FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT OF CONSTRUCTION AND OPERATION OF A PASS ROAD GATE

KEESLER AIR FORCE BASE
BILOXI, MISSISSIPPI

PREPARED BY:

Department of the Air Force

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FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT OF
CONSTRUCTION AND OPERATION OF A PASS ROAD GATE
KEESLER AIR FORCE BASE, BILOXI, MISSISSIPPI

Pursuant to the provisions of the National Environmental Policy Act of 1969 (NEPA) (Title 42 of the *United States Code* §§ 4321–4347), Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (Title 40 of the *Code of Federal Regulations* [CFR] Parts 1500–1508), and Air Force Environmental Impact Analysis Process (EIAP) regulations (32 CFR Part 989), the Department of the Air Force (DAF) has prepared an Environmental Assessment (EA) to evaluate potential environmental effects associated with the proposed construction and operation of a new Pass Road gate at Keesler Air Force Base (AFB) in Biloxi, MS. The Proposed Action would include demolition of existing gate facilities and construction and operation of the new gate facilities, related utilities and infrastructure, new roadway alignment and intersection, and rerouting of a portion of the I-81 running track. The Proposed Action would also include construction of a new school drop-off area, to replace the existing drop-off, for schoolchildren who live in Bayridge military family housing community on Keesler AFB. The EA is hereby incorporated by reference.

PURPOSE OF AND NEED FOR ACTION (EA § 1.3, page 1-3): The purpose of the Proposed Action is for the DAF to construct and operate a new antiterrorism/force protection- (AT/FP-) compliant gate for privately owned vehicles (POVs) at the Pass Road entrance to Keesler AFB.

The existing gate configuration does not have enough space available to accommodate required security measures to make it compliant with either AT/FP or Department of Defense (DoD) Unified Facilities Criteria (UFC) standards. It does not comply with UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*, and UFC 4-022-01, *Entry Control Facilities/ Access Control Points*. The existing school drop-off area also does not comply with UFC and AT/FP requirements. The new AT/FP- and UFC-compliant gate and the new school drop-off area are needed to improve base security, the safety of personnel and schoolchildren, gate capacity, traffic flow, and the base's public image.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

PROPOSED ACTION (EA § 2.1, pages 2-1): The Proposed Action is to construct and operate a new AT/FP- and UFC-compliant Pass Road gate on Keesler AFB. The proposed new gate would be sited along a new roadway leading onto the base in the same general location as the existing Pass Road Gate (EA Figure 2-1, p. 2-2). The proposed new gate would have an identification check canopy, a guard booth, a POV inspection canopy, Security Forces parking, chase vehicle parking, a gatehouse, an overwatch facility, and a backup generator. The gate would have support spaces, such as restrooms and telecommunications, mechanical, and electrical rooms. A proposed new roadway would serpentine north from the location of the existing Pass Road Gate to the new gate, then continue north to where it would exit onto Ploesti Drive on Keesler AFB, about one-fifth of a mile north of the new gate. A new school drop-off area also would be constructed to replace the existing school drop-off area.

As part of the Proposed Action, the northern portion of Ploesti Drive between the existing Pass Road Gate and the new intersection with the new roadway would be realigned and require rerouting a portion of the I-81 running track that currently parallels Ploesti Drive. Additionally, approximately one-third (37 of 112) of the live oak trees (*Quercus virginiana*) in the project area might have to be removed. Live oak trees older than 150 years have been designated by the city of Biloxi as "heritage trees," which are managed under the Keesler AFB's Natural Resources Management Program. The Wing Commander's approval would be required to remove any live oak tree on the base that is larger than 26 inches diameter at breast height (dbh).

ALTERNATIVES (EA § 2.4, page 2-4): The EA evaluates two action alternatives and a No Action Alternative.

- **Alternative 1 (EA § 2.4.1, page 2-4)**: Build a new Pass Road entry gate north of the location of the existing gate (EA Figure 2-2, page 2-6). Under Alternative 1, the intersection of the new roadway and Ploesti Drive would be south of an existing recreational vehicle (RV) storage area.
- **Alternative 2 (EA § 2.4.2, page 2-4)**: Implement the Proposed Action as described for Alternative 1 but with the northern portion of the new roadway aligned differently (EA Figure 2-3, page 2-7). The new roadway from the terminus of Pass Road to the northern extent of the school drop-off area would be the same as in Alternative 1. North of that point, however, the new roadway would parallel Rodeo Drive to a point between Wiltshire Boulevard and Sunset Boulevard, where the new intersection with Ploesti Drive would be located. The northern portion of Ploesti Drive also would be realigned differently than under Alternative 1, resulting in a new longer segment of Ploesti Drive and in the location of the existing RV storage area. Keesler AFB is in the process of moving the existing RV storage area to a different location on base, under a separate action.
- **No Action Alternative (EA § 2.4.3, page 2-4)**: CEQ regulations require analysis of the No Action Alternative. The No Action Alternative assumes the Proposed Action would not be implemented. Although the No Action Alternative does not meet the DAF's purpose of or need for an AT/FP- and UFC- compliant gate, it is a baseline against which the effects of implementing the Proposed Action alternatives were evaluated.

ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION (EA § 2.5, page 2-7): As part of the planning process, Keesler AFB systematically evaluated all siting constraints, operational issues, and other factors to identify the set of project alternatives that would satisfy the purpose of and need for the Proposed Action. The Proposed Action would be implemented to provide an AT/FP-compliant gate for POVs with enough space to accommodate required security measures at the Pass Road entrance to Keesler AFB. As such, locations for the gate at other entry points (i.e., not at the terminus of Pass Road) were not considered. Alternatives considered were those that could be accommodated within the available space near the existing Pass Road Gate. Other configurations of the realigned approach and gate could be accommodated, but configurations other than the two analyzed in the EA would not have improved upon the alternatives analyzed in any material way. Alternatives other than those described above, therefore, are not analyzed.

ENVIRONMENTAL CONSEQUENCES

SUMMARY OF EFFECTS (EA §§ 3.2–3.16, pages 3-2 to 3-43; § 4.0, page 4-1). The EA analyzed environmental effects of the Proposed Action on land use and visual resources, airspace and airfield operations, air quality, noise, earth resources, water resources, biological resources, cultural resources, hazardous materials and wastes, utilities, transportation and traffic, safety and occupational health, climate change, sustainability and greening, and environmental justice and protection of children. No significant adverse effects on any of the resource areas analyzed in the EA would be expected from implementing either Alternative 1 or Alternative 2. Both alternatives would result in long-term beneficial effects on transportation and traffic, safety and occupational health, and protection of children. The No Action Alternative would continue the existing long-term adverse effects on transportation and traffic, safety and occupational health, and protection of children.

The effects of implementing the Proposed Action under either action alternative are summarized below and discussed in detail in the EA.

Short-term increases in emissions of air pollutants, noise, soil erosion, sediment in stormwater and surface waters, and spills and leakage of hazardous materials and waste to landfills from implementing the Proposed Action (under Alternative 1 or Alternative 2) would be expected to result in less-than-significant adverse effects. There would be no change in land use. No adverse effects on airspace and airfield operations would be expected; however, a permanent airfield waiver would be required because the project area is in the clear zone of the Keesler AFB airfield. The new waiver will replace the existing one for the current gate location. Under either alternative, approximately one-third (37 of 112) of the live oak trees and a couple of dozens of trees of other species in the project area would be removed. The live oak trees that would be removed vary in size from 4 inches to 48 inches diameter at breast height (dbh). The Wing Commander's approval would be required to remove any live oak tree on the base that is larger than 26 inches dbh. Removal of the trees, however, would not substantially reduce or affect the viability of local populations of the affected tree species. There are no historic properties in the project area and, therefore, no historic properties would be affected by either alternative.

The proposed project area is adjacent to Environmental Restoration Program Site Landfill Site No. 1, a historic landfill, and, therefore, construction activities would be coordinated with base personnel so they would not interfere with ongoing sampling efforts or damage installed monitoring wells. Demand on infrastructure and utilities under either alternative would be similar to the current demand of the existing Pass Road Gate. Increased stormwater generation is expected to result from expanded impervious surfaces; however, adherence to Section 438 of the Energy Independence and Security Act would incorporate permanent controls to properly manage stormwater. Therefore, less-than-significant adverse effects would be expected from increased stormwater.

Under both alternatives, short-term less-than-significant adverse effects would be caused by changes in traffic patterns attributable to the temporary closure of the Pass Road Gate during construction. There would be long-term beneficial effects on traffic patterns on local roads surrounding Keesler AFB because the reconfigured gate would introduce no new traffic at the gate and vehicles waiting for inspection would not back up beyond the gate onto Pass Road and off the base. There would be less-than-significant adverse effects on climate change and

sustainability. No effects on environmental justice would be expected. The DAF and its contractors would implement appropriate safety measures and follow health regulations during construction to protect the health and safety of children from increased safety risk of short-term less-than-significant adverse effects. Long-term beneficial effects on the protection of children would be expected from improved gate access and pedestrian safety resulting from constructing the new AT/FP- and UFC-compliant school drop-off area. Based on the review of on- and off-base projects, none of them have effects that, when combined with those of the Proposed Action, could contribute to cumulative effects.

PERMIT/WAIVER REQUIREMENTS AND BEST MANAGEMENT PRACTICES

No mitigation measures would be necessary to reduce adverse impacts to below significant levels. Permit and/or waiver requirements and best management practices specified in the EA would be implemented to manage potential effects.

PUBLIC REVIEW/INTERAGENCY COORDINATION

On November 18, 2021, the DAF distributed Interagency and Intergovernmental Coordination for Environmental Planning letters to the agencies in Appendix A of the EA, informing them of the Proposed Action and requesting their input on its potential effects. The DAF also distributed letters to four federally recognized American Indian Tribes known to have an historical connection to the land on the base. They are the Jena Band of Choctaw Indians, Choctaw Nation of Oklahoma, Mississippi Band of Choctaw Indians, and Tunica-Biloxi Tribe of Louisiana. The DAF received responses from the U.S. Fish and Wildlife Service, Choctaw Nation of Oklahoma, and the Mississippi Department of Archives and History (MDAH). The USFWS stated that no threatened or endangered species or designated critical habitat areas would be impacted by the proposed project and it does not anticipate that any migratory birds (protected by the Migratory Bird Treaty Act) would be impacted. The Choctaw Nation of Oklahoma concurred with the DAF's finding of "no historic properties affected;" however, the tribe asked that work be stopped and their office contacted immediately in the event that American Indian artifacts or human remains are encountered. MDAH requested that a cultural resources survey be conducted of the project area prior to an effects determination and, in November 2022 in response, Keesler AFB conducted a Phase I archaeological survey of approximately 20 acres project area. The DAF provided the results of the survey and proposed determination of effect for the project to the same consulting parties discussed above in March 2023. MDAH provided their concurrence on the survey results and the determination of effect in April 2023, and requested their office be contacted if any undocumented cultural resources were encountered during project execution. The Tunica-Biloxi Tribe of Louisiana and Choctaw Nation of Oklahoma concurred with the survey results and the determination of effect in March and April 2023, respectively. Appendix A of the EA provides copies of the letters the DAF sent and responses it received.

On May 5, 2023, the DAF distributed a Notice of Availability (NOA) of the Draft EA and Draft Finding of No Significant Impact (FONSI) to the agencies and to the four federally recognized American Indian Tribes.

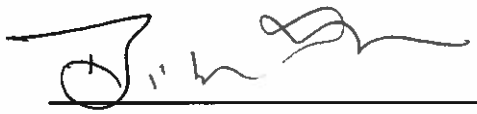
On May 8, 2023, the DAF published the NOA in the Biloxi Sun-Herald. The Draft EA and Draft FONSI were available for review and comment for a period of 30 days at: https://www.keesler.af.mil/about-us/resources/environmental-information/. Copies of the Draft

EA and Draft FONSI were also available for review at the Biloxi Library at 2047 Pass Road, Biloxi, MS 39531.

The DAF received two responses—from MS Department of Marine Resources (MDMR) Bureau of Wetlands Permitting and MDAH. Neither response raised concerns about the proposed project and action alternatives, the EA, or the FONSI.

FINDING OF NO SIGNIFICANT IMPACT

Based on my review of the facts and analyses contained in the attached EA—conducted under the provisions of NEPA, CEQ regulations, and EIAP and based on the results of the various consultations and review of the comments submitted during the 30-day public comment period—I conclude that the environmental effects of implementing the Proposed Action under Alternative 1 or Alternative 2 would not be significant. Accordingly, an Environmental Impact Statement is not required. The signing of this Finding of No Significant Impact completes the environmental impact analysis process.



BILLY E. POPE, Jr., Colonel, USAF
Commander, 81st Training Wing

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FINAL

ENVIRONMENTAL ASSESSMENT OF CONSTRUCTION AND OPERATION OF A PASS ROAD GATE

KEESLER AIR FORCE BASE
BILOXI, MISSISSIPPI

PREPARED BY:

Department of the Air Force

August 2023

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Environmental Assessment of
Construction and Operation of a Pass Road Gate

Keesler Air Force Base
Biloxi, Mississippi

Responsible Agencies: Department of the Air Force, Air Education and Training Command, 81st Training Wing, Keesler Air Force Base (AFB), Mississippi

Affected Location: Keesler AFB, Harrison County, Mississippi

Proposed Action: Construction and operation of a new antiterrorism/force protection- (AT/FP-) compliant entry gate at Pass Road with a new school drop-off area

Report Designation: Environmental Assessment

Responsible Agency: Department of the Air Force

Keesler AFB Point of Contact: Kristina A. Dean, 2d Lt, 81TRW/PA, Keesler AFB, MS 39534; 81trw.pamain@us.af.mil

Abstract: Keesler AFB proposes to construct and operate a new AT/FP-compliant gate at Pass Road on the west side of the base. The existing gate needs to be relocated and redesigned to meet current Unified Facilities Criteria (UFC) requirements. The proposed location for the new gate is north of the existing Pass Road Gate at the termination of Pass Road of Keesler AFB (or Gate 7). A new roadway would serpentine north from the current Pass Road Gate to the proposed new gate location, then continue north to where it would exit onto Ploesti Drive on Keesler AFB, about one-fifth of a mile north of the new gate. In addition, new roadway alignment and intersection, rerouting a portion of the I-81 running track, and a new drop-off area for schoolchildren living in Bayridge, the on-base military family housing community, would be constructed to replace the existing school drop-off area. The new drop-off area would be updated to be compliant with UFC requirements.

This Environmental Assessment (EA) considers potential environmental effects of the Proposed Action on the human and natural environments. It documents the analysis of two alternatives for the Proposed Action (Alternative 1 and Alternative 2) and the No Action Alternative. The two Proposed Action alternatives differ in how the northern section of the new roadway would be aligned, in how Ploesti Drive would be realigned to the northern terminus of the new roadway, and in cost. The EA analysis finds that implementing the Proposed Action would have no significant effects under either of the alternatives or the No Action Alternative.

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TABLES

FIGURES

APPENDICES

ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
81 TRW	81st Training Wing
AADT	average annual daily traffic
ACM	asbestos-containing materials
AFB	Air Force base
AFI	Air Force instruction
AFFF	Aqueous Film Forming Foam
AFPD	Air Force Policy Directive
ANO	Airport Noise Overlay
AQCR	air quality control region
AT/FP	antiterrorism/force protection
AVB	active vehicle barrier
BASH	Bird/Wildlife Aircraft Strike Hazard
BMP	best management practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGP	Construction General Permit
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CRMP	Cultural Resources Management Plan
CWA	Clean Water Act
CZMA	Coastal Zone Management Act of 1972
DAF	Department of the Air Force
dB	decibels
dBA	A-weighted decibels
dbh	diameter at breast height
DNL	day-night sound level
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
EPA	Environmental Protection Agency
ERP	Environmental Restoration Program
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact

ft	foot, feet
GHG	Greenhouse gas
HASP	Health and Safety Plan
HSWA	Hazardous and Solid Waste Amendments
HUC	Hydrologic Unit Code
HWMP	Hazardous Waste Management Plan
I-	Interstate
kV	kilovolts
LBP	lead-based paint
L_{eq}	equivalent sound level
LF001	Landfill Site No. 1
LOS	level of service
LUC	land use control
$\mu g/m^3$	micrograms per cubic meter
MCLs	maximum contaminant levels
MCLG	Maximum Contaminant Level Goals
MDAH	Mississippi Department of Archives and History
MDEQ	Mississippi Department of Environmental Quality
MDMR	Mississippi Department of Marine Resources
mgd	million gallons per day
MS4	municipal separate storm sewer system
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
ng/L	nanograms per liter
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NOI	Notice of Intent
NOx	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyl
PFAS	per- and polyfluoroalkyl substances
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
PGA	peak ground acceleration
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter

POL	petroleum, oils, and lubricants
POV	privately owned vehicle
ppb	parts per billion
ppt	parts per trillion
PPE	personal protective equipment
ppm	parts per million
RV	recreational vehicle
RCRA	Resource Conservation and Recovery Act
SCC	social cost of carbon
SDS	Safety Data Sheets
SDDCTEA	Military Surface Deployment and Distribution Command Transportation Engineering Agency
SO_2	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasure
SWMP	Stormwater Management Plan
SWMU	Solid Waste Management Unit
SWPPP	Stormwater Pollution Prevention Plan
tpy	tons per year
UFC	Unified Facilities Criteria
U.S.	United States (adjective only)
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
VQ	Visiting quarters
WOTUS	waters of the United States

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1.0 PURPOSE OF AND NEED FOR ACTION

1.1 Introduction

The Department of the Air Force (DAF) has prepared this Environmental Assessment (EA) to evaluate potential environmental effects associated with the proposed construction and operation of a new Pass Road gate on Keesler Air Force Base (AFB) in Biloxi, MS. The Proposed Action would include demolition of existing gate facilities and construction and operation of the new gate facilities, related utilities and infrastructure, new roadway alignment and intersection, rerouting a portion of the I-81 running track. The proposed action would also include construction of a new school drop-off area, to replace the existing, for schoolchildren who live in Bayridge military family housing community on Keesler AFB.

