emissions (TONs)
CO_2	99.705535
CO_2e	100.103463

-

4.1 Site Grading Phase

4.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

4.1.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 5000
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC

POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

4.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.33951	0.00490	2.85858	3.41896	0.15910	0.14637
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.29762	0.00487	2.89075	3.51214	0.17229	0.15851
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02155	0.00431	531.19419	533.01712
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02141	0.00428	527.74261	529.55369
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026

HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

4.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase
$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

4.2 Trenching/Excavating Phase

4.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 2
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

4.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 200
Amount of Material to be Hauled On-Site (yd^3): 15
Amount of Material to be Hauled Off-Site (yd^3): 0

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

4.2.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49122	0.00542	3.71341	4.67487	0.13603	0.12515
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02382	0.00476	587.13772	589.15263
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02385	0.00477	588.02637	590.04433
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

4.2.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD}$ = (20 * ACRE * WD) / 2000

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

4.3 Building Construction Phase

4.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 3
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 3
Number of Days: 0

4.3.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 2500
Height of Building (ft): 20
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC

POVs	0	0	0	0	0	100.00	0

4.3.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.20113	0.00487	1.94968	1.66287	0.07909	0.07277
Forklifts Composite [HP: 82] [LF: 0.2]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.26944	0.00487	2.55142	3.59881	0.13498	0.12418
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02140	0.00428	527.58451	529.39505
Forklifts Composite [HP: 82] [LF: 0.2]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02138	0.00428	527.10822	528.91712
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**NH_3**
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	**N_2O**	**CO_2**	**CO_2e**
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

4.3.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment

WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

4.4 Architectural Coatings Phase

4.4.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 6
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 1
Number of Days: 0

4.4.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 2500
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

4.4.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e

LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

4.4.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase
$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

5. Construction / Demolition

5.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 4. AGE Facility C&D with New Shop, Administrative Space and Covered Storage - Alternative 1

- Activity Description:
Demolition of Buildings 732, 752, 755, and 756. Construction of a new consolidated AGE facility with warehouse area, administrative space, and covered storage. The covered storage would be constructed over an already paved area; no new surface paving or concrete would be required.

Total square feet (sf) for project activities:
Demolition - 24,097
Grading - 45,312
Trenching - 1,000
Construction - 56,466
Architectural Coating - 56,466

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 9
End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.785389
SO_x	0.002214
NO_x	1.093079
CO	1.368169

Pollutant	Total Emissions (TONs)
PM 10	1.054784
PM 2.5	0.038890
Pb	0.000000
NH_3	0.003829

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.009369
N_2O	0.006423

Pollutant	Total Emissions (TONs)
CO_2	248.946620
CO_2e	251.094279

5.1 Demolition Phase

5.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 1
Number of Days: 0

5.1.2 Demolition Phase Assumptions

- General Demolition Information
Area of Building to be demolished (ft^2): 24097
Height of Building to be demolished (ft): 18

- Default Settings Used: Yes

- Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	8
Rubber Tired Dozers Composite	1	1
Tractors/Loaders/Backhoes Composite	2	6

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

5.1.3 Demolition Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.43930	0.00743	3.63468	4.34820	0.10060	0.09255
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02333	0.00467	575.01338	576.98668
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515

MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

5.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase
$PM10_{FD} = (0.00042 * BA * BH) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
0.00042: Emission Factor (lb/ft^3)
BA: Area of Building to be demolished (ft^2)
BH: Height of Building to be demolished (ft)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building being demolish (ft^2)
BH: Height of Building being demolish (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)
0.25: Volume reduction factor (material reduced by 75% to account for air space)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

5.2 Site Grading Phase

5.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

5.2.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 45312
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

5.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.33951	0.00490	2.85858	3.41896	0.15910	0.14637
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.29762	0.00487	2.89075	3.51214	0.17229	0.15851
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02155	0.00431	531.19419	533.01712
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02141	0.00428	527.74261	529.55369
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

5.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase
$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

5.3 Trenching/Excavating Phase

5.3.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 2
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

5.3.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 1000
Amount of Material to be Hauled On-Site (yd^3): 74
Amount of Material to be Hauled Off-Site (yd^3): 0

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

5.3.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49122	0.00542	3.71341	4.67487	0.13603	0.12515
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02382	0.00476	587.13772	589.15263
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02385	0.00477	588.02637	590.04433
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

5.3.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase
$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

5.4 Building Construction Phase

5.4.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 3
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 6
Number of Days: 0

5.4.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 56466
Height of Building (ft): 24
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	6
Forklifts Composite	2	6
Generator Sets Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8
Welders Composite	3	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC

POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

5.4.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.20113	0.00487	1.94968	1.66287	0.07909	0.07277
Forklifts Composite [HP: 82] [LF: 0.2]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.26944	0.00487	2.55142	3.59881	0.13498	0.12418
Generator Sets Composite [HP: 14] [LF: 0.74]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.54223	0.00793	4.34662	2.86938	0.17681	0.16267
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119
Welders Composite [HP: 46] [LF: 0.45]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49757	0.00735	3.67618	4.52476	0.11274	0.10373

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02140	0.00428	527.58451	529.39505
Forklifts Composite [HP: 82] [LF: 0.2]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02138	0.00428	527.10822	528.91712
Generator Sets Composite [HP: 14] [LF: 0.74]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02305	0.00461	568.32220	570.27253
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105
Welders Composite [HP: 46] [LF: 0.45]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02305	0.00461	568.30078	570.25105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515

MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

5.4.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

5.5 Architectural Coatings Phase

5.5.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 9
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 1
Number of Days: 0

5.5.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 56466
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

5.5.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

5.5.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

6. Construction / Demolition

6.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 5. Burma Road Realignment - Alternative 1

- Activity Description:
Realignment and repavement of approximately 6,000 linear feet of Burma Road with either conventional or permeable asphalt. Removal of approximately 4.6 acres of trees from the realignment footprint and removal of trees within the CZ.
Total square feet (sf) for project activities:
Grading - 132,000
Trenching - 200,376
Paving - 132,000

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 5
End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.088667
SO_x	0.001382
NO_x	0.747831
CO	0.961013

Pollutant	Total Emissions (TONs)
PM 10	8.636699
PM 2.5	0.027996
Pb	0.000000
NH_3	0.003293

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.006275
N_2O	0.005652

Pollutant	Total Emissions (TONs)
CO_2	172.148865
CO_2e	173.989504

-

6.1 Site Grading Phase

6.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 4
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

6.1.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 132000
Amount of Material to be Hauled On-Site (yd^3): 2444
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

6.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.33951	0.00490	2.85858	3.41896	0.15910	0.14637
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.29762	0.00487	2.89075	3.51214	0.17229	0.15851
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02155	0.00431	531.19419	533.01712
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02141	0.00428	527.74261	529.55369
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**NH_3**
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	**N_2O**	**CO_2**	**CO_2e**
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

6.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)

HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

6.2 Trenching/Excavating Phase

6.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 3

Number of Days: 0

6.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information

Area of Site to be Trenched/Excavated (ft^2): 200376
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 21409

- Trenching Default Settings

Default Settings Used: No
Average Day(s) worked per week: 5

- Construction Exhaust

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	4
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Rough Terrain Forklifts Composite	1	4
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20
Average Hauling Truck Round Trip Commute (mile): 20

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

6.2.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.43930	0.00743	3.63468	4.34820	0.10060	0.09255
Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49122	0.00542	3.71341	4.67487	0.13603	0.12515
Rough Terrain Forklifts Composite [HP: 96] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.11845	0.00489	1.69423	3.22091	0.03622	0.03332
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02333	0.00467	575.01338	576.98668
Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02382	0.00476	587.13772	589.15263
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02385	0.00477	588.02637	590.04433
Rough Terrain Forklifts Composite [HP: 96] [LF: 0.4]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02145	0.00429	528.72612	530.54057
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

6.2.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

6.3 Paving Phase

6.3.1 Paving Phase Timeline Assumptions

- Phase Start Date
Start Month: 1

Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 3
Number of Days: 0

6.3.2 Paving Phase Assumptions

- General Paving Information
Paving Area (ft^2): 132000

- Paving Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

6.3.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.55317	0.00854	4.19957	3.25548	0.16367	0.15057
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.24787	0.00486	2.64574	3.44523	0.13933	0.12819
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.20238	0.00487	2.21583	3.41771	0.08945	0.08229
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.56682	0.00541	3.67816	4.11298	0.16639	0.15308

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02313	0.00463	570.17504	572.13174
Pavers Composite [HP: 81] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02136	0.00427	526.53742	528.34436
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02141	0.00428	527.68636	529.49724
Rollers Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02381	0.00476	586.90234	588.91644

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**NH_3**
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	**N_2O**	**CO_2**	**CO_2e**
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

6.3.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft^2)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_P = (2.62 * PA) / 43560 / 2000$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft^2)
43560: Conversion Factor square feet to acre (43560 ft2 / acre)^2 / acre)
2000: Conversion Factor square pounds to TONs (2000 lb / TON)

7. Construction / Demolition

7.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 6. 38th Rescue Squadron Parking Lot Construction with Conventional Asphalt - Alternative 1

- Activity Description:
Construction of a new parking lot paved with either conventional or permeable asphalt and installation of charging stations.

Total square feet (sf) for project activities:
Grading - 20,000
Trenching - 1,000
Demolition - 10,000
Construction - 20,000
Paving - 20,000

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 10
End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.088749
SO_x	0.001503
NO_x	0.744390
CO	1.007484

Pollutant	Total Emissions (TONs)
PM 10	0.451310
PM 2.5	0.029846
Pb	0.000000
NH_3	0.001701

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.006711
N_2O	0.001542

Pollutant	Total Emissions (TONs)
CO_2	165.865777
CO_2e	166.492838

7.1 Demolition Phase

7.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 1
Number of Days: 0

7.1.2 Demolition Phase Assumptions

- General Demolition Information
Area of Building to be demolished (ft^2): 10000
Height of Building to be demolished (ft): 0.5

- Default Settings Used: Yes

- Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	8
Rubber Tired Dozers Composite	1	1
Tractors/Loaders/Backhoes Composite	2	6

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

7.1.3 Demolition Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.43930	0.00743	3.63468	4.34820	0.10060	0.09255
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02333	0.00467	575.01338	576.98668
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

7.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase
$PM10_{FD} = (0.00042 * BA * BH) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
0.00042: Emission Factor (lb/ft^3)
BA: Area of Building to be demolished (ft^2)
BH: Height of Building to be demolished (ft)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building being demolish (ft^2)
BH: Height of Building being demolish (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)
0.25: Volume reduction factor (material reduced by 75% to account for air space)
HC: Average Hauling Truck Capacity (yd^3)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

7.2 Site Grading Phase

7.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 2
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

7.2.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 20000
Amount of Material to be Hauled On-Site (yd^3): 37
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

7.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.33951	0.00490	2.85858	3.41896	0.15910	0.14637
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.29762	0.00487	2.89075	3.51214	0.17229	0.15851
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02155	0.00431	531.19419	533.01712
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02141	0.00428	527.74261	529.55369
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

7.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

7.3 Trenching/Excavating Phase

7.3.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 4
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

7.3.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 1000
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 93

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day

Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

7.3.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49122	0.00542	3.71341	4.67487	0.13603	0.12515
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02382	0.00476	587.13772	589.15263
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02385	0.00477	588.02637	590.04433
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

7.3.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

7.4 Building Construction Phase

7.4.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 5
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 6
Number of Days: 0

7.4.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 20000
Height of Building (ft): 0.5
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC

POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

7.4.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.20113	0.00487	1.94968	1.66287	0.07909	0.07277
Forklifts Composite [HP: 82] [LF: 0.2]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.26944	0.00487	2.55142	3.59881	0.13498	0.12418
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02140	0.00428	527.58451	529.39505
Forklifts Composite [HP: 82] [LF: 0.2]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02138	0.00428	527.10822	528.91712
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826

LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

7.4.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

7.5 Paving Phase

7.5.1 Paving Phase Timeline Assumptions

- Phase Start Date
Start Month: 5
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

7.5.2 Paving Phase Assumptions

- General Paving Information
Paving Area (ft^2): 20000

- Paving Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Rollers Composite	1	7
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

7.5.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.55317	0.00854	4.19957	3.25548	0.16367	0.15057
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.24787	0.00486	2.64574	3.44523	0.13933	0.12819
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.56682	0.00541	3.67816	4.11298	0.16639	0.15308
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02313	0.00463	570.17504	572.13174
Pavers Composite [HP: 81] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02136	0.00427	526.53742	528.34436
Rollers Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02381	0.00476	586.90234	588.91644
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

7.5.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft^2)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_P = (2.62 * PA) / 43560 / 2000$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft^2)
43560: Conversion Factor square feet to acre (43560 ft2 / acre)^2 / acre)
2000: Conversion Factor square pounds to TONs (2000 lb / TON)

8. Construction / Demolition

8.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 7. Airfield Stormwater Repair and Replacement - Alternative 1

- Activity Description:
Excavation, removal, and replacement with the same-sized stormwater drainage pipes. Removal of two concrete stormwater outfall structures located in the CZ and replacement with belowground culverts.

Total square feet (sf) for project activities:
Grading - 7,500
Trenching - 14,500
Construction - 14,500

Architectural Coating - 240,666

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 3
End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.049024

Pollutant	Total Emissions (TONs)
PM 10	0.456610

SO_x	0.000781
NO_x	0.425855
CO	0.536403

PM 2.5	0.017386
Pb	0.000000
NH_3	0.000766

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.003540
N_2O	0.000939

Pollutant	Total Emissions (TONs)
CO_2	88.031280
CO_2e	88.399491

8.1 Site Grading Phase

8.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 2
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

8.1.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 7500
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	6
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	6
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

8.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.33951	0.00490	2.85858	3.41896	0.15910	0.14637
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.29762	0.00487	2.89075	3.51214	0.17229	0.15851
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02155	0.00431	531.19419	533.01712
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02141	0.00428	527.74261	529.55369
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

8.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase
$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

8.2 Trenching/Excavating Phase

8.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

8.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 14500
Amount of Material to be Hauled On-Site (yd^3): 644
Amount of Material to be Hauled Off-Site (yd^3): 322