The DAF prepared this EA pursuant to the National Environmental Policy Act of 1969 (NEPA) (Title 42 of the *United States Code* [U.S.C.] §§ 4321–4347); Council on Environmental Quality (CEQ) Final Rule dated July 16, 2020, *Update to the Regulations for Implementing the Procedural Provisions of National Environmental Policy Act* (Title 40 of the *Code of Federal Regulations* [CFR] Parts 1500–1508); and the DAF Environmental Impact Analysis Process (EIAP) (32 CFR Part 989). The CEQ Final Rule dated April 20, 2022, *National Environmental Policy Act Implementing Regulations Revisions*, amends certain provisions of the regulations modified in 2020. Revisions to the 2020 CEQ regulations update went into effect on May 20, 2022.

1.2 Location and Mission

Keesler AFB is located on the Mississippi Gulf Coast, within the boundaries of the City of Biloxi in Harrison County, MS (Figure 1-1). The base occupies 1,646 acres on a narrow peninsula bordered by the Back Bay of Biloxi on the north and the Gulf of Mexico on the south. The main base consists of 1,447 acres and is densely developed. U.S. Highway (U.S.) 90 parallels the southern border of the base and provides access to Interstate (I-) 10 by U.S. 49 and U.S. 110.

Keesler AFB is home to the Air Education and Training Command's 81st Training Wing (81 TRW), which comprises three large groups: the 81st Training Group (the largest electronics training group in the DAF), the 81st Medical Group (the second largest medical facility in the DAF), and the 81st Mission Support Group. Several squadrons make up each of the three groups. On Keesler AFB, the 81 TRW hosts Headquarters Second Air Force, the 403rd Wing (Air Force Reserve), the 85th Engineering Installation Squadron, the Mathies Noncommissioned Officer Academy, and a Marine Corps Detachment. Keesler AFB's primary mission is to provide technical training, and it is the Electronics Training Center of Excellence for the DAF. A daily average of 3,400 students is enrolled in more than 300 training programs taught at the base.

Keesler AFB proposes to construct and operate a new antiterrorism/force protection- (AT/FP-) compliant gate on the western boundary of the base. The existing Pass Road Gate does not comply with Department of Defense (DoD) Unified Facilities Criteria (UFC), including UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*, and UFC 4-022-01, *Entry Control Facilities/ Access Control Points*. The gate needs to be relocated and a new approach roadway constructed for it to be compliant with DoD standards. The proposed location for the new gate is north of the existing gate. A new roadway would serpentine north from the existing Pass Road Gate to the new gate location, then continue north to where it would exit onto Ploesti Drive on Keesler AFB, about one-fifth of a mile north of the new gate. A new drop-off area for schoolchildren living in Bayridge military family housing community on-base, also would be

constructed to replace the existing school drop-off area and updated to comply with AT/FP standards.

Figure 1-1. Keesler Air Force Base Location

1.3 Purpose and Need

The purpose of the Proposed Action is for the DAF to construct and operate a new AT/FP-compliant gate for privately owned vehicles (POVs) at the Pass Road entrance to Keesler AFB. The new school drop-off area would also comply with UFC and AT/FP requirements.

The existing gate configuration does not have enough space available to accommodate required security measures to make it AT/FP-compliant and it does not meet current UFC requirements. The existing school drop-off area also does not comply with UFC and AT/FP requirements. The new AT/FP-compliant gate and the new school drop-off area are needed to improve base security, the safety of personnel and schoolchildren, gate capacity, traffic flow, and the base's public image.

1.4 Decision to be Made

The DAF must decide whether the socioeconomic and environmental effects of implementing the Proposed Action would support a Finding of No Significant Impact (FONSI) or would require publishing in the *Federal Register* a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS). The DAF will publish an NOI if the potential adverse environmental effects associated with implementing the Proposed Action remain significant even after all reasonable mitigation measures have been implemented.

1.5 Cooperating Agencies and Intergovernmental Coordination / Consultation

1.5.1 Cooperating Agencies

No cooperating agencies were required for the EA.

1.5.2 Interagency and Intergovernmental Coordination and Consultations

The Intergovernmental Coordination Act (29 CFR § 1902.5) and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, require the proponent of an action to issue intergovernmental notifications before making any detailed statement of environmental effects. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning, the proponent must notify concerned federal, state, and local agencies and allow them enough time to evaluate potential environmental effects of a proposed action. Comments from these agencies are subsequently incorporated into the EA.

On November 18, 2021, the DAF distributed Interagency and Intergovernmental Coordination for Environmental Planning letters to the agencies, informing them of the Proposed Action and requesting their input on its potential effects. The agencies are listed in Appendix A. Similarly, on November 18, 2021, the DAF distributed letters to four federally recognized American Indian Tribes known to have an historical connection to the land on the base. They are the Choctaw Nation of Oklahoma, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, and Tunica-Biloxi Tribe of Louisiana. The DAF received responses from the U.S. Fish and Wildlife Service (USFWS), Choctaw Nation of Oklahoma, and Mississippi Department of Archives and History (MDAH). The USFWS stated no threatened or endangered species or designated critical habitat areas would be impacted by the proposed project and it does not anticipate that any migratory birds (protected by the Migratory Bird Treaty Act) would be impacted. The Choctaw Nation of Oklahoma concurred with DAF's finding of "no historic properties affected;" however, the tribe asked that work be stopped and their office contacted immediately in the event that American Indian artifacts or human remains are encountered. MDAH requested that a cultural resources survey be conducted of the project area prior to an effects determination and, in

November 2022, Keesler AFB conducted a Phase I archaeological survey of the approximately 20 acres project area. The DAF provided the results of the survey and proposed determination of effect for the project to the same consulting parties discussed above in March 2023. In April 2023, MDAH provided their concurrence on the survey results and the DAF's determination of "no historic properties affected." MDAH also requested their office be contacted if any undocumented cultural resources were encountered during project execution. The Tunica-Biloxi Tribe of Louisiana and Choctaw Nation of Oklahoma, in March and April 2023, respectively, concurred with the survey results and the DAF's proposed determination of effect. Appendix A provides copies of the letters the DAF sent and responses it received.

1.6 Public and Agency EA Review

On May 5, 2023, the DAF distributed a Notice of Availability (NOA) of the Draft EA and Draft Finding of No Significant Impact (FONSI) to the agencies and to the four federally recognized American Indian Tribes.

On May 8, 2023, the DAF published the NOA in the *Biloxi Sun-Herald*. The Draft EA and Draft FONSI were available for review and comment for a period of 30 days at: https://www.keesler.af.mil/about-us/resources/environmental-information/. Copies of the Draft EA and Draft FONSI were also available for review at the Biloxi Library at 2047 Pass Road, Biloxi, MS 39531.

The DAF received two responses—from MS Department of Marine Resources (MDMR) Bureau of Wetlands Permitting and MDAH. Neither response raised concerns about the proposed project and action alternatives, the EA, or the FONSI. The NOA and comments received are provided in Appendix B, and following is a summary of the comments:

- Bureau of Wetlands Permitting, MDMR stated no objections provided there are no direct or indirect impacts to coastal wetlands and no coastal program agency objects to the proposed action. The Bureau added if wetlands impacts are anticipated, the DAF should submit an application to its office for review.
- MDAH stated their determination that no cultural resources are likely to be affected and no objection with the proposed undertaking. The agency requested the DAF contact them should there be additional work in connection with the project, or any changes in the scope of work, to ensure appropriate comments in compliance with the applicable regulations.

1.7 Applicable Laws and Environmental Regulations

1.7.1 National Environmental Policy Act

Under NEPA, a federal agency must prepare an EA to analyze the potential effects on the human and natural environments of a proposed action and other reasonable alternatives, including the No Action Alternative. If the analyses presented in an EA indicate that implementing the proposed action would not result in significant environmental effects, a FONSI is prepared. A FONSI briefly presents reasons why a proposed action would not have a significant effect on the human or natural environment. If significant environmental issues are identified that cannot be mitigated to insignificance, either an EIS would be prepared or the proposed action would be abandoned and no action would be taken.

1.7.2 Integration of Other Environmental Statutes and Regulations

Department of the Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, states that the DAF will comply with applicable federal, state, and local environmental laws and regulations, including NEPA. The EIAP is the DAF's implementing regulation for NEPA. This EA serves as a means for ensuring compliance with applicable federal statutes, including the Endangered Species Act (ESA) (16 U.S.C. §§ 1531–1544); Clean Water Act (CWA) (33 U.S.C. § 1251 *et seq.*); Clean Air Act (CAA) (42 U.S.C. §§ 7401–7671q); and National Historic Preservation Act (NHPA) (54 U.S.C. § 300101 *et seq.*) as well as with various EOs and applicable state statutes and regulations. The EA discusses key provisions of the statutes and EOs in more detail in the text to provide better understanding of their requirements and how they related to the Proposed Action.

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2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section of the EA describes the Proposed Action, the screening criteria, Alternatives 1 and 2, and the No Action Alternative.

2.1 Proposed Action

The Proposed Action is to construct and operate a new UFC- and AT/FP standards-compliant Pass Road gate on Keesler AFB. The proposed new gate would be along a proposed new roadway leading onto the base in the same general location as the existing Pass Road Gate (Figure 2-1). The new gate would have an identification check canopy, a guard booth, a POV inspection canopy, Security Forces parking, chase vehicle parking, a gatehouse, an overwatch facility, and a backup generator. The gate would have support spaces, such as restrooms and telecommunications, mechanical, and electrical rooms. A new roadway would serpentine north from the location of the existing Pass Road Gate to the new gate, then continue north to where it would exit onto Ploesti Drive on Keesler AFB, about one-fifth of a mile north of the new gate. A new drop-off area for schoolchildren living in Bayridge, the military family housing community on-base, also would be constructed to replace the existing school drop-off area. The new school drop-off area also would comply with UFC and AT/FP requirements.

As part of the Proposed Action, the northern portion of Ploesti Drive between the existing Pass Road Gate and the new intersection with the new roadway would be realigned and require rerouting a portion of the I-81 running track that currently parallels Ploesti Drive. The running track would likely be relocated to the east of the newly aligned road and connected to its sidewalk (Holland 2023a, personal communication). Additionally, approximately one-third (37 of 112) of the live oak trees (*Quercus virginiana*) in the project area would have to be removed. Live oak trees older than 150 years have been designated by the city of Biloxi as “Heritage Trees,” which are managed under the Keesler AFB’s Natural Resources Management Program. The Wing Commander’s approval would be required to remove any live oak tree on the base that is larger than 26 inches diameter at breast height (dbh).

2.2 Selection Standards

Following are the primary planning goals and selection standards for designing a new Pass Road Gate site:

- Ensure compliance with DoD standards for access control points and AT/FP standards.
- Provide adequate POV parking.
- Provide the required number of processing lanes.
- Increase POV queuing space.
- Provide a bidirectional POV inspection area.
- Provide pedestrian access and improve pedestrian safety.
- Improve school gate access and safety.
- Provide one set of active vehicle barriers (AVBs).

Figure 2-1. Site Map

The following publications provide other facility criteria design requirements that must be met:

- UFC 4-022-01 (July 2017)
- UFC 4-010-01 (August 2020)
- Military Surface Deployment and Distribution Command Transportation Engineering Agency (SDDCTEA) Pamphlet 55-15, *Traffic and Safety Engineering for Better Entry Control Facilities* (2019)

Keesler AFB examined the area near the existing Pass Road Gate to determine whether these requirements could be met by making improvements or whether a new gate site would be needed to meet the requirements. Based on their examination, it was determined that a new gate would be needed.

2.3 Screening of Alternatives

The DAF evaluated alternatives against the selection standards listed in Section 2.2 to determine whether they met the purpose of and need for the Proposed Action and should be carried forward for analysis in this EA. Table 2-1 lists the alternatives, including the No Action Alternative, and whether each alternative met the standards and other considerations.

Table 2-1. Pass Road Gate Alternatives Compared to Selection Standards

Selection Standard	Alternative 1	Alternative 2	No Action Alternative
Complies with AT/FP and UFC requirements	Yes	Yes	No
Provides adequate POV parking	Yes	Yes	No
Provides the required number of processing lanes	Yes	Yes	No
Increases POV queuing space	Yes	Yes	No
Provides a bidirectional POV inspection area	Yes	Yes	No
Provides pedestrian access and improves pedestrian safety	Yes	Yes	No
Improves school gate access and safety	Yes	Yes	No
Provides AVBs	Yes	Yes	No
Conforms to UFC 4-022-01, UFC 4-010-01, and SDDCTEA 55-15	Yes	Yes	No

Because Alternative 1 and Alternative 2 both meet all the selection standards, both alternatives have been carried forward in the EA for full analysis. The No Action Alternative is analyzed as prescribed by CEQ regulations.

2.4 Detailed Description of the Alternatives

2.4.1 Alternative 1

Alternative 1 is to build a new Pass Road entry gate north of the location of the existing gate (Figure 2-2), as described in Section 2.1. Under Alternative 1, the intersection of the new roadway and Ploesti Drive would be south of an existing recreational vehicle (RV) storage area. No threatened or endangered species, American Indian sacred sites or National Register of Historic Places- (NRHP-) eligible or listed cultural resources, or wetlands are known to be on the approximately 20 acres of the proposed project site.

2.4.2 Alternative 2

Alternative 2 is also on the same approximately 20 acres of the proposed project site. The alternative would implement the Proposed Action as described in Section 2.1 but with the northern portion of the new roadway aligned differently than in Alternative 1 (Figure 2-3). The new roadway from the terminus of Pass Road to the northern extent of the school drop-off area would be the same as in Alternative 1. North of that point, however, the new roadway would parallel Rodeo Drive to a point between Wiltshire Boulevard and Sunset Boulevard, where the new intersection with Ploesti Drive would be located. Rodeo Drive, Wiltshire Boulevard, and Sunset Boulevard are off-base and not part of the proposed new roadway. The northern portion of Ploesti Drive also would be realigned differently than under Alternative 1, resulting in a new longer segment of Ploesti Drive and in the location of the existing RV storage area. Keesler AFB is in the process of moving the existing RV storage area to a different location on base, under a separate action (see Section 4.0).

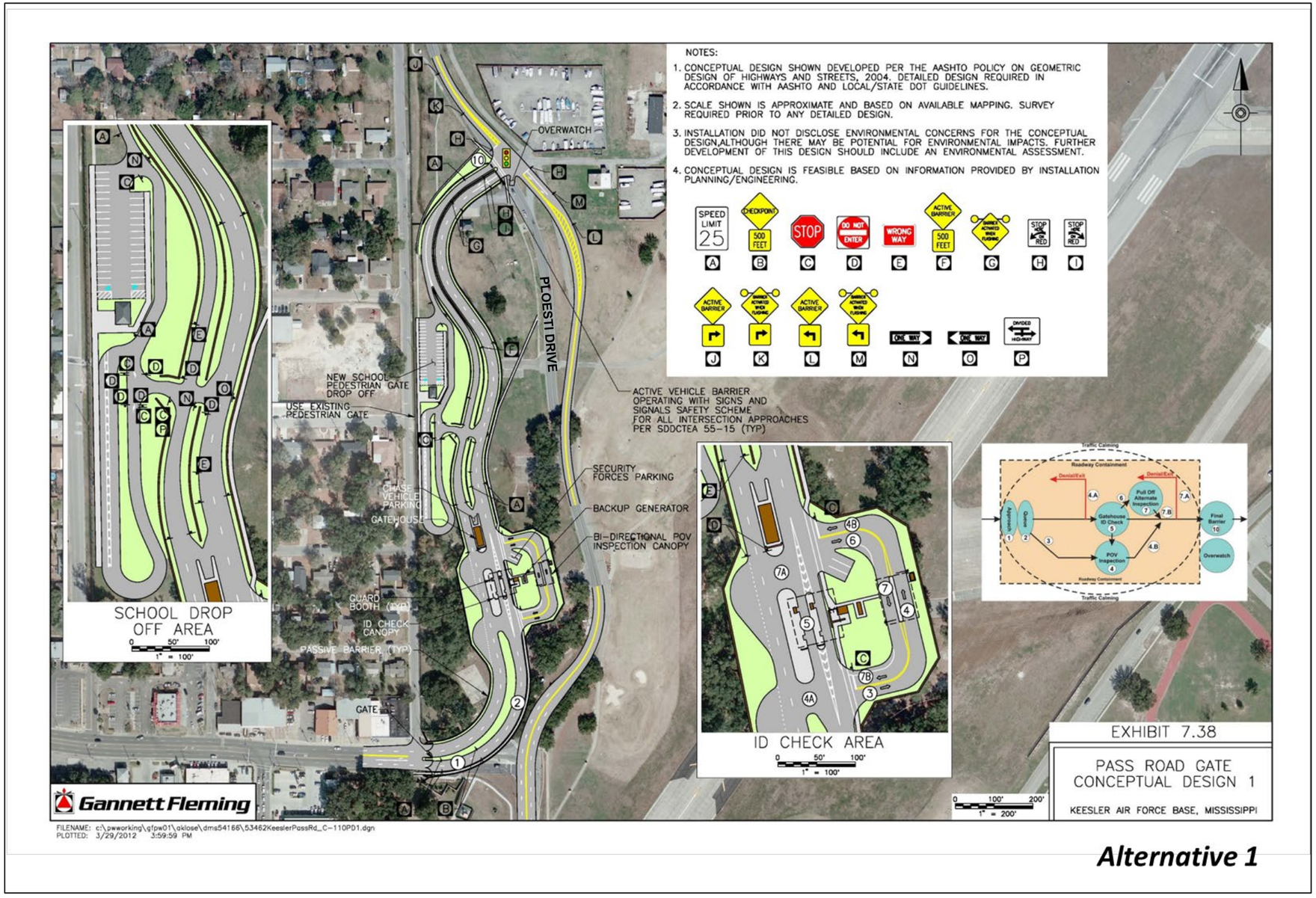
Facility construction details would be the same under both alternatives and other design and construction considerations would apply equally to Alternative 1 and Alternative 2. Alternative 2 has been estimated to cost about 15 percent more than Alternative 1.