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

8.2.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49122	0.00542	3.71341	4.67487	0.13603	0.12515
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02382	0.00476	587.13772	589.15263
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02385	0.00477	588.02637	590.04433
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**NH_3**
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	**N_2O**	**CO_2**	**CO_2e**
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

8.2.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase
CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL}* 0.002205) / 2000

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
VMT_{VE} = (HA_{OnSite} + $HA_{OffSite}$) * (1 / HC) * HT

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

8.3 Building Construction Phase

8.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 2
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

8.3.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 14500
Height of Building (ft): 0.5
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

8.3.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.20113	0.00487	1.94968	1.66287	0.07909	0.07277
Forklifts Composite [HP: 82] [LF: 0.2]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.26944	0.00487	2.55142	3.59881	0.13498	0.12418
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02140	0.00428	527.58451	529.39505
Forklifts Composite [HP: 82] [LF: 0.2]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02138	0.00428	527.10822	528.91712
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

8.3.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

9. Construction / Demolition

9.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 8. Mission Lake Water Barrier and Stone Road Repairs – Both Shoulders - Alternative 1

- Activity Description:
Extension of the shoulders of Stone Road both to the north and south of road currently lacking shoulders. Strengthening of Mission Lake water barrier using riprap at the toe of slope on both sides of the water barrier.

Total square feet (sf) for project activities:
Trenching - 24,000
Construction - 12,000
Paving - 12,000

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 4
End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.038301
SO_x	0.000678
NO_x	0.318430
CO	0.465450

Pollutant	Total Emissions (TONs)
PM 10	0.728571
PM 2.5	0.011330
Pb	0.000000
NH_3	0.001451

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.003119
N_2O	0.002023

Pollutant	Total Emissions (TONs)
CO_2	82.352126
CO_2e	83.032706

-

9.1 Trenching/Excavating Phase

9.1.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 1

Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 3
Number of Days: 0

9.1.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 24000
Amount of Material to be Hauled On-Site (yd^3): 7500
Amount of Material to be Hauled Off-Site (yd^3): 111

- Trenching Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

9.1.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49122	0.00542	3.71341	4.67487	0.13603	0.12515
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02382	0.00476	587.13772	589.15263
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02385	0.00477	588.02637	590.04433
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

9.1.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

9.2 Building Construction Phase

9.2.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 3
Number of Days: 0

9.2.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Office or Industrial
Area of Building (ft^2): 12000
Height of Building (ft): 0.5
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

9.2.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.20113	0.00487	1.94968	1.66287	0.07909	0.07277
Forklifts Composite [HP: 82] [LF: 0.2]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.26944	0.00487	2.55142	3.59881	0.13498	0.12418
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO_x	NO_x	CO	PM 10	PM 2.5
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]				
	CH_4	N_2O	CO_2	CO_2e

Emission Factors	0.02140	0.00428	527.58451	529.39505
Forklifts Composite [HP: 82] [LF: 0.2]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02138	0.00428	527.10822	528.91712
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**NH_3**
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	**N_2O**	**CO_2**	**CO_2e**
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

9.2.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

9.3 Paving Phase

9.3.1 Paving Phase Timeline Assumptions

- Phase Start Date
Start Month: 4
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 1

Number of Days: 0

9.3.2 Paving Phase Assumptions

- General Paving Information
Paving Area (ft^2): 12000

- Paving Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Rollers Composite	1	7
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

9.3.3 Paving Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.55317	0.00854	4.19957	3.25548	0.16367	0.15057
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.24787	0.00486	2.64574	3.44523	0.13933	0.12819
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.56682	0.00541	3.67816	4.11298	0.16639	0.15308
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02313	0.00463	570.17504	572.13174

Pavers Composite [HP: 81] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02136	0.00427	526.53742	528.34436
Rollers Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02381	0.00476	586.90234	588.91644
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**NH_3**
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	**N_2O**	**CO_2**	**CO_2e**
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

9.3.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

- Construction Exhaust Emissions per Phase
$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft^2)

0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_P = (2.62 * PA) / 43560 / 2000$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft^2)
43560: Conversion Factor square feet to acre (43560 ft2 / $acre)^2$ / acre)
2000: Conversion Factor square pounds to TONs (2000 lb / TON)

10. Construction / Demolition

10.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 9. Boundary Fence Repair with Driving Lane - Alternative 1

- Activity Description:

Removal of vegetation along the Moody AFB boundary fence by clearing all vegetation on both sides of the fence. , including grading of the roadway through an existing wetland area, placing a culvert in Beatty Branch, and building the driving lane over the culverted Beatty Branch. Repair of the boundary fence would in all areas that have been previously inaccessible due to thick vegetation growth.