2.4.3 No Action Alternative

Under the No Action Alternative, no new Pass Road entry gate would be constructed. The following conditions would continue or worsen:

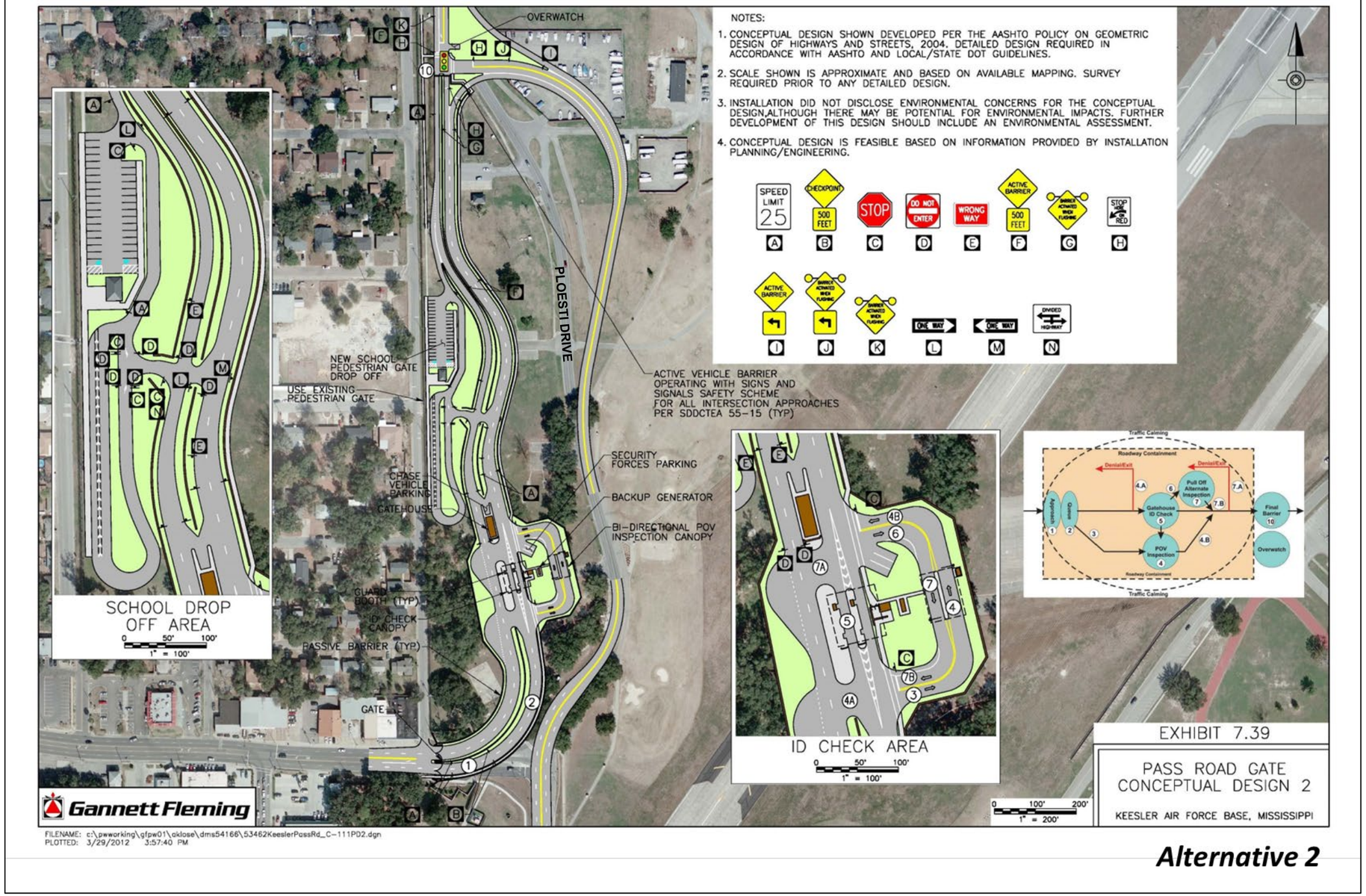
- The gate would not meet AT/FP or UFC requirements.
- Unsafe gate operations and unsafe conditions for personnel would continue to exist.

No changes in the current gate configuration at Pass Road would occur under the No Action Alternative. The No Action Alternative is included in the analysis as prescribed by CEQ regulations. It serves as a baseline against which the effects of implementing the Proposed Action alternatives were evaluated.



Source: Gannett Fleming 2012

Figure 2-2. Alternative 1



Source: Gannett Fleming 2012

Figure 2-3. Alternative 2

2.5 Alternatives Eliminated from Further Consideration

The DAF may expressly eliminate alternatives from detailed analysis based on reasonable selection criteria. In compliance with NEPA and 32 CFR Part 989, which implements the EIAP process, the DAF must consider reasonable alternatives for implementing the Proposed Action. As part of the planning process, Keesler AFB systematically evaluated all siting constraints, operational issues, and other factors to identify the set of project alternatives that would satisfy the purpose of and need for the Proposed Action. The Proposed Action would be implemented to provide an AT/FP-compliant gate for POVs with enough space to accommodate required security measures at the Pass Road entrance to Keesler AFB. As such, locations for the gate at other entry points (i.e., not at the terminus of Pass Road) were not considered. Alternatives considered were those that could be accommodated within the available space near the existing Pass Road Gate. Other configurations of the realigned approach and gate could be accommodated, but configurations other than the two analyzed in the EA would not have improved upon the alternatives analyzed in any material way. Alternatives other than those described above, therefore, are not analyzed.

2.6 SUMMARY OF POTENTIAL ENVIRONMENTAL CONSEQUENCES

The potential effects associated with the Action Alternatives 1 and 2 and the No Action Alternative are summarized in Table 2-2. The summary is based on information discussed in detail in Section 3.0, Affected Environment and Environmental Consequences, and includes a concise definition of each issue addressed in that narrative and the potential environmental effects associated with each alternative.

Table 2-2. Summary of Environmental Consequences by Resource Area

Resource Area	Alternative 1	Alternative 2	No Action Alternative
Land Use and Visual Resources	Negligible short-term adverse and long-term beneficial effects. Demolition and construction related short-term adverse effects on approximately 20 acres of previously disturbed land; 1.4 percent of the total land area of the main base operational area. Existing land use would remain unchanged. Once operational, long-term beneficial use of the land from the UFC- and AT/FP-compliant gate, school drop-off, and roadway, compatible with existing uses and future development. Short-term, less-than-significant adverse visual effects from demolition and construction. Long-term less-than-significant adverse effects loss of live oak trees located in the developed project area.	Similar to effects from Alternative 1.	No effects on land use and visual resources.
Airspace and Airfield Operations	No effects on airspace and airfield operations; a new permanent airfield waiver to replace the existing would be required because the proposed project area is also in the clear zone.	Same effects as Alternative 1.	No effects on airspace and airfield operations.
Air Quality	Short-term less-than significant adverse effects from demolition and construction activities; long-term negligible changes in operational emissions from a backup generator. Air emissions would not exceed the DAF's significance indicators or contribute to a violation of any federal, state or local air regulation.	Similar to effects from Alternative 1.	No effects on air quality.
Noise	Short-term less-than-significant adverse effects from noise related to demolition and construction activities. Noise related to increase in traffic along Ploesti Drive due to roadway reconfiguration would be negligible.	Similar to effects from Alternative 1.	No effects on the noise environment.
Earth Resources	Short-term less-than-significant adverse effects on soils and topography during construction; the DAF would implement proper segregation and preservation during construction and reuse across the site to promote revegetation during site final restoration.	Similar to effects from Alternative 1.	No effects on earth resources.

Resource Area	Alternative 1	Alternative 2	No Action Alternative
Water Resources	Short-term less-than-significant adverse effects on surface water from demolition and construction activities; minimized with the use of standard sediment and erosion control BMPs as required in the CGP. Long-term less-than-significant adverse effects from conversion of pervious to impervious cover; would be minimized through implementing BMPs as described in the Keesler AFB SWMP. No effects on groundwater because the area drains to an MS4 outfall discharging to surface water. Negligible effects on the floodplain would be expected because the Proposed Action in the 500-year floodplain would not alter floodplain elevation. No effects on coastal zone; would be fully compliant with the Mississippi Coastal Program.	Similar to effects from Alternative 1.	No effects on water resources.
Biological Resources	Long-term less-than-significant adverse effects on biological resources; loss of approximately one-third of the live oak trees (37 of 112) in the project area. The Wing Commander's approval would be required to remove any live oak tree on the base that is larger than 26 inches dbh. Removal of the trees would not substantially reduce the local population of any tree species, including live oak, or affect the viability of the local population of any tree species. No adverse effects on sensitive species would be expected. No threatened or endangered species or sensitive habitats occur in the project area.	Similar to effects from Alternative 1. Loss of approximately one-third of the live oak trees (37 of 112) in the project area.	No effects on biological resources.
Cultural Resources	In April 2023, MDAH concurred with Phase I Archaeological Survey results in the project area and the DAF's determination of no historic properties affected. The Tunica-Biloxi Tribe of Louisiana and Choctaw Nation of Oklahoma concurred with the results of the survey and proposed determination of effect in March and April 2023, respectively.	Same effects as Alternative 1.	No effects on cultural resources.
Hazardous Materials and Hazardous Wastes	Short-term less-than-significant, adverse effects during demolition and construction; all activities would be conducted in compliance with established management plans for hazardous materials and wastes, and spill prevention and response. Construction BMPs would be implemented at all sites. Operation and maintenance of the new Pass Road Gate would be similar to preconstruction activities and would not introduce additional hazardous materials usage or waste generation.	Similar to effects from Alternative 1.	No effects on hazardous materials and hazardous wastes.

Resource Area	Alternative 1	Alternative 2	No Action Alternative
Infrastructure and Utilities	Demand from construction activities would result in short-term negligible effects on the base's infrastructure and utilities. Compliance to Section 438 of the EISA would result in less-than-significant adverse effect from increased stormwater from increase impervious surface.	Similar to effects from Alternative 1.	No effects on infrastructure and utilities.
Transportation and Traffic	Short-term less-than-significant adverse effects from changes in traffic patterns attributable to the temporary closure of the Pass Road Gate during construction and redirection of traffic to the White Avenue Gate; temporary closure of the school drop-off area; and additional vehicles and day-labor traffic during construction. Long-term beneficial effects; the reconfigured gate would reduce back up beyond the gate onto Pass Road off the base. Drivers intending to head south after clearing inspection at the gate would have to travel an additional approximately three-fifths of a mile.	Similar to effects from Alternative 1. Once the RV storage area relocation is complete under a different action, daily traffic on Ploesti Drive might be slightly less than under the current configuration.	Long-term adverse effects of traffic at the gate and vehicles waiting for inspection at the Pass Road Gate causing back up beyond the gate on Pass Road off the base would continue.
Safety and Occupational Health	Short-term less-than significant adverse effects from construction activities would be minimized from implementing established base Standard Operating Procedures and preparing and implementing project-specific HASPs. Long-term beneficial effects on safety and occupational health from a new AT/FP-compliant gate and school drop-off.	Similar to effects from Alternative 1.	Existing Pass Road Gate would remain non-compliant of AT/FP and UFC criteria and long-term adverse effects to base security and the safety of personnel and schoolchildren would continue.
Climate Change	No future climate scenario or potential climate stressor would have appreciable effects on any element of the proposed new gate project.	Similar to effects from Alternative 1.	No effects on climate change.
Sustainability and Greening	Short-term generation of waste to landfills would occur during construction and demolition and existing open space would be converted to impervious cover. The DAF would incorporate sustainability and greening practices by identifying opportunities to reduce waste to landfills from demolition to be consistent with federal regulations and EOs. Opportunities to minimize waste include reusing, recycling, and composting materials or purchasing items produced from recycled materials. The proposed new Pass Road Gate would be implemented using sustainable design concepts.	Similar to effects from Alternative 1.	No effects on sustainability and greening.

Resource Area	Alternative 1	Alternative 2	No Action Alternative
Environmental Justice and Protection of Children	No environmental justice effects would be expected. Implementing Alternative 1 would not result in disproportionately adverse environmental or health effects on low-income or minority populations. Short-term less-than-significant adverse and long-term beneficial effects would be expected in the protection of children. Construction and operations activity would take place on the base separated from the off-base residential neighborhood by the installation boundary fence and controlled entry gate. Short-term effects from construction activity could increase the safety risk to children.	Similar to effects from Alternative 1.	No effects on environmental justice. A new UFC-compliant school drop-off area would not be constructed and long-term adverse effects to the safety of schoolchildren would continue.

Notes: AT/FP = antiterrorism/force protection; BMP = best management practice; CGP = Construction General Permit; dbh = diameter at breast height; EO = Executive Order; HASPs = Health and Safety Plans; MDAH = Mississippi Department of Archives and History; RV = recreational vehicle; SWMP = Stormwater Management Plan; UFC = Unified Facilities Criteria.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes relevant existing environmental conditions at Keesler AFB and potential effects resulting from implementing the Proposed Action and alternatives. In accordance with guidelines established by NEPA, CEQ regulations, and the EIAP, the impact analysis in this EA focuses only on aspects of the environment potentially subject to effects resulting from the Proposed Action and alternatives. This EA evaluates those effects on the following resources: land use and visual resources, airspace and airfield operations, air quality, noise, earth resources, water resources, biological resources, cultural resources, hazardous materials and wastes, utilities, transportation and traffic, safety and occupational health, climate change, sustainability and greening and environmental justice and protection of children.

Each alternative is evaluated for its potential to affect physical, biological, and socioeconomic resources in accordance with 40 CFR § 1508.1. In accordance with 40 CFR § 1501.3, the DAF analyzed the affected environment and degree of the potential effects of the action to determine whether they would be significant. The analysis of effects includes considering short- and long-term effects; whether effects are beneficial or adverse; their impact on public health and safety; and whether the action would violate federal, state, tribal, or local laws or regulations that protect the environment. This EA characterizes effects as follows:

- None—No effects are expected to occur.
- Negligible—The effect would not be readily perceptible when compared to existing conditions.
- Less than significant—The effect would be readily perceptible when compared to existing conditions, but not severe, widespread, or prolonged.
- Significant—The effect would be severe, widespread, or prolonged or exceed a regulatory threshold. The effect would be considered significant unless mitigable to a less-than-significant level.

3.1 Resource Areas Dismissed from Further Analysis

CEQ regulations in 40 CFR § 1501.9 state that the lead agency shall identify and eliminate from detailed study the issues or resources that are not significant or that have been covered by prior environmental reviews, narrowing the discussion of those issues in the document to a brief justification that demonstrates a less-than-significant effect on the human environment.

After considering information gathered, factors used to evaluate the potentially affected environment, and the degree of effect of the alternatives, the DAF determined that the following resources would not experience any measurable effects: geology (earth resources), wetlands (water resources), or socioeconomics, as described below. Accordingly, no further discussion of these resource areas is included in the EA analysis.

***Earth Resources—Geology*.** The project area is essentially flat and previously disturbed from past development activity. Additionally, the Proposed Action would not alter the geology of the area.

Water Resources—Wetlands. There are no wetlands on the proposed site. All wetlands on the base occur along the Back Bay of Biloxi (CEMML 2019).

Socioeconomics. The Proposed Action would have negligible beneficial effects on the local economy. As of July 2021, Harrison County had an estimated population of 209,396, a 12 percent increase from the 2010 population of 187,105. The Mississippi population decreased by 0.6 percent and the U.S. population grew by 7 percent during the same time period (U.S.

Census Bureau 2022a). As of September 2022, Harrison County had 88,551 people in the labor force, with 85,405 employed and an unemployment rate of 3.6 percent. The Mississippi unemployment rate was 3.7 percent, and the U.S. unemployment rate was 3.3 percent (BLS 2022). Keesler AFB is one of the largest employers in southern Mississippi, directly employing more than 11,100 military and civilian personnel, accounting for 13 percent of the people employed in Harrison County (BLS 2022; Keesler AFB 2022b). Keesler AFB had a Fiscal Year 2021 total adjusted economic impact on the region of $1.03 billion (Keesler AFB 2022b). Estimated construction expenditures for alternatives 1 and 2 range from about $11 million to $12.6 million (GannettFleming 2012), which would be about 1 percent of Keesler AFB's total annual economic impact. The construction activity for the proposed Pass Road Gate would have short-term negligible beneficial effects on the regional economy from construction expenditures for purchasing project materials and supplies, hiring people in construction-related industries, wages earned by those employees, and expenditure of those wages on goods and services. On the basis of the region of influence labor force data and the temporary nature of construction work, it is anticipated that the force would fill the construction jobs with construction workers commuting from surrounding regional communities without moving their place of residence. No long-term socioeconomic effects would be expected from the operation of the proposed new gate, as no additional operations personnel would be required. As a result, the socioeconomics resource area was not carried forward for detailed analysis in the EA.