Total square feet (sf) for project activities:
Trenching - 150,304
Grading - 148,104
Construction - 6,200

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 9
End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.091259
SO_x	0.001526
NO_x	0.799857
CO	1.073210

Pollutant	Total Emissions (TONs)
PM 10	11.949258
PM 2.5	0.028772
Pb	0.000000
NH_3	0.002757

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.006927
N_2O	0.004370

Pollutant	Total Emissions (TONs)
CO_2	182.480327
CO_2e	183.955448

10.1 Site Grading Phase

10.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 7
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

10.1.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 148104
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

10.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.33951	0.00490	2.85858	3.41896	0.15910	0.14637
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.29762	0.00487	2.89075	3.51214	0.17229	0.15851
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Graders Composite [HP: 148] [LF: 0.41]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02155	0.00431	531.19419	533.01712
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02141	0.00428	527.74261	529.55369
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				

	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

10.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

10.2 Trenching/Excavating Phase

10.2.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 6
Number of Days: 0

10.2.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information
Area of Site to be Trenched/Excavated (ft^2): 150304
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 15824

- Trenching Default Settings
Default Settings Used: No
Average Day(s) worked per week: 5

- Construction Exhaust

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	4
Excavators Composite	2	8
Other General Industrial Equipment Composite	1	8
Rough Terrain Forklifts Composite	1	4
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20
Average Hauling Truck Round Trip Commute (mile): 20

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

10.2.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.43930	0.00743	3.63468	4.34820	0.10060	0.09255
Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.40191	0.00542	3.44643	4.21104	0.10704	0.09848
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.49122	0.00542	3.71341	4.67487	0.13603	0.12515
Rough Terrain Forklifts Composite [HP: 96] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.11845	0.00489	1.69423	3.22091	0.03622	0.03332
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02333	0.00467	575.01338	576.98668
Excavators Composite [HP: 36] [LF: 0.38]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02382	0.00476	587.13772	589.15263
Other General Industrial Equipment Composite [HP: 35] [LF: 0.34]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02385	0.00477	588.02637	590.04433

Rough Terrain Forklifts Composite [HP: 96] [LF: 0.4]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02145	0.00429	528.72612	530.54057
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

10.2.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

10.3 Building Construction Phase

10.3.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 8
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 2
Number of Days: 0

10.3.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 6200
Height of Building (ft): 10
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips
Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

10.3.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.20113	0.00487	1.94968	1.66287	0.07909	0.07277
Forklifts Composite [HP: 82] [LF: 0.2]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.26944	0.00487	2.55142	3.59881	0.13498	0.12418
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02140	0.00428	527.58451	529.39505
Forklifts Composite [HP: 82] [LF: 0.2]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02138	0.00428	527.10822	528.91712

Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	N_2O	CO_2	CO_2e
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515
MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

10.3.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

11. Construction / Demolition

11.1 General Information & Timeline Assumptions

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 10. Demolish Eleven Buildings - Alternative 1

- Activity Description:
Demolition of 11 buildings as described by the Proposed Action. All demolished materials and solid waste would be removed from Moody AFB using dump trucks and haul-off debris containers. Demolished building

locations would either be left with the foundation building pad in place, or the building foundations removed, and the soils revegetated and maintained as grass-covered space.

Total square feet (sf) for project activities:
Demolition - 8,855

- Activity Start Date
Start Month: 1
Start Month: 2025

- Activity End Date
Indefinite: False
End Month: 6
End Month: 2025

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.034449
SO_x	0.000608
NO_x	0.290718
CO	0.426387

Pollutant	Total Emissions (TONs)
PM 10	0.038255
PM 2.5	0.009530
Pb	0.000000
NH_3	0.000865

- Activity Emissions of GHG:

Pollutant	Total Emissions (TONs)
CH_4	0.002533
N_2O	0.000974

Pollutant	Total Emissions (TONs)
CO_2	64.177254
CO_2e	64.530677

11.1 Demolition Phase

11.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2025

- Phase Duration
Number of Month: 6
Number of Days: 0

11.1.2 Demolition Phase Assumptions

- General Demolition Information
Area of Building to be demolished (ft^2): 8855
Height of Building to be demolished (ft): 15

- Default Settings Used: No

- Average Day(s) worked per week: 5

- Construction Exhaust

Equipment Name	Number Of Equipment	Hours Per Day
Concrete/Industrial Saws Composite	1	8
Rubber Tired Dozers Composite	1	1
Tractors/Loaders/Backhoes Composite	2	6

- Vehicle Exhaust

Average Hauling Truck Capacity (yd^3): 20

Average Hauling Truck Round Trip Commute (mile): 40

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

11.1.3 Demolition Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.43930	0.00743	3.63468	4.34820	0.10060	0.09255
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.37086	0.00491	3.50629	2.90209	0.15396	0.14165
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**
Emission Factors	0.19600	0.00489	2.00960	3.48168	0.07738	0.07119