3.2 Land Use and Visual Resources

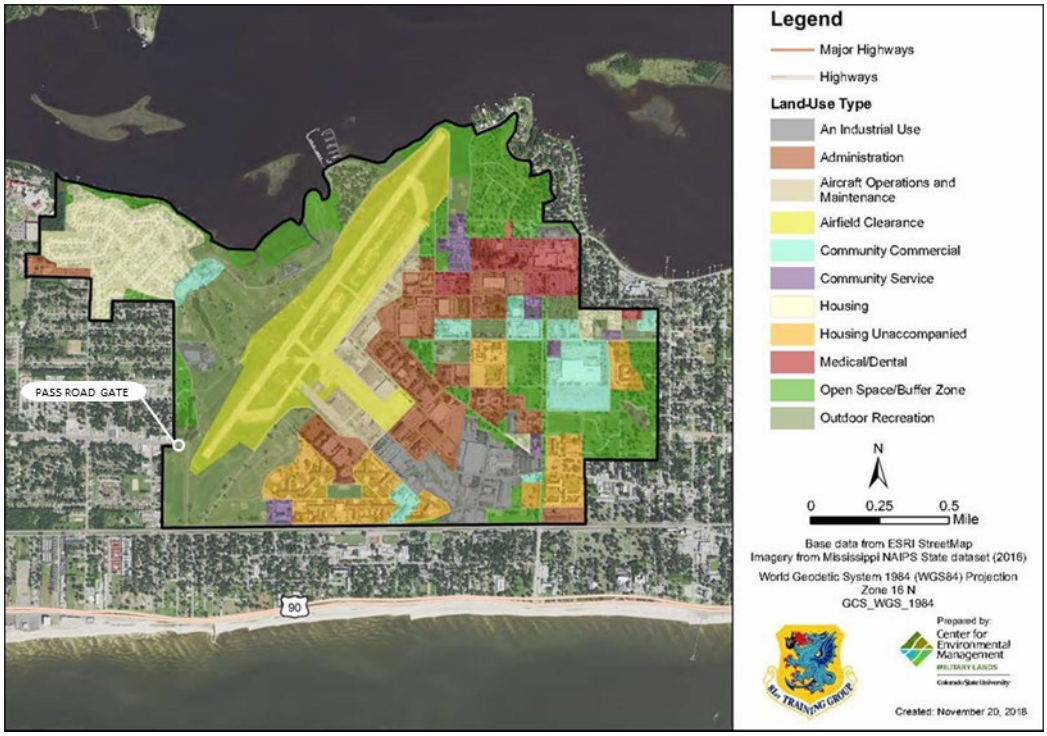
This section includes a regulatory overview of land use and visual resources, describes the existing conditions, and discusses the environmental consequences of the action.

3.2.1 Affected Environment

Keesler AFB is located on the Mississippi coast approximately 90 miles east of New Orleans, LA, and 60 miles west of Mobile, AL. The installation is sited in the City of Biloxi, MS, and includes pockets of privatized housing separate from the base operational area within the city limits and Harrison County. The base opened as an airfield and technical training school in 1941 and has been in continuous operation since its formal establishment. The 81 TRW replaced Keesler Training Center in July 1993, taking on the mission of specialized technical training for the DAF, Air Force Reserve, Air National Guard, other DoD agencies, and foreign nations. Today Keesler AFB is the single largest employer on the Mississippi Gulf Coast (Keesler AFB 2022c).

The total land area of Keesler AFB and its privatized housing developments is 1,646 acres. The main base operational area features a single runway and encompasses approximately 2.3 square miles (1,447 acres of the total 1,646 acres) on a narrow coastal peninsula between the Mississippi Sound and the Back Bay of Biloxi. The Back Bay of Biloxi is an 8.1-square-mile estuary, fed by the freshwater of the Biloxi and Tchoutacabouffa rivers and the brackish water of the Mississippi Sound. Land use categories on Keesler AFB are as shown in Figure 3-1.

The base is located north of U.S. 90 and west of I-110. The nearest population center is the city of Biloxi. Keesler AFB abuts the City of Biloxi to its east, south, and west; the Back Bay of Biloxi forms the base's northern boundary. The Proposed Action is located in the outdoor recreation and open space land use categories along the western perimeter of the base.



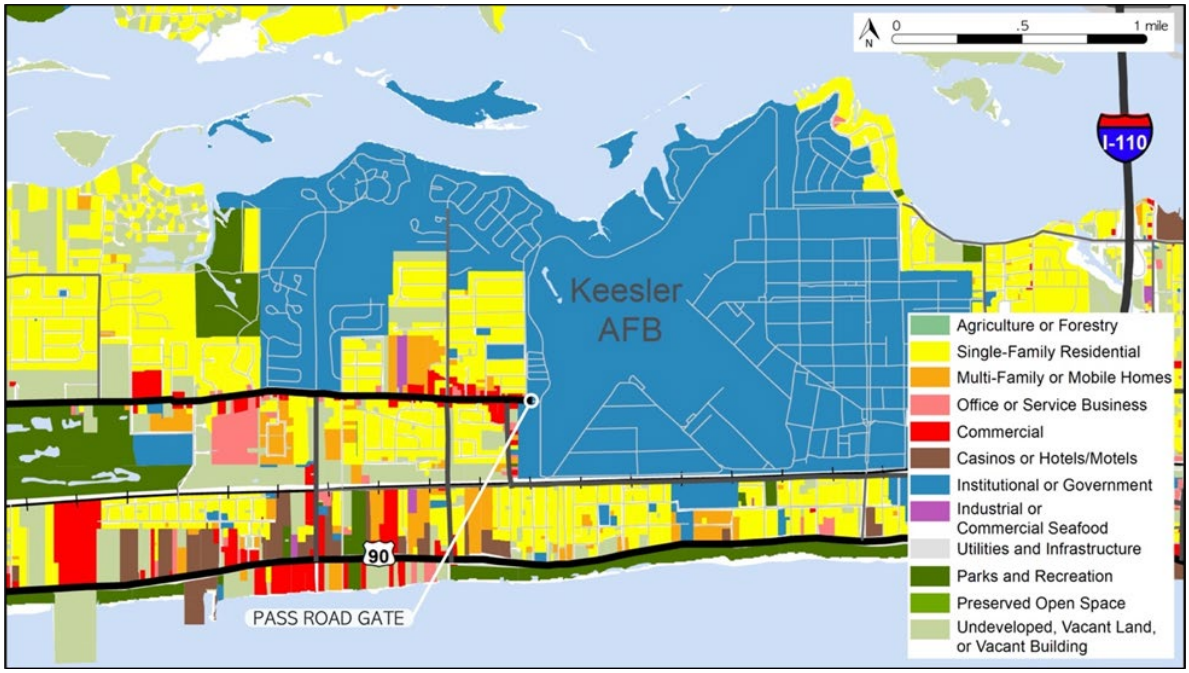
Source: CEMML 2019.

Figure 3-1. Existing Land Use in Keesler AFB

The primary land use adjoining and in the immediate vicinity of the base is single-family residential (see Figure 3-2). Back Bay Elementary School is adjacent to the west of the base at Rodeo Drive between St. Martha Street and St. Ann Avenue (see Figure 2-1). Commercial districts and higher density residential development are located along Pass Road and U.S. 90. Running along the southern boundary of Keesler AFB is the CSX Transportation rail line, which separates the installation from the residential area on the south side of Irish Hill Drive. Development in greater Biloxi offers a blend of residential, commercial, and public uses, providing residents and visitors access to parks and recreation preserved open space.

Visual resources are natural and man-made features that give a particular “landscape” (visible features of an area of land) or “viewshed” (view on an area from a vantage point) its character and aesthetic quality. Special consideration is given to actions within visually sensitive locations and viewpoints from visually sensitive locations. An example of a visually sensitive location would be a protected area, such as a national park, national monument, or historic district. None of the five remaining buildings on Keesler AFB that continue to require consultation under Section 106 of the NHPA—buildings 4116, 4330, 4331, 6901, and potentially 1002—is within or has line of sight to the project area.

The immediate area of the base is a heavily developed peninsula characterized by historic residential neighborhoods and commercial strip development along the main transportation arteries. Figure 3-3 shows an aerial view of the base’s boundaries and surrounding private development between the Mississippi Sound and the Back Bay of Biloxi. While immediate views from the base are primarily of surrounding residences, an abundance of water views exist from both the Back Bay and the Sound that soften the transition between base activities and private development.



Source: City of Biloxi 2009.

Figure 3-2. Existing Land Use in the Vicinity of Keesler AFB

Source: Google Maps 2022.

Figure 3-3. Aerial View of Keesler AFB Boundaries

3.2.2 Environmental Consequences

3.2.2.1 Alternative 1

Under Alternative 1, construction and operation of the Proposed Action would result in negligible short-term adverse and long-term beneficial effects. Alternative 1 would result in short-term demolition and construction related adverse effects on previously disturbed land on approximately 20 acres. This would include areas used for temporary construction laydown and parking areas. Alternative 1 would also require rerouting a portion of the I-81 running track that currently parallels Ploesti Drive. The approximately 20 acres represents 1.4 percent of the total land area of the main base operational area. The new gate, school drop-off, and roadway would replace the existing in the same area. The existing land use at Keesler AFB would remain unchanged. Once the new Pass Road Gate is operational, there would be long-term beneficial use of the land from the UFC- and AT/FP-compliant gate, school drop-off, and roadway, compatible with existing uses and future development.

Construction and demolition would result in short-term, less-than-significant adverse visual effects because of the presence of construction equipment, support structures, and infrastructure in various stages of construction and demolition. Those activities would not be out of character for a military installation, and site visitors and employees observing the construction would find it similar to past construction activities. Post-construction, equipment, and temporary construction office trailers (if any) would be removed, and construction laydown areas would be restored.

Once the security checkpoint and supporting projects are operational, the visual landscape as described in Section 3.2.1 would not change appreciably because of the developed nature of the site. The proposed facilities would occur within a context of similar development and would mirror the improvements that have historically occurred on-site such as the existing Pass Road Gate. Under Alternative 1, the school drop-off would be located immediately east of Back Bay Elementary School. The long-term visual effects would be from the loss of approximately one-third (37 of 112) of the live oak trees in the project area. The loss of this cluster would represent a visual change to that area; however, the effects would be less -than-significant because Keesler AFB would remain a developed area. The Proposed Action includes no visual changes to other areas within Keesler AFB.

3.2.2.2 Alternative 2

Under Alternative 2, the northern section of Pass Road would parallel the base's western boundary along Rodeo Drive. This would place this section of Pass Road closer to the private residential development adjoining the base. Except for those changes, the effects on land use and visual resources from Alternative 2 would be similar to those of Alternative 1.

3.2.2.3 No Action Alternative

Under the No Action Alternative, the DAF would not construct a new UFC- and AT/FT-compliant Pass Road Gate. Land use and visual resources would remain unchanged when compared to existing conditions.

3.3 Airspace and Airfield Operations

This section includes an overview of airspace and airfield operations, describes existing conditions, and discusses the environmental consequences of the action.

3.3.1 Affected Environment

Air traffic in the region is managed through the establishment of controlled airspace by the Federal Aviation Administration. Keesler AFB's regional military airspace is composed of military operations areas, military training routes, and restricted areas.

The proposed project area is roughly 500 feet (ft) west of the Keesler AFB airfield. Majority of the project area is in the clear zone of Runway 3, with a small portion located within the clear zone graded area (see Figure 3-4). Runway clear zones are areas on the ground, located at the ends of each runway. They possess a high potential for accidents, and their use is restricted to be compatible with aircraft operations (UFC 3-262-01, *Airfield and Heliport Planning and Design* [February 4, 2019]). The existing Pass Road gate is in the clear zone and therefore, occupies the area under an airfield waiver P-MAHG-09-37/KE-102 - Denial Barrier, Shade Structure, Gate House 7.

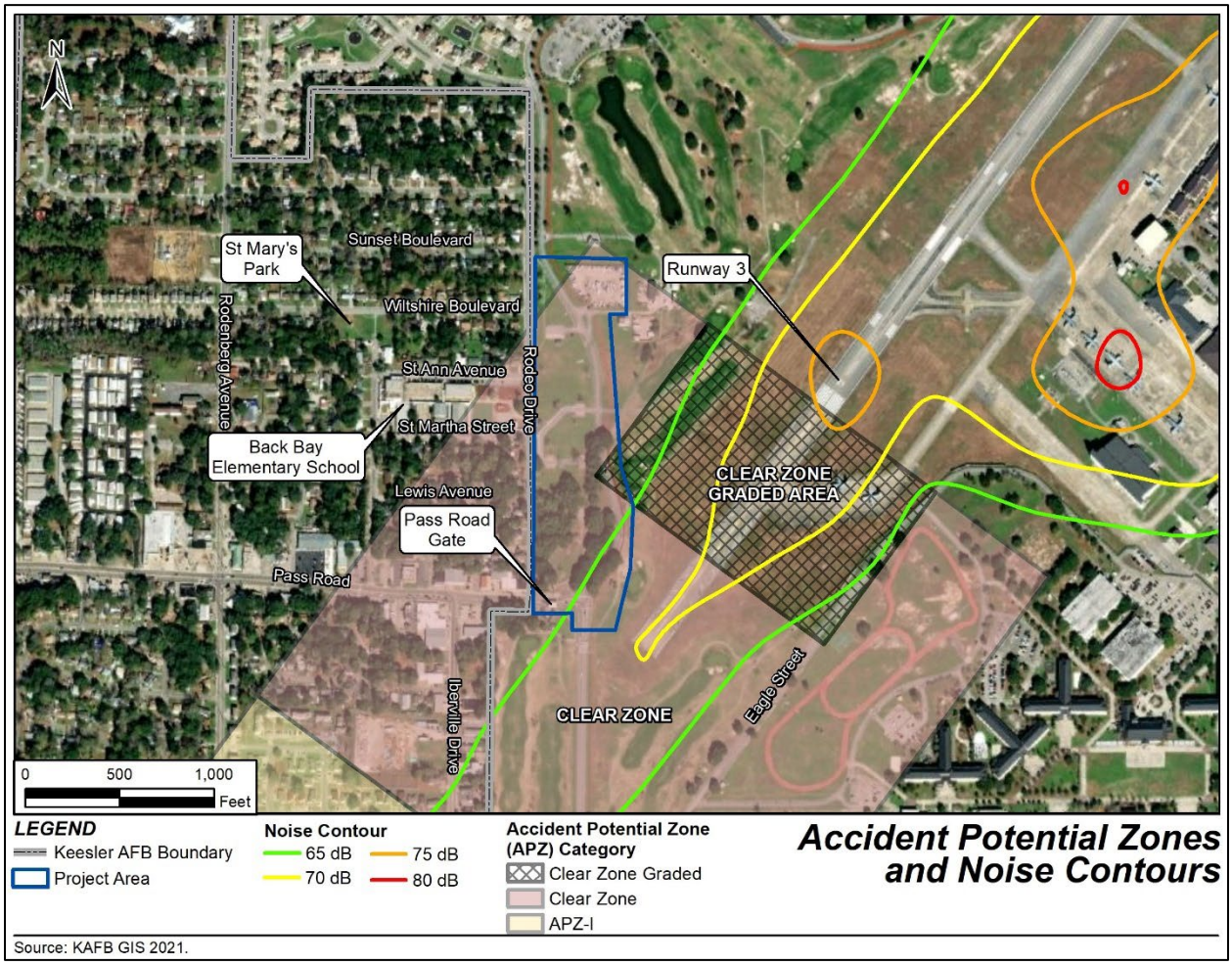


Figure 3-4. Keesler AFB Airfield Accident Potential Zones and Noise Contours

3.3.2 Environmental Consequences

Airspace and airfield operations at the base would be significantly affected if implementing an alternative would (1) restrict movement of other air traffic in the area, (2) conflict with air traffic control in the region, (3) change operations within airspace already designated for other purposes, (4) result in a need to designate controlled airspace where none previously existed, (5) result in a reclassification of controlled airspace from a less restrictive to a more restrictive classification, or (6) result in a need to designate regulatory special use airspace.

3.3.2.1 Alternative 1

No effects on airspace and airfield operations would be expected if Alternative 1 was implemented. No aspect of Alternative 1 is within or would have any effect on airspace at Keesler AFB or elsewhere in the region.

A permanent airfield waiver would be required because the proposed project area is also in the clear zone of the Keesler AFB airfield. The new waiver would replace the existing waiver.

3.3.2.2 Alternative 2

No effects on airspace and airfield operations would be expected if Alternative 2 was implemented.

A permanent airfield waiver would be required because the proposed project area is also in the clear zone of the Keesler AFB airfield. The new waiver would replace the existing waiver.

3.3.2.3 No Action Alternative

No effects on airspace and airfield operations would be expected under the No Action Alternative. Airspace and airfield operations would remain unchanged.

3.4 Air Quality

Air quality is defined by the level of overall air pollution. As a resource, it includes air pollution within a region, sources of air emissions, and regulations governing air emissions. Air pollution is the presence of one or more contaminants (e.g., dust, fumes, gas, mist, odor, smoke, or vapor) in the outdoor atmosphere in quantities and duration that could harm human, plant, or animal life or unreasonably interfere with the enjoyment of life and property. This section includes a regulatory overview of air quality, describes existing conditions, and discusses the environmental consequences of the action.

3.4.1 Affected Environment

3.4.1.1 National Ambient Air Quality Standards and Attainment Status

The U.S. Environmental Protection Agency (EPA) Region 4 and Mississippi Department of Environmental Quality (MDEQ) regulate air quality in Mississippi. The CAA assigns EPA the responsibility for establishing the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that specify acceptable concentration levels of six criteria pollutants: particulate matter (measured as both particulate matter less than 10 microns in diameter [PM_{10}] and particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and lead (Pb) (see Table 3-1). Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term NAAQS (annual averages) have been established for pollutants

contributing to chronic health effects. While each state has the authority to adopt standards stricter than those established under the federal program, the State of Mississippi has accepted the federal standards (MDEQ 2022).

Table 3-1. National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
CO		Primary	8 hours	9 ppm	Not to be exceeded more than once a year
			1 hour	35 ppm	
Pb		Primary and secondary	Rolling 3-month average	0.15 µg/m^3	Not to be exceeded
NO_2		Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Primary and secondary	Annual	53 ppb	Annual mean
O_3		Primary and secondary	8 hours	0.070 ppm	Annual fourth highest daily maximum 8-hour concentration, averaged over 3 years
Particulate matter	$PM_{2.5}$	Primary	Annual	12 µg/m^3	Annual mean, averaged over 3 years
		Secondary	Annual	15 µg/m^3	Annual mean, averaged over 3 years
		Primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	Primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
SO_2		Primary	1 hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Sources: 40 CFR 50.1-50.12, USEPA 2022a.
Notes: µg/m^3 = micrograms per cubic meter; ppb = parts per billion; ppm = parts per million.

3.4.1.2 Existing Emissions and Permitting Overview

Federal regulations designate air quality control regions (AQCRs) in violation of the NAAQS as "nonattainment areas." Federal regulations designate AQCRs with levels below the NAAQS as "attainment areas." Harrison County (and, therefore, all areas associated with the proposed action) is within the Mobile-Pensacola-Panama City-Southern Mississippi Interstate AQCR

(40 CFR § 81.68). EPA has designated Harrison County (therefore, all areas associated with the action) as in attainment for all criteria pollutants (USEPA 2022b). Since the area is in attainment for all criteria pollutants, the General Conformity rule does not apply. The General Conformity rule ensures that federal actions cause no new violations of the CAA in nonattainment areas.

Keesler AFB is considered a major source of air pollutants and operates under a Synthetic-Minor Operating Permit (Permit No. 1020-00006) granted by MDEQ, which expires April 30, 2023. Primary sources of air emissions include boilers, generators, and paint booths. The permit requirements include annual periodic inventory of all significant stationary sources of air emissions for each of the criteria pollutants of concern as well as monitoring and recordkeeping. Table 3-2 lists Keesler AFB annual emissions from all significant stationary sources. Notably, these emissions do not include mobile sources, such as vehicle traffic or airport operations.

Table 3-2. Keesler Air Force Base Annual Emissions for Significant Stationary Sources Last Reported for 2017

Pollutant	Emissions (tpy)
CO	9.8
NO_2	16.9
VOCs	1.3
$PM_{2.5}$	0.9
PM_{10}	2.2
SO_2	0.2

Source: USEPA 2022b.
Notes: tpy = tons per year; VOCs = volatile organic compounds.

3.4.2 Environmental Consequences

Effects on air quality would be considered significant if the project would (1) exceed the DAF's significance indicators or (2) contribute to a violation of any federal, state, or local air regulation.

3.4.2.1 Alternative 1

Short-term less-than-significant adverse effects from Alternative 1 would be expected as a result of airborne dust and other pollutants being generated during construction and demolition. There would be negligible long-term changes in operational emissions from a backup generator. Air emissions would not (1) exceed the DAF's significance indicators or (2) contribute to a violation of any federal, state, or local air regulation.

Construction and demolition emissions were estimated for fugitive dust, on- and off-road diesel equipment and vehicles, worker trips, architectural coatings, and paving off-gases (see Table 3-3). Operational emissions were primarily derived from a backup generator that would be installed at the proposed gate. Although the area is in attainment and the General Conformity rule does not apply, the DAF's significance indicators were carried forward to determine the level of effects under NEPA. The estimated emissions from Alternative 1 would be below the DAF's significance indicators; therefore, the level of effects would be less than significant. Detailed emission calculations are provided in Appendix C.

Table 3-3. Estimated Air Emissions Compared to DAF Significance Indicators

Pollutant	Estimated Emissions (tpy)		DAF Significance Indicators (tpy)	Exceedance (Yes or No)
	Construction	Operations		
VOC	0.7	< 0.1	250	No
NO_x	4.0	< 0.1	250	No
CO	4.7	< 0.1	250	No
SO_x	0.01	< 0.1	250	No
PM_{10}	24.8	< 0.1	250	No
$PM_{2.5}$	0.2	< 0.1	250	No
Pb	0.0	< 0.1	25	No
CO_2e	1,056.3	5.7	-	-

Source: DAF 2020.
Notes: CO_2e = carbon dioxide equivalent; tpy = tons per year; VOC = volatile organic compound.

For purposes of analysis, the DAF assumed that all construction activities would be compressed into one 12-month period; therefore, regardless of the ultimate implementation schedule, annual emissions would be less than those specified herein. Small changes in facilities siting and ultimate design and moderate changes in quantity and types of equipment used would not substantially change these emissions estimates and would not change the determination under the General Conformity rule or level of effects under NEPA.

MDEQ outlines requirements with which developers must comply when constructing new facilities, such as controlling fugitive dust and open burning. Anyone responsible for any operation, process, handling, transportation, or storage facility that could result in fugitive dust would take reasonable precautions to prevent that dust from becoming airborne. They would implement best management practices (BMPs) such as using water to control dust caused by building construction, road grading, or land clearing. In addition, construction would proceed in full compliance with current MDEQ requirements (Title 11 Mississippi Administrative Code [Miss. Admin. Code], Part [Pt.] 2, Chapter [Ch.] 2). The DAF and any contractors would comply with all applicable air pollution control regulations.

3.4.2.2 Alternative 2

The effects of Alternative 2 would be similar to those of Alternative 1 and the emissions would be the same (see Table 3-3). The emissions would not exceed the DAF's significance indicators, and the activities would not contribute to a violation of any federal, state, or local air regulation. Detailed emission calculations are provided in Appendix C. All applicable regulations and BMPs would be similar to those applicable to Alternative 1.

3.4.2.3 No Action Alternative

No adverse effects on air quality would be expected under the No Action Alternative. Air quality would remain unchanged compared to existing conditions.

3.5 Noise

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

Sound varies by both intensity and frequency. Sound pressure level, described in decibels (dB), is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz are used to quantify sound frequency. The human ear responds differently to different frequencies. "A-weighing," measured in A-weighted decibels (dBA), approximates a frequency response expressing the perception of sound by humans. Table 3-4 provides sounds encountered in daily life and their dBA levels.

Table 3-4. Common Sounds and their Levels

Outdoor Sound	Sound Level (dBA)	Indoor Sound
Jet flyover at 1,000 ft	100	Rock band
Tractor	90	Garbage disposal
Noisy restaurant	85	Blender
Downtown (large city)	80	Ringing telephone
Freeway traffic	70	TV audio
Normal conversation	60	Sewing machine
Rainfall	50	Refrigerator

Source: Harris 1998.

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

This section includes a regulatory overview of the noise environment, describes existing conditions, and discusses the environmental consequences of the action.

3.5.1 Affected Environment

The Noise Control Act of 1972 (Public Law 92-574) directs federal agencies to comply with applicable federal, state, and local noise control regulations. In 1974, EPA provided information suggesting continuous and long-term noise levels in excess of DNL 65 dBA are normally unacceptable for noise-sensitive land uses, such as residences, schools, churches, and hospitals.

Harrison County and the City of Biloxi maintain noise ordinances. Harrison County limits sound levels to 68 dBA in residential areas during daytime hours and prohibits the use of power tools before 7:00 a.m. (HCC 2022). The City of Biloxi limits sound levels to 65 dBA in residential areas during daytime hours; however, construction noise is exempt between the hours of 7:00 a.m. and 6:00 p.m. (City of Biloxi 2022a). The City of Biloxi also has three Airport Noise Overlay (ANO) districts, which are established and intended to provide public notice of those areas of the city in which people may be exposed to the higher-than-average noise levels and risk of aircraft accidents associated with proximity to the airport at Keesler AFB (City of Biloxi 2022b). ANO-3 applies to an approximate one-square-mile area southwest of Keesler AFB. ANO-1 applies to the areas outside of ANO-3 that are exposed to a yearly DNL of 65–70 dB, and ANO-2 applies to areas outside of ANO-3 that are exposed to a yearly DNL of 70–75 dB. The purpose of the ANOs is also to ensure that new buildings include an appropriate level of exterior-to-interior reduction of noise levels associated with overhead aircraft. A reduction of 25–30 dB, depending on proximity to the airfield, is required for areas exposed to a yearly DNL above 65 dBA (City of Biloxi 2022b).

The primary source of noise at Keesler AFB are activities that take place at the airfield. Other sources of noise include operation of civilian and military vehicles, lawn and landscape equipment, construction activities, and vehicle maintenance operations. The affected environment for noise is the areas on and immediately surrounding the existing Pass Road Gate. The immediate area surrounding the gate on-base includes the airfield, recreational areas, and the existing school drop-off area. Off-base areas include sensitive noise receptors within one-quarter mile of the gate—Back Bay Elementary School, nonmilitary residential housing, and St. Mary's Park.

Background noise levels without airport operations (Leq and DNL) were estimated for the surrounding areas using the techniques specified in the American National Standard Institute Quantities and Procedures for Description and Measurement of Environmental Sound Part 3: Short-term measurements with an observer present. Table 3-5 outlines the land use categories and the estimated background noise levels for nearby noise-sensitive areas (ANSI 2013). Most environments include near-constant, long-term sound sources that create a background sound level and intermittent, intrusive sources that create sound peaks that are noticeably higher than the background levels. In suburban areas, human activities make up the background sound level. The extent to which an intrusive sound affects a given receptor in the environment depends upon the degree to which it exceeds the background sound level. Both background and intrusive sound may affect the quality of life in a given environment.

Table 3-5. Estimated Background Noise Levels

Land Use Category	DNL	L_{eq} (dBA)	
		Daytime	Nighttime
Suburban residential (4 people per acre)	52	53	47
Quiet commercial, industrial, and normal urban residential (20 people per acre)	59	58	52
School playground	-	71	N/A

Sources: ANSI 2013; NYCSCA 2012.
Note: N/A = not applicable.

The Keesler AFB airfield is roughly 500 ft east of the proposed project area. DNL 65 dBA occurs at that range and increases closer to the runway (Figure 3-4) in Section 3.3.1. Noise from the airfield transects the base from the southwest to the north and is clearly audible in the cantonment area. Notably, the Noise Control Act exempts aircraft noise from all state and local noise regulations.

3.5.2 Environmental Consequences

Either alternative would have short- and long-term less-than-significant effects on noise. Short-term effects would be caused by the use of heavy equipment during demolition and construction activities. Long-term effects would be the result of the change in noise adjacent to the school drop-off area. The Proposed Action would not create appreciable long-term increases in noise as there are no incompatible land uses near the siting of the project area and would not lead to a violation of any federal, state, or local noise regulation.

3.5.2.1 Alternative 1

Short-term increases in noise would be caused by construction activities. Table 3-6 presents typical noise levels (dBA at 50 ft) EPA has estimated for the main phases of outdoor construction. Individual pieces of construction equipment typically generate noise levels of 80–90 dBA at a distance of 50 ft. With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime periods at locations within several hundred feet of active construction sites. The zone of relatively high construction noise typically extends to distances of 400–800 ft from the site of major equipment operations. Given the temporary and intermittent nature of proposed construction activities and the limited amount of noise that heavy equipment would generate, these effects would not be loud enough to interfere with classroom communication at the elementary school when the windows are closed. Therefore, these effects would be less-than-significant.

Table 3-6. Noise Levels Associated with Outdoor Construction

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

Source: USEPA 1971.

None of the proposed construction would be within the ANO District. Figure 3-4 illustrates the noise contours for Keesler AFB's airfield, which extend linearly from the airfield runway to the north and south. The noise reduction requirement for new buildings applies primarily to these areas.

While no new cars would be added to the installation, changes in traffic patterns would have long-term less-than-significant effects on the noise environment. Long-term effects would be caused by appreciable increases in noise near the school drop-off area. A detailed description of the effects on traffic and transportation resources is provided in Section 3.12.

Noise is measured on a logarithmic scale, so a doubling in traffic volume along a two-lane road would not double the noise level, but would increase it by 3 dBA, regardless of the initial traffic volume. Table 3-7 defines noise by speed at a 50-ft distance. If traffic generating 60 dBA traveling around 30 miles per hour were doubled, the noise level would be 63 dBA. Notably, a 3-dBA change in noise levels would be barely perceptible to individuals with average hearing (FHWA 2011).

Alternative 1 would increase traffic along Ploesti Drive and at the school drop-off area near the proposed gate. This is due to the reconfiguration that would require drivers intending to head south from the gate to travel north to the intersection of the new entrance road and Ploesti Drive (approximately three-tenths of a mile) before turning south on Ploesti Drive. Traffic would be moving at slow speeds leaving and approaching the gate and would amount to an increase in noise of approximately 1–2 dBA. These noise levels would be barely perceptible, if they would be perceptible at all, in the noise environment at the drop-off area compared to existing conditions. These effects would be negligible.

Table 3-7. Noise Levels by Speed and Vehicle Type

Speed (mph)	dB at 50 ft		
	Auto	Medium Truck	Heavy Truck
30	62	73	80
35	64	76	81
40	67	78	83

Source: Cowan 1994.

3.5.2.2 Alternative 2

The nature and overall level of effects from Alternative 2 would be similar to those of Alternative 1. All applicable noise reduction requirement for new buildings would also be similar to those for Alternative 1.

3.5.2.3 No Action Alternative

No adverse effects on the noise environment would be expected under the No Action Alternative. The overall noise environment would remain unchanged compared to existing conditions.

3.6 Earth Resources

This section includes a regulatory overview of earth resources, describes existing conditions, and discusses the environmental consequences of the Proposed Action.

3.6.1 Affected Environment

Keesler AFB is within the Coastal Meadows (Flatwoods) topographical division of the Gulf Coast region. Terrain is generally flat or gently undulating with elevations averaging from five ft to 30 ft above mean sea level (CEMML 2019). Local relief is primarily the result of past depositional and more recent erosional processes. The elevation at the proposed project site ranges from 20 ft to 30 ft above mean sea level. Surficial geology at Keesler AFB consists of unconsolidated coastal deposits, comprised primarily of sand, gravel, loam, and clay (USGS 2021a).

The coastal area of Mississippi has not been seismically active in recent time, with only three minor earthquakes recorded since 1900 (USGS 2021c). No faults are identified within or in the vicinity of the site (USGS 2021b). U.S. Geological Survey (USGS) data indicate that an earthquake with a 2 percent likelihood of occurring in the next 50 years would have a peak ground acceleration (PGA) of 0.05 times the acceleration of gravity, or 0.05g, and an earthquake with a 10 percent likelihood of occurring in the next 50 years would have a PGA of 0.02g (USGS 2021d). Earthquakes of this magnitude would be unlikely to cause damage (FEMA 2020).

The dominant soil types at the base formed from sandy or loamy upland materials. These sandy soils have good-to-fair drainage capacity and an estimated weight-bearing capacity of 3,000–5,000 pounds per square foot (Keesler AFB 2015b). Soil units at the proposed site include the Pactolus-Urban land complex, Sulfaquepts, and Harleston fine sandy loam (see Figure 3-5).

These soil units have the following characteristics: no frequency of flooding or ponding, depth to restrictive layer of 80 inches or more, depth to saturated soils between 20 and 40 inches below grade, low runoff potential, non-hydric, and range from poorly-to-moderately well-drained. These soil units have low susceptibility to water erosion but are susceptible to wind erosion. The Pactolus-Urban land complex covers most of the site and consists of loamy sand. The northern portion of the site contains Sulfaquepts soils, which consist of sand. Lastly, Harleston fine sandy loam is mapped underneath the existing RV storage. The Pactolus-Urban land complex is considered farmland of statewide importance and the Harleston fine sandy loam is considered prime farmland, but these classifications are not applicable to soils on military installations (NRCS 2021; Keesler AFB 2015b).

There are no oil or gas fields or active mining within the site and immediate vicinity (MDEQ 2009; USGS 2021e).

3.6.2 Environmental Consequences

Earth resources would be significantly affected if implementing an alternative would change geologic features (underlying geologic structure or topography), result in permanent or long-term loss of mineral resources, or result in severe soil loss or loss of soil productivity.

3.6.2.1 Alternative 1

During construction, short-term less-than-significant adverse effects on soils would be expected from implementing Alternative 1. The construction footprint would cover approximately 20 acres, and soil disturbance would occur during construction. However, soils would be protected from erosion during construction in accordance with the terms of the Large Construction General Permit (CGP) issued by the MDEQ. Stormwater runoff from construction activities (including clearing, grading, excavating, and other land-disturbing activities) of 5 acres or more must be permitted under the CGP. Other requirements of the permit include listing and describing site-specific controls appropriate for the construction activities, including measures to minimize the amount of soil exposed during construction activity, minimize sediment discharges from the site, minimize soil compaction, and preserve topsoil (Keesler AFB 2015b; MDEQ 2021). With the implementation of requirements under the CGP, soil loss through wind and water erosion would not be significant.