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour)

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02333	0.00467	575.01338	576.98668
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02159	0.00432	532.17175	533.99803
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH_4	**N_2O**	**CO_2**	**CO_2e**
Emission Factors	0.02149	0.00430	529.86270	531.68105

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH_3
LDGV	0.27777	0.00168	0.13961	4.03031	0.00418	0.00370	0.05231
LDGT	0.23699	0.00208	0.18903	3.62362	0.00481	0.00426	0.04375
HDGV	0.87960	0.00467	0.67184	11.04321	0.02158	0.01909	0.09392
LDDV	0.10112	0.00128	0.15037	5.65442	0.00350	0.00322	0.01663
LDDT	0.21054	0.00146	0.48188	5.41566	0.00569	0.00523	0.01761
HDDV	0.12742	0.00425	2.49726	1.57131	0.05253	0.04832	0.06515

MC	2.91855	0.00194	0.62874	12.70064	0.02292	0.02027	0.05254

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH_4	N_2O	CO_2	CO_2e
LDGV	0.01491	0.00510	333.43927	335.32826
LDGT	0.01525	0.00728	412.84364	415.39026
HDGV	0.05582	0.02693	924.36140	933.76280
LDDV	0.04955	0.00070	380.06288	381.51083
LDDT	0.03772	0.00103	431.15861	432.40928
HDDV	0.02569	0.16061	1263.31926	1311.81246
MC	0.11069	0.00315	392.50958	396.21464

11.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (0.00042 * BA * BH) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
0.00042: Emission Factor (lb/ft^3)
BA: Area of Building to be demolished (ft^2)
BH: Height of Building to be demolished (ft)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
HP: Equipment Horsepower
LF: Equipment Load Factor
EF_{POL}: Emission Factor for Pollutant (g/hp-hour)
0.002205: Conversion Factor grams to pounds
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building being demolish (ft^2)
BH: Height of Building being demolish (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)
0.25: Volume reduction factor (material reduced by 75% to account for air space)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
VMT_{WT} = WD * WT * 1.25 * NE

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

12. Heating

12.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 1. Guardian Angel Facility Construction and Renovation-North Site - Alternative 1

- Activity Description:
Additional Heating Area - 117,699 square feet

- Activity Start Date
Start Month: 1
Start Year: 2026

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.033261
SO_x	0.003628
NO_x	0.604749
CO	0.507989

Pollutant	Emissions Per Year (TONs)
PM 10	0.045961
PM 2.5	0.045961
Pb	0.000000
NH_3	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH_4	0.013667
N_2O	0.013667

Pollutant	Emissions Per Year (TONs)
CO_2	725.813308
CO_2e	726.563196

12.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 117699
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value (MMBtu/ft^3): 0.00105
Energy Intensity (MMBtu/ft^2): 0.1079

- Default Settings Used: Yes

- Boiler/Furnace Usage
Operating Time Per Year (hours): 900 (default)

12.3 Heating Emission Factor(s)

- Heating Criteria Pollutant Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3
5.5	0.6	100	84	7.6	7.6		

- Heating Greenhouse Gasses Pollutant Emission Factors (lb/1000000 scf)

CH_4	N_2O	CO_2	CO_2e
2.26	2.26	120019	120143

12.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year
FC_{HER}= HA * EI / HV / 1000000

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement (MMBtu/ft^2)
HV: Heat Value (MMBTU/ft^3)
1000000: Conversion Factor

- Heating Emissions per Year
HE_{POL}= FC * EF_{POL} / 2000

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

13. Emergency Generator

13.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 1. Guardian Angel Facility Construction and Renovation-North Site -Alternative 1

- Activity Description:
Added one diesel generator for backup power.

- Activity Start Date
Start Month: 1
Start Year: 2026

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.005650
SO_x	0.004759
NO_x	0.023288
CO	0.015552

Pollutant	Emissions Per Year (TONs)
PM 10	0.005083
PM 2.5	0.005083
Pb	0.000000
NH_3	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH_4	0.000094
N_2O	0.000019

Pollutant	Emissions Per Year (TONs)
CO_2	2.328750
CO_2e	2.693250

13.2 Emergency Generator Assumptions

- Emergency Generator
Type of Fuel used in Emergency Generator: Diesel
Number of Emergency Generators: 1

- Default Settings Used: Yes

- Emergency Generators Consumption
Emergency Generator's Horsepower: 135 (default)
Average Operating Hours Per Year (hours): 30 (default)

13.3 Emergency Generator Emission Factor(s)

- Emergency Generators Criteria Pollutant Emission Factor (lb/hp-hr)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251		

- Emergency Generators Greenhouse Gasses Pollutant Emission Factor (lb/hp-hr)

CH_4	N_2O	CO_2	CO_2e
0.000046297	0.000009259	1.15	1.33

13.4 Emergency Generator Formula(s)

- Emergency Generator Emissions per Year

AE_{POL}= (NGEN * HP * OT * EF_{POL}) / 2000

AE_{POL}: Activity Emissions (TONs per Year)
NGEN: Number of Emergency Generators
HP: Emergency Generator's Horsepower (hp)
OT: Average Operating Hours Per Year (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hp-hr)

14. Heating

14.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 2. AFTF Improvements with Truck Driving Training - Alternative 1

- Activity Description:
Additional heating area - 10,000 square feet

- Activity Start Date
Start Month: 1
Start Year: 2026

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.001820
SO_x	0.000199
NO_x	0.033095
CO	0.027800

Pollutant	Emissions Per Year (TONs)
PM 10	0.002515
PM 2.5	0.002515
Pb	0.000000
NH_3	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH_4	0.000748
N_2O	0.000748

Pollutant	Emissions Per Year (TONs)
CO_2	39.720574
CO_2e	39.761612

14.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 10000
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value ($MMBtu/ft^3$): 0.00105
Energy Intensity ($MMBtu/ft^2$): 0.0695

- Default Settings Used: Yes

- Boiler/Furnace Usage
Operating Time Per Year (hours): 900 (default)

14.3 Heating Emission Factor(s)

- Heating Criteria Pollutant Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3
5.5	0.6	100	84	7.6	7.6		

- Heating Greenhouse Gasses Pollutant Emission Factors (lb/1000000 scf)

CH_4	N_2O	CO_2	CO_2e
2.26	2.26	120019	120143

14.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year
FC_{HER}= HA * EI / HV / 1000000

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement ($MMBtu/ft^2$)
HV: Heat Value ($MMBTU/ft^3$)
1000000: Conversion Factor

- Heating Emissions per Year
HE_{POL}= FC * EF_{POL} / 2000

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

15. Heating

15.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 3. Gate Overwatch Position Construction at Davidson Rd. and Mitchell Rd. Gates - Alternative 1

- Activity Description:
Additional heating area - 2,500 square feet.

- Activity Start Date
Start Month: 1
Start Year: 2026

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.000621
SO_x	0.000068
NO_x	0.011298
CO	0.009490

Pollutant	Emissions Per Year (TONs)
PM 10	0.000859
PM 2.5	0.000859
Pb	0.000000
NH_3	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH_4	0.000255
N_2O	0.000255

Pollutant	Emissions Per Year (TONs)
CO_2	13.559289
CO_2e	13.573298

15.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 2500
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value ($MMBtu/ft^3$): 0.00105
Energy Intensity ($MMBtu/ft^2$): 0.0949

- Default Settings Used: Yes

- Boiler/Furnace Usage
Operating Time Per Year (hours): 900 (default)

15.3 Heating Emission Factor(s)

- Heating Criteria Pollutant Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3
5.5	0.6	100	84	7.6	7.6		

- Heating Greenhouse Gasses Pollutant Emission Factors (lb/1000000 scf)

CH_4	N_2O	CO_2	CO_2e
2.26	2.26	120019	120143

15.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year

FC_{HER}= HA * EI / HV / 1000000

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement ($MMBtu/ft^2$)
HV: Heat Value ($MMBTU/ft^3$)
1000000: Conversion Factor

- Heating Emissions per Year

HE_{POL}= FC * EF_{POL} / 2000

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

16. Heating

16.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 4. AGE Facility C&D with New Shop, Administrative Space and Covered Storage - Alternative 1

- Activity Description:

Additional heating area = 22,656 square feet

- Activity Start Date

Start Month: 1
Start Year: 2026

- Activity End Date

Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.003394
SO_x	0.000370

Pollutant	Emissions Per Year (TONs)
PM 10	0.004690
PM 2.5	0.004690

NO_x	0.061711
CO	0.051837

Pb	0.000000
NH_3	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH_4	0.001395
N_2O	0.001395

Pollutant	Emissions Per Year (TONs)
CO_2	74.064479
CO_2e	74.141000

16.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 22656
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value ($MMBtu/ft^3$): 0.00105
Energy Intensity ($MMBtu/ft^2$): 0.0572

- Default Settings Used: Yes

- Boiler/Furnace Usage
Operating Time Per Year (hours): 900 (default)

16.3 Heating Emission Factor(s)

- Heating Criteria Pollutant Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3
5.5	0.6	100	84	7.6	7.6		

- Heating Greenhouse Gasses Pollutant Emission Factors (lb/1000000 scf)

CH_4	N_2O	CO_2	CO_2e
2.26	2.26	120019	120143

16.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year
FC_{HER}= HA * EI / HV / 1000000

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement ($MMBtu/ft^2$)
HV: Heat Value ($MMBTU/ft^3$)
1000000: Conversion Factor