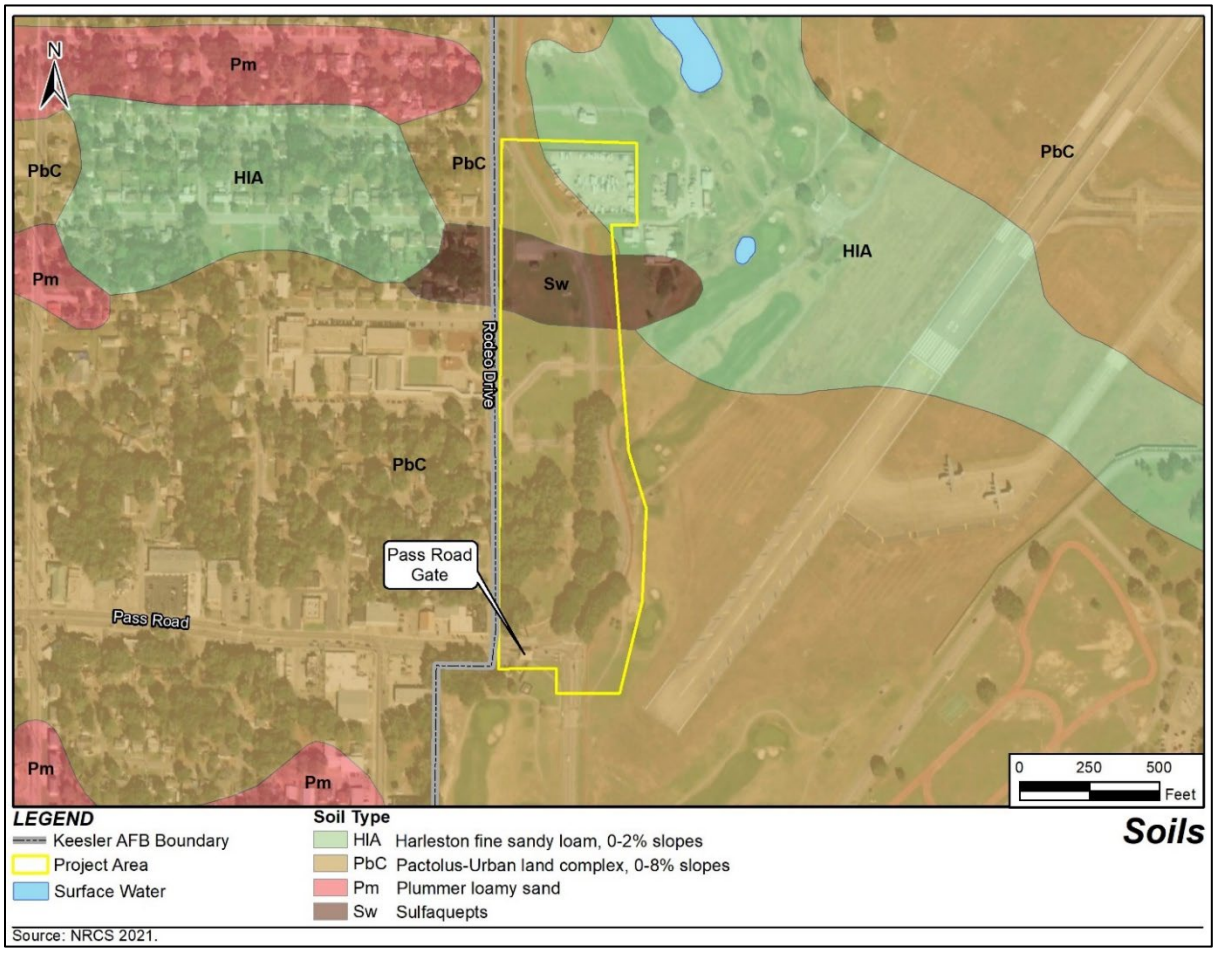


Figure 3-5. Soil Units at the Project Area

Topsoil would be stripped, segregated, and stabilized at the beginning of construction. During site restoration, all topsoil would be reused within the site to reestablish green space. As part of restoration, areas to be revegetated would be de-compacted as necessary; topsoil would be spread; and seed, lime, and fertilizer would be applied as necessary to promote revegetation.

Effects on the topsoil resource would be less-than-significant with proper segregation and preservation during construction and reuse across the site to promote revegetation during site final restoration.

During construction, short-term less-than-significant adverse effects on topography would be expected from implementing Alternative 1. Topsoil stripping and grading of the site would create temporary minor changes to the site's topographic contours, which could temporarily impact site drainage, as stormwater collection within excavated areas would likely increase. However, implementing CGP requirements would minimize sediment discharges from the site. In addition, excavation during construction is expected to be shallow. As a result, no permanent effects on-site topography would be expected from Alternative 1.

3.6.2.2 Alternative 2

The effects on soils and topography of implementing Alternative 2 would be similar to those discussed for Alternative 1.

3.6.2.3 No Action Alternative

No effects on earth resources would result under the No Action Alternative. No soil or other ground disturbance would occur.

3.7 Water Resources

Water resources at Keesler AFB include wetlands, streams, ponds, and coastal zone resources in the Mississippi Coastal watershed (USGS Hydrologic Unit Code [HUC] 03170009); more specifically, the Back Bay of Biloxi watershed (HUC 03170009-06-05), which drains the majority of Keesler AFB, and the Beach Drainage (HUC 03170009-08-01), which drains the southwest corner of the installation where the current gate is located (see Figure 3-6) (USGS 2021f; CEMML 2019). Water resources at Keesler AFB also include floodplains and stormwater. Keesler AFB is located almost entirely in either a 100-year floodplain (an area with a 1.0 percent annual chance of flood hazard) or a 500-year floodplain (an area with a 0.2 percent annual chance of flood hazard) and has a municipal storm sewer system (MS4) permit (Permit No. MSRMS4023). The small MS4 permit authorizes the discharge of stormwater as well as defined non-stormwater to waters of the United States (WOTUS). The MS4 permit requires the development of a Stormwater Management Plan (SWMP), which describes BMPs and goals to reduce the discharge of pollutants to stormwater (Keesler AFB 2020a).

3.7.1 Affected Environment

3.7.1.1 Surface Water

Keesler AFB follows a DAF-standardized SWMP to comply with MS4 Permit No. MSRMS4023. The SWMP defines minimum control measures and BMPs to control stormwater runoff into WOTUS. MDEQ is authorized by EPA Region 4 to regulate discharges into surface waterbodies in Mississippi. The National Pollutant Discharge Elimination System (NPDES) permit program was created in 1972 under the CWA to regulate point sources discharging into WOTUS. Water from facilities at Keesler AFB discharges through NPDES-permitted outfalls (Keesler AFB 2020a). These outfalls discharge to the Back Bay of Biloxi.

The SWMP defines the stormwater requirements for construction and post-construction activities as well as compliance education and monitoring for illicit discharge detection. Keesler AFB relies on the MDEQ guidance in review of all plans and stormwater-related activities. BMPs are required for all construction activities at Keesler AFB, regardless of the footprint size of the project. Projects disturbing more than 5 acres are required to comply with MDEQ's Large CGP. Developers also are required to develop an Environmental Protection Plan, which includes a Stormwater Pollution Prevention Plan (SWPPP). Projects larger than 5,000 square feet are required to comply with Section 438 of the Energy Independence and Security Act (EISA) (Public Law 110-140) to reduce runoff from projects to protect water resources during construction and after construction ends. Implementing post-construction BMPs is intended to maintain predevelopment runoff volumes and water quality. Monthly stormwater outfall assessments are performed during or after significant rain events and during dry weather events to detect illicit discharges; additional outfall sampling may be conducted up to twice per year.

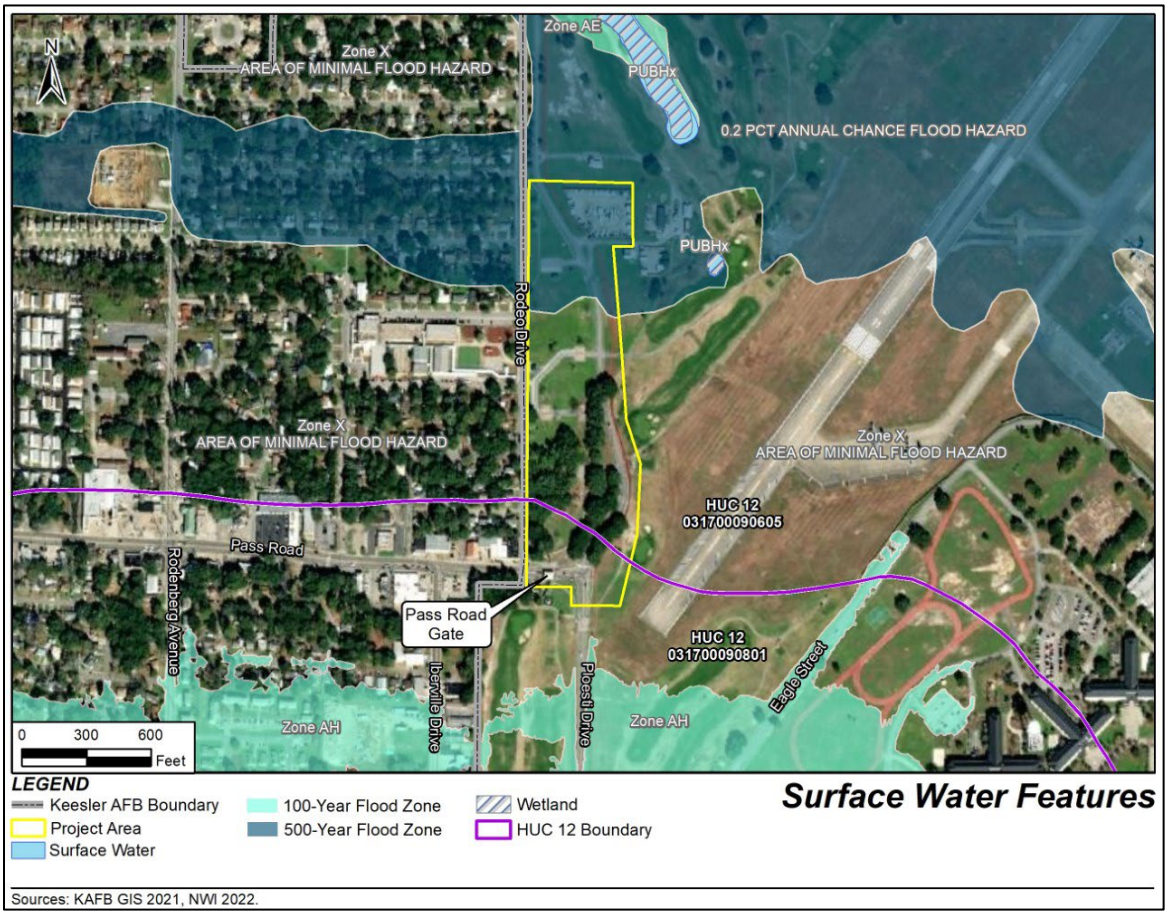


Figure 3-6. Surface Water Features in the Project Area and Vicinity

MDEQ is responsible for assessing waters of the State to determine if they meet water quality standards set for the waterbody consistent with CWA Section 303(d). States submit a list of impaired waters—those not meeting water quality standards based on their designated use—to EPA every 2 years (USEPA 2022c; MDEQ 2020). No waterbodies on Keesler AFB were identified as impaired in 2020 (MDEQ 2020).

3.7.1.2 Groundwater

Groundwater in Harrison County is stored in surficial coastal deposits, including the Citronelle and Miocene aquifers. Keesler AFB's primary water source is the Miocene aquifer system (CEMML 2019).

3.7.1.3 Floodplains

EO 11988, *Floodplain Management*, requires that development on federal lands avoids, to the maximum extent possible, effects associated with the occupancy and modification of floodplains. Section 2 of the EO states that:

> …each agency has a responsibility to evaluate the potential impacts of any actions it may take in a floodplain to ensure that its planning programs and budget requests reflect consideration of flood hazards and floodplain management, and to prescribe procedures to implement the policies and requirements of the EO.

Federal Emergency Management Agency Flood Insurance Rate Maps are used to determine the effects on floodplains. The entirety of Keesler AFB is within floodplains of varying flood hazard degrees. Portions of the proposed project area have minimal flood hazard risk (Zone X) and are in a 500-year floodplain (see Figure 3-6) (CEMML 2019).

The National Storm Surge Hazard Maps of the National Oceanic and Atmospheric Administration illustrate portions of Keesler AFB that experience storm surge from the Back Bay of Biloxi. These areas are along the coast and to the northeast in tidally influenced wetlands (NOAA 2022a).

3.7.1.4 Coastal Zone Management

Actions involving federal activities, federal licenses or permits, and federal assistance programs that affect coastal resources are required to be consistent with the MDMR to the "maximum extent practicable," in accordance with the federal Coastal Zone Management Act of 1972 (CZMA) (16 U.S.C. § 1451). The goal of the CZMA is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

Harrison County is one of three Mississippi counties defined within the designated coastal zone. Therefore, Keesler AFB must determine whether their activities are reasonably likely to affect any coastal use or resource and to conduct the activities in a manner that is compliant to the maximum extent practicable with the Mississippi Coastal Program. A Consistency Determination and supporting materials must be submitted to the state at least 90 days before starting the proposed activity. An assessment of the consistency of the proposed activities with the enforceable policies of the MDMR is provided in Appendix D.

3.7.2 Environmental Consequences

Either alternative would have short- and long-term less-than-significant effects on surface waters. Short-term effects would be caused by the disturbance of land during construction. Long-term effects would be the result of the permanent conversion of pervious cover to impervious cover. The DAF would implement BMPs, and the Proposed Action would not lead to a violation of any federal or state regulation.

3.7.2.1 Alternative 1

Surface Water. Short- and long-term less-than-significant adverse effects on surface water would be expected. The proposed project area would be within MS4 drainages discharging to surface water through Outfall 7. Outfall 7 is approximately 0.5 miles north of the proposed school drop off area. The outfall is north of Ploesti Drive across from Dragon's Lair Lounge and discharges into Mullet Lake (Keesler AFB 2020a). No modifications would be expected to be made to the existing MS4 permit, BMPs, or monitoring programs.

Construction would have short-term effects on surface water with the use of standard sediment and erosion control BMPs. These effects would be the result of land clearing and the operation of heavy equipment associated with construction. Stormwater runoff during construction can contain high sediment loads and cause localized areas of erosion because of the lack of vegetation cover. Heavy machinery can leak oil that would be carried in runoff after storm events. Stormwater can carry sediment and other pollutants into receiving waters, such as ponds, lakes, and streams, resulting in turbidity and other effects on water quality. Keesler AFB or its contractor would implement approved construction BMPs, as required in the CGP, SWPPPs, and erosion control specifications, to minimize effects on surface waters. MDEQ's Large CGP would be needed because the proposed activity would affect more than 5 acres.

Applicable stormwater construction BMPs would be implemented as described in the Keesler AFB SWMP (Keesler AFB 2020a).

Alternative 1 would have long-term less-than-significant adverse effects on surface water resources with the use of post-development stormwater BMPs. The effects would be caused by the conversion of pervious cover to impervious cover, which reduces infiltration and has the potential to increase runoff. Stormwater runoff has the potential to affect the quantity and quality of water entering surface waterbodies. Inspections, maintenance, and monitoring would be conducted consistent with the Keesler AFB SWMP to comply with the existing MS4 permit. These effects would be minimized through implementing BMPs as described in the Keesler AFB SWMP (Keesler AFB 2020a).

Groundwater. No effects on groundwater would be expected because the area drains to an MS4 outfall discharging to surface water.

Floodplains. Negligible effects on the floodplain would be expected because the proposed project in the 500-year floodplain would not alter floodplain elevation and the overall landscape would not be changed by the Proposed Action (Holland 2021, personal communication). Consistent with the 2019 Integrated Natural Resources Management Plan, if necessary, the structure finished first floor would be 20-feet above mean sea level (CEMML 2019).

Coastal Zone Management. Keesler AFB is within the state's designated coastal zone; therefore, the DAF prepared a Consistency Determination and supporting materials (Appendix D). The Consistency Determination assessed the consistency of the proposed action with the enforceable policies of the Mississippi Coastal Program. No effects on Mississippi's coastal zone would be expected and Alternative 1 would be fully compliant with the Mississippi Coastal Program.

3.7.2.2 Alternative 2

The nature and overall level of effects of Alternative 2 on water resources would be similar to those of Alternative 1. All applicable regulations and BMPs also would be similar to those for Alternative 1.

3.7.2.3 No Action Alternative

No adverse effects on water resources would be expected under the No Action Alternative. Water resources would remain unchanged compared to existing conditions.

3.8 Biological Resources

"Biological resources" refers to living organisms (biota) and the living landscape (habitat and ecosystems). This section organizes biological resources under three general categories: vegetation, wildlife, and sensitive species.

3.8.1 Affected Environment

3.8.1.1 Vegetation

Keesler AFB lies within the Outer Coastal Plain Mixed Forest Province ecological area. Vegetation in the province is characteristic of a temperate rainforest and includes evergreen and laurel forests (CEMML 2019). The vegetation on Keesler AFB is characterized by urban and suburban flora, with a few naturally vegetated wetlands bordering the Back Bay of Biloxi. Most of Keesler AFB is developed, occupied by buildings, runways, roadways, and parking. Underdeveloped portions of the base are grassed areas, coastal wetlands, and urban forest. There are no coastal wetlands in the proposed project area. Undeveloped but maintained open areas are dominated by Bermuda grass (*Cynodon dactylon*), centipede grass (*Eremochloa ophiuroides*), and St. Augustine grass (*Stenotaphrum secundatum*).

There are approximately 8,000 trees on Keesler AFB that include live oaks and slash pine (*Pinus elliottii*) in open areas between buildings and semi-improved areas (Keesler AFB 2021b). Other common native trees include water oak (*Quercus nigra*), northern red oak (*Quercus rubra*), turkey oak (*Quercus laevis*), river birch (*Betula nigra*), green ash (*Fraxinus pennsylvanica*), and sweetgum (*Liquidambar styraciflua*). Common nonnative trees include Callery pear (*Pyrus calleryana*) and crape myrtle (*Lagerstroemia indica*).

Figure 3-7. Live Oak Trees Are Found Throughout the Base. This One Was Dedicated as the "Airman's Oak" in 2013.

Forests of the iconic live oaks draped with Spanish moss (*Tillandsia usneoides*) on Keesler AFB are representative of the maritime forest along the U.S. Gulf Coast (see Figure 3-7) (CEMML 2019). Individual live oaks are scattered throughout the base. More than 200 of the larger live oaks on Keesler AFB have a dbh of more than 44 inches and are estimated to be more than 200–250 years old. The City of Biloxi has designated live oaks more than 150 years old as "Heritage Trees," *City of Biloxi, and Relating to the Planting, Protection and Removal of Trees*, which are set aside for conservation. Heritage Trees are managed under the Keesler AFB's Natural Resources Management Program. Heritage Trees may not be removed without the Wing Commander's approval. They are removed only when they have been damaged permanently by lightning, disease, or wind or if they pose a safety hazard to aircraft. The Wing Commander reviews any requests for removal of live oaks.