- Heating Emissions per Year
HE_{POL}= FC * EF_{POL} / 2000

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

17. Heating

17.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Remove

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 4. AGE Facility C&D with New Shop, Admin Space and Covered Storage - Alternative 1

- Activity Description:
Heating square feet removed - 24,097 square feet

- Activity Start Date
Start Month: 1
Start Year: 2026

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	-0.003610
SO_x	-0.000394
NO_x	-0.065636
CO	-0.055134

Pollutant	Emissions Per Year (TONs)
PM 10	-0.004988
PM 2.5	-0.004988
Pb	0.000000
NH_3	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH_4	-0.001483
N_2O	-0.001483

Pollutant	Emissions Per Year (TONs)
CO_2	-78.775236
CO_2e	-78.856625

17.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 24097
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value (MMBtu/ft^3): 0.00105
Energy Intensity (MMBtu/ft^2): 0.0572

- Default Settings Used: Yes

- Boiler/Furnace Usage
Operating Time Per Year (hours): 900 (default)

17.3 Heating Emission Factor(s)

- Heating Criteria Pollutant Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3
5.5	0.6	100	84	7.6	7.6		

- Heating Greenhouse Gasses Pollutant Emission Factors (lb/1000000 scf)

CH_4	N_2O	CO_2	CO_2e
2.26	2.26	120019	120143

17.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year
FC_{HER}= HA * EI / HV / 1000000

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement ($MMBtu/ft^2$)
HV: Heat Value ($MMBTU/ft^3$)
1000000: Conversion Factor

- Heating Emissions per Year
HE_{POL}= FC * EF_{POL} / 2000

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

18. Emergency Generator

18.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 4. AGE Facility C&D with New Shop, Administrative Space and Covered Area - Alternative 1

- Activity Description:
Added one diesel emergency generator for backup power.

- Activity Start Date
Start Month: 1
Start Year: 2026

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.005650
SO_x	0.004759
NO_x	0.023288
CO	0.015552

Pollutant	Emissions Per Year (TONs)
PM 10	0.005083
PM 2.5	0.005083
Pb	0.000000
NH_3	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH_4	0.000094
N_2O	0.000019

Pollutant	Emissions Per Year (TONs)
CO_2	2.328750
CO_2e	2.693250

18.2 Emergency Generator Assumptions

- Emergency Generator
Type of Fuel used in Emergency Generator: Diesel
Number of Emergency Generators: 1

- Default Settings Used: Yes

- Emergency Generators Consumption
Emergency Generator's Horsepower: 135 (default)
Average Operating Hours Per Year (hours): 30 (default)

18.3 Emergency Generator Emission Factor(s)

- Emergency Generators Criteria Pollutant Emission Factor (lb/hp-hr)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251		

- Emergency Generators Greenhouse Gasses Pollutant Emission Factor (lb/hp-hr)

CH_4	N_2O	CO_2	CO_2e
0.000046297	0.000009259	1.15	1.33

18.4 Emergency Generator Formula(s)

- Emergency Generator Emissions per Year
$AE_{POL} = (NGEN * HP * OT * EF_{POL}) / 2000$

AE_{POL}: Activity Emissions (TONs per Year)
NGEN: Number of Emergency Generators
HP: Emergency Generator's Horsepower (hp)
OT: Average Operating Hours Per Year (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hp-hr)

19. Heating

19.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Remove

- Activity Location
County: Lanier; Lowndes
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: PROJECT 10. Demolish Eleven Buildings -Alternative 1

- Activity Description:
Removed heating area - 8,855 square feet from proposed demolition of buildings

- Activity Start Date
Start Month: 1
Start Year: 2026

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	-0.001612
SO_x	-0.000176
NO_x	-0.029306
CO	-0.024617

Pollutant	Emissions Per Year (TONs)
PM 10	-0.002227
PM 2.5	-0.002227
Pb	0.000000
NH_3	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH_4	-0.000662
N_2O	-0.000662

Pollutant	Emissions Per Year (TONs)
CO_2	-35.172568
CO_2e	-35.208907

19.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 8855
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value ($MMBtu/ft^3$): 0.00105
Energy Intensity ($MMBtu/ft^2$): 0.0695

- Default Settings Used: Yes

- Boiler/Furnace Usage
Operating Time Per Year (hours): 900 (default)

19.3 Heating Emission Factor(s)

- Heating Criteria Pollutant Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3
5.5	0.6	100	84	7.6	7.6		

- Heating Greenhouse Gasses Pollutant Emission Factors (lb/1000000 scf)

CH_4	N_2O	CO_2	CO_2e
2.26	2.26	120019	120143

19.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year

FC_{HER}= HA * EI / HV / 1000000

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement ($MMBtu/ft^2$)
HV: Heat Value ($MMBTU/ft^3$)
1000000: Conversion Factor

- Heating Emissions per Year

HE_{POL}= FC * EF_{POL} / 2000

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

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