A tree inventory conducted on the proposed project area in 2021 identified 178 trees within the boundaries of the project site, including 112 live oak trees (Keesler AFB 2021b). The live oaks on Keesler AFB are being impacted by encroaching development, the long-term effects of Hurricane Katrina in August 2005, and several droughts (CEMML 2019). A substantial number of them are exhibiting signs of stress. Many live oaks in the new family housing area were removed when the housing was constructed, and development of a new Division Street gate near the southeast corner of the base required removal of the live oak trees remaining on the site.

The live oaks on Keesler AFB benefit the military mission (CEMML 2019). They have become a symbol of the installation and the military and surrounding communities have developed a strong connection to them. Maintaining and caring for the live oaks demonstrates to the community that Keesler AFB is a good steward of these character-defining resources. An annual event of note is the base's participation in Arbor Day, which brings awareness to military and civilian people about the grandeur of the base's trees, particularly the live oaks.

3.8.1.2 Wildlife

Fish and wildlife management on Keesler AFB focuses on the coastal salt marsh wetlands along the Back Bay of Biloxi (CEMML 2019). Issues concerning fish and wildlife management include the licensing program for fishing, wetland habitat conservation, nuisance wildlife species management, and the Bird/Wildlife Aircraft Strike Hazard (BASH) program. The project area supports common species of animals adapted to human-altered environments. Hunting and trapping are not permitted on the base.

Through the Keesler AFB BASH Plan, grass height near the flight line and flight safety zones is managed (CEMML 2019). The grass in these areas is mowed to a standard height of 10 inches, which effectively discourages birds from using the aircraft takeoff and landing areas.

3.8.1.3 Sensitive Species

Threatened and endangered species surveys were conducted at Keesler AFB in 2006 and 2012 (CEMML 2019). During the surveys, only one federally listed species, the brown pelican (*Pelecanus occidentalis*), was observed in Back Bay of Biloxi. Potential habitats for the bald eagle (*Haliaeetus leucocephalus*), federally protected under the Bald and Golden Eagle Protection Act (16 U.S.C. §§ 668–668c), and one state-listed species, Bewick's wren (*Thryomanes bewickii*), were found near the base. Other federally listed species and state species of concern might occur in areas adjacent to Keesler AFB, including the open waters of the Back Bay of Biloxi, Keegan Bayou, and other wetlands.

The proposed project site does not provide suitable habitat for any federally or state listed species. The USFWS's Information for Planning and Conservation system listing of federally protected species in the vicinity of the proposed project site includes one mammal, four birds, six reptiles, and one plant, none of which occur on the site (USFWS 2022). Appendix E list the federally protected species potentially occurring on Keesler AFB.

3.8.2 Environmental Consequences

3.8.2.1 Alternative 1

3.8.2.1.1 Vegetation and Wildlife

Long-term less-than-significant adverse effects on biological resources would be expected from implementing Alternative 1. The site proposed for the new Pass Road Gate has been altered substantially from its predevelopment state by previous activity. The northern portion of the site is maintained lawn and a recreational area. The southern portion is more park-like with a variety of trees on maintained lawn. The tree species on the site are listed in Table 3-8. Ploesti Drive and a running track pass through the site.

Table 3-8. Tree Species and Abundance on Project Site

Common Name	Scientific Name	Number On-Site
Live oak	*Quercus virginiana*	112
Crape myrtle	*Lagerstroemia indica*	17
Pecan	*Carya illinoinensis*	11
Palm Popcorn tree	*Arecaceae* (family) *Triadica sebifera*	6 each
Loblolly pine	*Pinus taeda*	4
Bald cypress Eastern red cedar Japanese privet Shumard oak	*Taxodium distichum* *Juniperus virginiana* *Ligustrum japonicum* *Quercus shumardii*	3 each
Willow oak	*Quercus phellos*	2
Black willow Bradford pear Lemon tree Mulberry Red maple Sweet bay magnolia Sycamore Water oak	*Salix nigra* *Pyrus calleryana* *Citrus limon* *Morus alba* *Acer rubrum* *Magnolia virginiana* *Platanus occidentalis* *Quercus nigra*	1 each

Implementing Alternative 1 would result in a loss of 37 live oak trees and 23 trees of other species. The tree inventory in the project area identified 178 trees, including 112 live oak trees. Therefore, the Proposed Action would result in a loss of approximately one-third of the live oak trees on the site. The live oak trees that would be removed vary in size from 4 inches to 48 inches dbh (see Table 3-9).

Table 3-9. Sizes of Live Oak Trees on Proposed Project Site

Diameter Range (inches at dbh)	Number of Live Oaks	Number of Live Oaks to Be Removed	Age Estimate (years)
4–9	2	1	16–36
10–19	22	4	40–76
20–25	31	12	80–100
26–29	20	8	104–116
30–36	17	6	120–144
37[a]–39	4	1	148–156
40–49	15	5	160–196
50+	1	0	200+[b]

Sources: Keesler AFB 2021a; Seal 2021.
Notes:
[a] Live oak trees of 37 inches dbh or more are estimated to be 150 years old or older.
[b] The largest live oak on the site has a 54-inch dbh and is estimated to be 216 years.

Removal of the trees would not substantially reduce the local population of any tree species, including live oak, or affect the viability of the local population of any tree species. Many tree species found on the site, however, are of value to wildlife and their removal would reduce the value of the site to local wildlife (Arbor Day Foundation 2022; NWF 2022):

- Food: Black willow, eastern red cedar, oak, pecan, and red maple.
- Shelter and nesting: Eastern red cedar, oak, and pine. Birds also use the moss that hangs from live oak tree branches to construct nests.

3.8.2.1.2 Sensitive Species

No adverse effects on sensitive species would be expected. No threatened or endangered species or sensitive habitats occur in the project area.

3.8.2.2 Alternative 2

3.8.2.2.1 Vegetation and Wildlife

Long-term less-than-significant adverse effects on biological resources would be expected from implementing Alternative 2. The effects of Alternative 2 on biological resources would be the same as those of Alternative 1. The same number of live oak trees (37) would be lost under Alternative 2 as under Alternative 1 and one more tree of a species other than live oak (24) would be lost under Alternative 2. More ground disturbance would occur under Alternative 2 with the realignment of the northern portion of Ploesti Drive, but the disturbed ground is maintained lawn and the additional disturbance would not add to effects on biological resources.

3.8.2.2.2 Sensitive Species

No adverse effects on sensitive species would be expected. No threatened or endangered species, sensitive habitats, or wetlands occur in the project area.

3.8.2.3 No Action Alternative

No effects on biological resources would result under the No Action Alternative. No changes to the site would occur.

3.9 Cultural Resources

Cultural resources are physical manifestations of culture—specifically, archaeological sites, architectural properties, ethnographic resources, and other historical resources and places relating to human activities, society, and cultural institutions—that define communities and link them to their surroundings. The federal government maintains the NRHP, a listing of prehistoric, historic, and ethnographic buildings, structures, sites, districts, and objects that are considered significant at a national, state, or local level. Cultural resources that meet the criteria for listing on the NRHP are considered NRHP-eligible and are afforded the same considerations as listed resources. Cultural resources that meet the criteria for listing on the NRHP, regardless of age, are called *historic properties*.

3.9.1 Affected Environment

3.9.1.1 Historic Resources

In 1988, Keesler AFB cultural resources personnel worked with MDAH to identify and document buildings and sites on the base with potential historical and cultural significance (Keesler AFB

2022a). The Keesler *Cold War-Era Buildings and Structures Inventory and Assessment* was completed in December 2003 and provided an inventory of all buildings built between 1945 and 1991. As of 2013, Keesler AFB in collaboration with MDAH determined that only five remaining buildings on the installation continue to require consultation under Section 106 of the NHPA: buildings 4116, 4330, 4331, 6901, and potentially 1002 (Keesler AFB 2022a). Of these buildings, none are within or have line of sight to the project area.

3.9.1.2 Archaeological Resources

The Center for Archaeological Research at the University of Mississippi was contracted by the National Park Service in August 1993 to conduct a baseline archaeological survey of Keesler AFB. Because of the extensive land disturbance that had occurred over most of the base, the study concluded there is very little likelihood that any unknown archaeological deposits remain on Keesler AFB (Keesler AFB 2022a). In November 2021, during the Section 106 consultation between the DAF and MDAH for this project, MDAH indicated that a cultural resources survey was required for all areas where soil-disturbance is expected prior to continuing consultation on project effects. MDAH explained this request citing the topography of the area, the presence of recorded archaeological sites near the project area, and their not having evidence that the area of potential effects was previously examined for cultural resources (MDAH 2021; See Appendix A).

With assistance from New South Associates in November 2022, DAF conducted an archaeological survey of the approximately 20-acre project area. The survey recorded three archaeological resources: two historic archaeological sites and one historic isolated find. New South Associates recommended that the three resources not be considered eligible for listing on the NRHP (i.e., they are not historic properties). No American Indian resources were recorded during survey. The DAF provided the draft survey report to MDAH and affiliated Tribes in March 2023 for concurrence and comment. The DAF received Tunica-Biloxi Tribe of Louisiana's concurrence with the survey results in March 2023 and Choctaw Nation of Oklahoma's and MDAH's in April 2023 (See Appendix A).

3.9.1.3 American Indian Concerns

In 1995, a Legacy Study was conducted at Keesler AFB, which determined that no prehistoric or historic American Indian archaeological or sacred sites are present on Keesler AFB (Keesler AFB 2022a). During preparation of the 2013 Cultural Resources Management Plan (CRMP), Keesler AFB contacted four federally recognized American Indian Tribes known to have an historical connection to the land on the base—the Choctaw Nation of Oklahoma, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, and Tunica-Biloxi Tribe of Louisiana—to meet the intent of the Native American Indian Religious Freedom Act of 1978 (42 U.S.C. § 1996) and the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001–3013) to identify any concerns the Tribes might have about resources of religious or cultural importance located on the installation. No American Indian sacred sites or resources were identified (or have since been identified), and Keesler AFB will contact the Tribes in the event of any discoveries and consult the Tribes for any significant ground-disturbing developments (Keesler AFB 2022a).

3.9.2 Environmental Consequences

An Alternative would be expected to have a significant adverse impact on cultural resources if it would (1) result in adverse effects, as defined by the NHPA, on a historic property listed or eligible for listing on the NRHP that are not resolved through a Memorandum of Agreement

(MOA) with the SHPO, and possibly with the Advisory Council on Historic Preservation (ACHP), or (2) create conditions that would stop the traditional use of sacred or ceremonial sites or resources by a Tribe or Tribes, without discussions on a government-to-government level with the affected Tribe(s).

3.9.2.1 Alternative 1

The DAF initiated the Section 106 consultation process in November 2021 with MDAH and four federally recognized Tribes affiliated with the installation—the Choctaw Nation of Oklahoma, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, and Tunica-Biloxi Tribe of Louisiana. Responses were received from the Choctaw Nation of Oklahoma and MDAH. In January 2022, the Choctaw Nation of Oklahoma concurred with the DAF assessment that neither of the two proposed alternatives have the potential to affect historic properties and requested that work be stopped and their office contacted immediately in the event that American Indian artifacts or human remains are encountered (See Appendix A). However, per MDAH request, the DAF conducted a cultural resources survey of the project area in November 2022 (details in Section 3.9.1.2).

The survey documented three archaeological resources, all of which were recommended not eligible for the NRHP (i.e., not historic properties). The DAF provided the draft survey report and the proposed determination of no historic properties affected from the Proposed Action and alternatives to MDAH and affiliated American Indian Tribes for concurrence and comment. MDAH provided their concurrence on the survey results and the determination of effect in April 2023, and requested their office be contacted if any undocumented cultural resources were encountered during project execution (See Appendix A). The Tunica-Biloxi Tribe of Louisiana and Choctaw Nation of Oklahoma, in March and April 2023, respectively, concurred with the survey results and the DAF's proposed determination of effect (See Appendix A).

The documented resources are within the project area and would experience both short- and long-term effects from construction and operation. Since these proposed activities might occur anywhere within the project area, it is reasonable to assume the resources would experience some, if not complete, disturbance. However, none of these resources are eligible for the NRHP (i.e., historic properties), thus project effects would remain less-than-significant.

According to the Keesler AFB CRMP contingency plan for archaeological discoveries, if an archaeological resource was discovered during excavation or construction, activity in the area would cease immediately and a reasonable effort would be made to protect the discovered items. The construction manager would contact the base civil engineer and the Keesler AFB cultural resources manager, who would in turn contact the State Historic Preservation Office / MDAH and the American Indian Tribes known to have an historical connection to the land on the base as well as other appropriate persons and agencies (Keesler AFB 2022a).

3.9.2.2 Alternative 2

The effects of implementing Alternative 2 would be the same as those of implementing the Alternative 1. The same precautions would be taken in the event of an inadvertent discovery.

3.9.2.3 No Action Alternative

No effects on cultural resources would result under the No Action Alternative. The No Action Alternative would involve no ground disturbance, and there would not, therefore, be any chance of a disturbance of an historic, archaeological, or American Indian resource.

3.10 Hazardous Materials and Hazardous Wastes

Hazardous materials are defined in 49 CFR § 171.8 "as a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under Section 5103 of federal hazardous material transportation law (49 U.S.C. §§ 5103)." The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR § 172.101), and materials that meet the defining criteria for hazard classes and divisions in Part 173 of subchapter C. Transportation of hazardous materials is regulated by the U.S. Department of Transportation regulations in 49 CFR Parts 105–108.

Hazardous wastes are defined by the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. § 6903(5)), as amended by the Hazardous and Solid Waste Amendments, "as a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

Regulatory Review. AFPD 32-70 and the DAF Instruction (AFI) 32-7000 series incorporate the requirements of all federal regulations and other AFIs and DoD directives for the management of hazardous materials, hazardous wastes, and special hazards. Evaluation extends to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site of a proposed action.

Special hazards are those substances that might pose a risk to human health and are addressed separately from other hazardous substances. Special hazards include asbestos-containing materials (ACM), polychlorinated biphenyls (PCBs), and lead-based paint (LBP). EPA is given authority to regulate these special hazard substances under the Toxic Substances Control Act (15 U.S.C. Chapter 53).

EPA has authorized the MDEQ Hazardous Waste Management Program to administer a hazardous waste regulatory program and to enforce the RCRA requirements in Mississippi. The Mississippi hazardous waste management regulations are provided in 11 Miss. Admin. Code Pt. 3, Ch. 1–5.

3.10.1 Affected Environment

This section describes the existing conditions as they relate to hazardous materials and waste management on Keesler AFB.

Hazardous materials are used throughout Keesler AFB for various routine functions, including shop operations and maintenance; ground support equipment maintenance; and facilities maintenance and repair. Sources of these materials may include electrical components; heating and cooling systems; generators; storage tanks; chemical pest control; and petroleum, oils, and lubricants (POL) (i.e., fuels, grease, lubricating oil, solvents, and coolants).

Keesler AFB has a base-specific hazardous materials and waste management program implemented through the 81 TRW Hazardous Waste Management Plan (HWMP) and Spill Prevention, Control, and Countermeasure (SPCC) Plan (Keesler AFB 2020b; 81 TRW 2021). The HWMP provides guidance to personnel who work with hazardous waste and prescribe the roles and responsibilities with respect to the waste stream inventory, waste analysis plan, hazardous waste management procedures, training, emergency response, and pollution

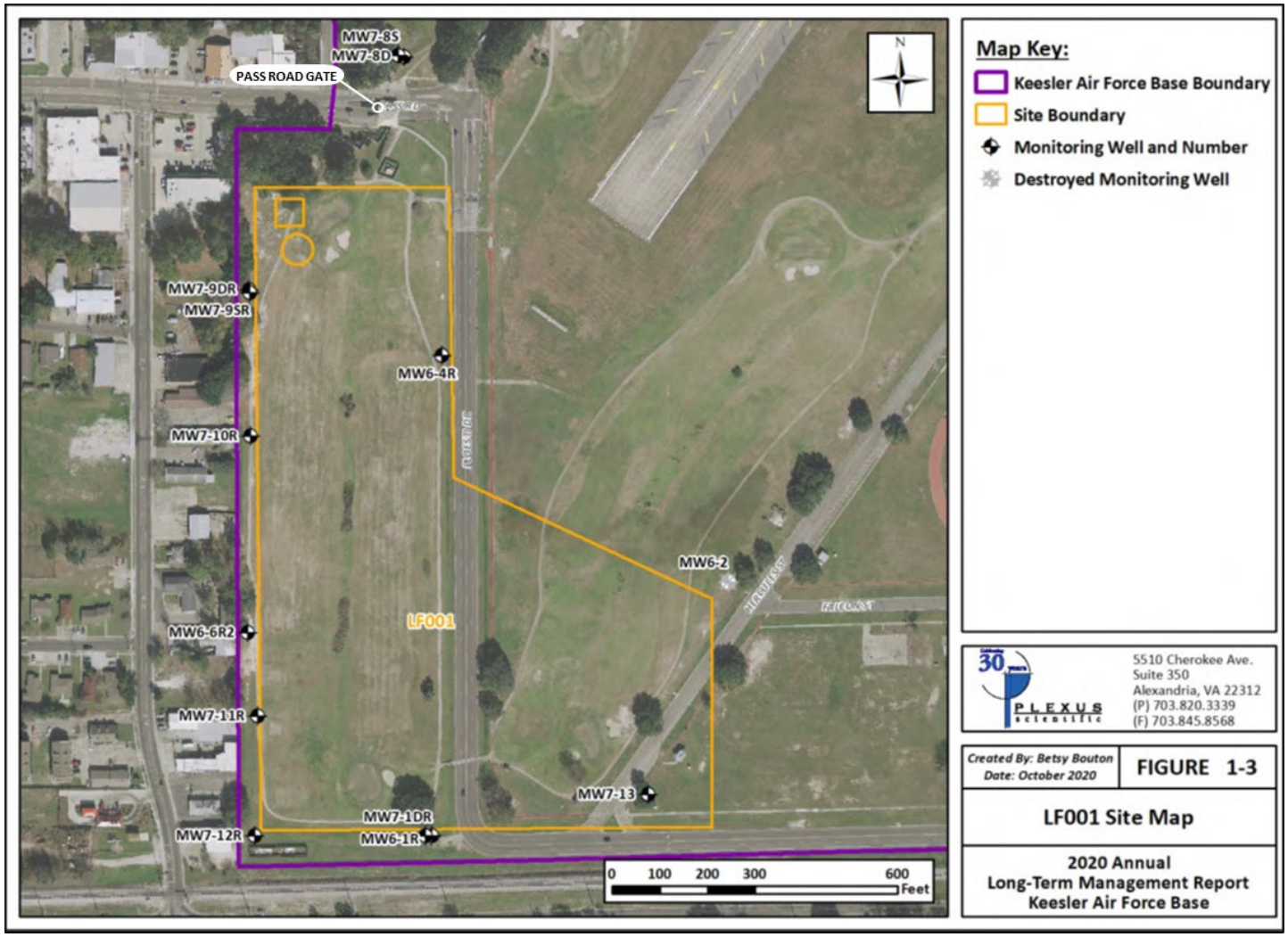
prevention. The SPCC Plan provides guidance specific to hazardous material and petroleum containment, handling, disposal, and emergency response. All guidance documents for operations conducted at Keesler AFB are regularly reviewed by the installation hazardous waste program manager to ensure compliance with current federal, state, and local requirements regarding the management of hazardous wastes as they relate to environmental protection and worker safety. The guidance documents apply to all base personnel, contractors, and external support organizations on Keesler AFB.

Keesler AFB is regulated as a large-quantity generator of hazardous waste (Keesler AFB 2020b), which means the base generates more than 2,200 pounds of hazardous waste in a single month. Hazardous waste is separated and temporarily stored on-base before being transferred off-base for disposal or reclamation. The hazardous waste program manager is responsible for arranging the shipment and disposal of waste through the Defense Logistics Agency Disposition Service or by another disposal contractor.

Facilities on Keesler AFB are known to contain ACM and LBP. In facilities constructed prior to the 1980s, ACM and LBP may reasonably be assumed to be present. ACM, LBP, and PCBs are special hazards, with specific handling and abatement requirements that differ from other hazardous materials. Facilities known or suspected to have special hazards would be inspected by a licensed contractor. Special hazards would be removed, stored, and disposed of in accordance with the Asbestos Operations and Management Plan (Keesler AFB 2019); the Lead Based Paint Management Plan (Keesler AFB 2014) and applicable federal, state, and local regulations.

As of 1998, all underground and aboveground liquid fuel storage tanks not meeting current environmental requirements had been upgraded, replaced, or removed (CEMML 2019).

Environmental Restoration Program (ERP). The objectives of the ERP are to identify and fully evaluate any areas suspected of being contaminated with hazardous materials caused by past operations and to eliminate or control any hazards to public health, public welfare, or the environment. ERP activities at Keesler AFB are regulated under a RCRA permit identified as USEPA Hazardous and Solid Waste Amendments (HSWA) Permit No. MS2-570-024-164, issued in 2017 The proposed project area is adjacent to ERP Site Landfill Site No. 1 (LF001) (Solid Waste Management Unit [SWMU] 7), a historic landfill (Keesler AFB 2020c) (See Figure 3-8). Site LF001 operated between the early 1940s and the 1960s and in 1942, unknown quantities of aviation gasoline sludge suspected of containing tetraethyl lead were buried on the northern portion of the Site (Keesler AFB 2020c). In March 2006, long-term operations and maintenance activities began at LF001. The chosen remedy for the former landfill is long-term monitoring and implementation of land use controls (LUCs). In the most recent sampling event in June 2020, no contamination of concerns was detected above maximum contaminant levels (MCLs) (Keesler AFB 2020c).



Source: Keesler AFB 2020c.
Note: The location of aviation gasoline sludge burial and the potential location of a concrete vault are in the northeast corner of the landfill site.

Figure 3-8. Landfill Site No. 1, SWMU 7

Emerging Contaminants. Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs). PFOS and PFOA are components of legacy Aqueous Film Forming Foam (AFFF) the DAF began using in the 1970s as a firefighting agent to extinguish petroleum fires. In November 2015, more environmentally responsible AFFF formulas were added to the DOD's qualified products list for firefighting agents. The DAF began replacing both PFOS-based and other legacy AFFF products with a new, environmentally responsible formula in August 2016. The DAF completed new foam delivery in August 2017.

In March 2023, EPA published proposed rulemaking for a National Primary Drinking Water Regulation and health-based Maximum Contaminant Level Goals (MCLG) for four PFAS and their mixtures as well as for PFOA and PFOS (USEPA 2023). An MCLG is the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, allowing an adequate margin of safety. EPA is also proposing enforceable standards which takes the form of maximum contaminant levels (MCLs) in this proposed regulation. An MCL is the maximum level allowed of a contaminant or a group of contaminants (i.e., mixture of contaminants) in water which is delivered to any user of a public water system. The DoD has proactively directed all installations to test their drinking water for PFOS and PFOA. Drinking water testing results collected at 20 sample locations around the base in November 2020 were below the Method Reporting Limit for all 29 PFAS compounds covered and Keesler AFB is scheduled to resample in 2025 (SSgt Chambers 2023).

3.10.2 Environmental Consequences

Effects would be considered significant if the Proposed Action would (1) cause or increase the risk of human exposure to hazardous substances without adequate protection; (2) substantially increase the risk of spills or releases of hazardous substances; (3) disturb the progress of cleanup activities so adverse effects on human health or the environment could result; (4) conflict with established LUCs; or (5) result in noncompliance with applicable federal, state, or local laws and regulations or with permits related to hazardous materials and waste.

3.10.2.1 Alternative 1

Alternative 1 would have short-term less-than-significant, adverse effects on the presence and use of hazardous materials and wastes. Short-term effects would be realized by an increased use of hazardous materials and generation of wastes during demolition and construction activities. Construction would have short-term less-than-significant, adverse effects on hazardous materials usage and waste management. The use of hazardous materials and generation of wastes at the demolition and construction areas would occur; however, the increase in hazardous materials and wastes would be limited and temporary. General construction activities involve hazardous materials such as POLs, batteries, and pesticides for site maintenance. Use of hazardous materials and management of hazardous wastes would involve minor risk of spills and human exposure; however, Keesler AFB or construction contractors would minimize those risks by complying with established management plans for hazardous materials and wastes, and spill prevention and response. Construction BMPs would be implemented at all sites, including personnel safety training, proper storage and signage of containers, routine inventory, and readily available Safety Data Sheets (SDS) for all hazardous materials used on-site. In addition, equipment would receive regular maintenance and vehicles would use drip pans when stationary to prevent contamination from leaks.

Contractors on-site would comply with local, state, and federal regulations for the use, handling, and disposal of hazardous materials and hazardous wastes. All construction sites would have a designated Health and Safety Officer on-site to ensure compliance with applicable regulations and the Health and Safety Plan (HASP). The HASP is a site-specific document required by the Occupational Safety and Health Administration OSHA that details items such as job hazard analysis, employee training, required personal protective equipment (PPE), exposure monitoring, and contamination response for the site. A printed copy would be kept at every project site for reference and would be updated if changes occur.

Construction activities would be coordinated with base personnel so they would not interfere with ongoing sampling efforts or damage installed monitoring wells.

Operation and maintenance of the new Pass Road Gate would be similar to preconstruction activities and would not introduce additional hazardous materials usage or hazardous waste generation.

3.10.2.2 Alternative 2

The effects of implementing Alternative 2 would be the same as those of implementing Alternative 1. Construction contractors would be responsible for preventing spills and following all applicable storage and handling procedures. Operation and maintenance of the new Pass Road Gate would be similar to preconstruction activities and would not introduce additional hazardous materials usage or hazardous waste generation.

3.10.2.3 No Action Alternative

Under No Action Alternative, a new Pass Road Gate would not be constructed, therefore, there would be no effects on hazardous materials usage and hazardous waste management.

3.11 Infrastructure and Utilities

Infrastructure and utilities include basic resources and services required to support planned construction and operations and the continued operation of existing facilities. For the purposes of this EA, infrastructure is defined as potable water supply, energy systems, central heating and cooling, communications, sanitary sewer, and stormwater systems.

3.11.1 Affected Environment

Keesler AFB has an extensive infrastructure network that meets current and projected supply and capacity requirements. The proposed site for the new Pass Road Gate is served by Keesler AFB infrastructure systems (Keesler AFB 2015a).

3.11.1.1 Potable Water Supply System

Keesler AFB maintains its own potable water system. There are approximately 500,000 linear feet of water supply pipeline constructed of transite, polyvinyl chloride, steel, and cast iron.

The principal source of drinking water for Keesler AFB is groundwater from the Miocene aquifer system. The potable water system for Keesler AFB includes a network of 10 active water supply wells with production capacities of 500–1,500 gallons per minute, six 400,000-gallon elevated storage tanks with a combined capacity of 2.4 million gallons, and two 50,000-gallon fire suppression system water storage tanks (Keesler AFB 2015a). Average water usage at Keesler AFB is 1.7 million gallons per day (mgd). The permitted combined production capability for all Keesler AFB active water supply wells is 9.2 mgd (Keesler AFB 2015a, 2015b).

3.11.1.2 Energy Systems

Keesler AFB's energy requirements include the use of natural gas and electricity. Natural gas is purchased from a commercial vendor and is distributed to Keesler AFB through a 14-mile long, welded steel, high-pressure main from Gulfport. Once on base, natural gas is distributed by recently replaced polyethylene plastic natural gas lines that supply most areas of the base. There are approximately 370,000 linear feet of gas mains. The base is operating well below natural gas capacity limits (Keesler AFB 2015a).

Keesler AFB's electrical infrastructure was completely replaced after Hurricane Georges in 1998. All overhead lines were replaced with secure and weather-resistant underground lines. Keesler AFB purchases all its electricity from Mississippi Power Company. Electricity is supplied by a 115-kilovolt (kV) transmission line south of the Keesler AFB-owned 115-kV substation and is distributed through approximately 240 miles of underground power lines (Keesler AFB 2015a). The base is operating well below peak capacity (Keesler AFB 2015a).

3.11.1.3 Central Heating and Cooling

Keesler AFB no longer uses central steam plants to heat and cool buildings; they have been replaced by individual boilers at specific buildings. In addition, there are five stand-alone central chiller plants, each with underground distribution piping to the buildings they serve (Keesler AFB 2015a).

3.11.1.4 Communications System

The base communications systems include telephone feeder cable and fiber optic lines, cable television, and satellite communication. Communications infrastructure has improved recently through the installation of underground lines, expansion of fiber optic cable, and advancement of Voice over Internet Protocol (Keesler AFB 2015a, 2015b).

3.11.1.5 Sanitary Sewer System

The Harrison County Wastewater District provides wastewater treatment and disposal for Keesler AFB. The base owns and maintains a 50-mile wastewater collection system, which can accommodate an estimated wastewater flow of approximately 3.1 mgd. The piping system is cast iron and clay. Wastewater is pumped to the West Biloxi Sewage Treatment Plant, which provides secondary treatment of the effluent (CEMML 2019). The treatment facility has a treatment capacity of 11 mgd. The average daily wastewater generation at Keesler AFB is approximately 1.4 mgd (Keesler AFB 2015a).

3.11.1.6 Stormwater System

Stormwater drainage within the base is divided into 10 drainage areas, the majority of which encompass small residential or commercial areas not associated with industrial activities. These drainage areas discharge to the Back Bay of Biloxi though 10 outfalls located on the base, as does most of the stormwater drainage from Keesler AFB. A portion of the base stormwater, however, flows south through the city of Biloxi's storm drainage system to the Mississippi Sound (CEMML 2019).

The stormwater drainage system consists of open channels and covered drainage culverts. The main base has nearly 500,000 linear feet of concrete storm drainage pipe (Keesler AFB 2015a). Stormwater near the proposed site drains north to the Back Bay of Biloxi.

3.11.2 Environmental Consequences

Infrastructure and utilities on the base would be significantly affected by implementing an alternative that would increase the demand or exceed the capacity of a utility or created a need for an unavailable utility service. Less-than-significant effects would occur on local utilities if the systems have sufficient capacity to handle the increased demand or the increased demand could be mitigated or managed with BMPs.

3.11.2.1 Alternative 1

Under Alternative 1, demand from construction activities would result in negligible and short-term effects on the base's Infrastructure and utilities. The base's infrastructure and utilities have sufficient capacity to handle demands during construction and demolition.

Once operational, infrastructure and utilities usage from Pass Road Gate at the new location would be similar to current usage for the existing Pass Road Gate. Increased stormwater generation is expected from increased impervious surfaces, such as asphalt and concrete used for roadway, parking, and inspection areas. However, Section 438 of the EISA specifically calls for federal development that has a footprint that exceeds 5,000 square feet to maintain or restore predevelopment hydrology. As a result, facility design would incorporate permanent controls for the proper management of stormwater. Therefore, a less-than-significant adverse effect would be expected from increased stormwater.

3.11.2.2 Alternative 2

Utility demands during construction and operation of Alternative 2 would be similar to Alternative 1.

3.11.2.3 No Action Alternative

No effects on infrastructure and utilities would be expected under the No Action Alternative. The existing Pass Road Gate would continue to operate and the demand for utility service would remain the same.

3.12 Transportation and Traffic

3.12.1 Affected Environment

Transportation near Keesler AFB is achieved mainly via road and street networks and pedestrian walkways. Regional access is provided by I-110 (State Route 15), which connects to I-10 north of Biloxi and provides east-west access to other locations in Mississippi and other states. Pass Road and Rodeo Drive provide direct access to the Pass Road Gate.

The average annual daily traffic (AADT) is the average number of vehicles traveling along a roadway each day. Level of service (LOS) is a measure of the operational conditions on a roadway or at an intersection. LOS ranges from A to F, with "A" representing the best operating conditions (free flow, little delay) and "F" the worst conditions (congestion, long delays). LOSs A, B, and C are typically considered good operating conditions. Table 3-10 and Table 3-11 summarize the routes near the proposed site and in the area, their AADT, and their estimated existing LOSs.

Table 3-10. Existing Traffic and LOS on Nearby Roadways and Gates

Intersection	Estimated Existing LOS
Pass Road/ Ploesti Drive	B-C
Pass Road/ Rodeo Drive	A
White Avenue/ Irish Hill Drive	A-B
Road	**AADT**
Pass Road (east of Rodenberg Avenue)	12,000
Rodenberg Avenue (north of Irish Hill Drive)	5,800
Irish Hill Drive	2,800
Iberville Drive (north of Irish Hill Drive)	6,000

Sources: MDOT 2022; GannettFleming 2020.

Table 3-11. Existing Conditions at Pass Road Gate

Condition	Volume
24-hour volume summary (outbound)	3,424
24-hour volume summary (inbound)	3,423
Peak 15-minute inbound arrival	134
Existing inbound demand	536

Source: GannettFleming 2020.

***Air, Rail, and Public Transportation*.** Keesler AFB has an airstrip that is for official DAF use only (AirNav 2022b). The closest international airport, Gulfport-Biloxi International Airport, is 9 miles away and has 131 operations per day (AirNav 2022a). The closest Amtrak rail station is 53 miles away in Picayune, MS (Amtrak 2022). Coast Transit Authority offers bus transportation to designated locations throughout Harrison County. Route 34 (blue route) travels from Gulfport to Pass Road and the Veterans Administration building near the Pass Road Gate. Service is offered Monday through Saturday from 5:09 a.m. to 7:52 p.m. with a reduced schedule on Sundays (CTA 2021).

3.12.2 Environmental Consequences

Traffic and the transportation network would be significantly affected if implementing either of the proposed alternatives created appreciable changes in the overall traffic volume or permanently degraded LOS more than two levels at an affected intersection.

3.12.2.1 Alternative 1

Short-term less-than-significant adverse effects and long-term beneficial effects on the transportation network would be expected. Short-term effects would be caused by changes in traffic patterns attributable to the temporary closure of the Pass Road Gate during construction; temporary redirection of traffic to the White Avenue Gate; temporary closure of the school drop-off area; and additional vehicles and day-labor traffic during construction. Long-term effects would be to the result of changes in traffic patterns attributable to construction of an improved

Pass Road Gate. Alternative 1 would have no appreciable effect on air, rail, or public transportation.

Construction activities would have short-term less-than-significant adverse effects on transportation and traffic. These effects primarily would be to the result of the temporary closure of the Pass Road Gate and the adjacent school drop-off area to accommodate construction work. Base traffic would be redirected to the White Avenue Gate, which could be operating under limited hours during the proposed construction. In addition, short-term less-than-significant adverse effects attributable to worker commutes, road closures or detours to accommodate utility system work, and delivery of equipment and materials to and from the project site causing congestion and traffic delays near the construction site would be expected. These effects would be temporary and end with the construction phase. Although the effects would not be significant, contractors would be expected to route and schedule construction vehicles to minimize conflicts with other traffic and strategically locate staging areas to minimize traffic impacts. If possible, construction near the school drop-off area would be started in the summer to limit effects during the school year. All construction vehicles would be equipped with backing alarms, two-way radios, and “Slow Moving Vehicle” signs, as appropriate.

Operation and maintenance of the new Pass Road Gate would be similar to preconstruction activities and would not introduce additional vehicle trips to or from the base. Traffic volumes at the gate are anticipated to be similar to preconstruction. Traffic to the White Avenue Gate and congestion and traffic backups at the gate would be expected to return to preconstruction levels once the new Pass Road Gate was operational.

Based on a qualitative analysis, the overall effects of Alternative 1 on the traffic patterns in the area would be beneficial because the reconfigured gate would not introduce new traffic at the gate and vehicles waiting for inspection at the Pass Road Gate would not back up beyond the gate onto Pass Road off the base.

One unavoidable change of reconfiguring the Pass Road Gate as proposed in Alternative 1 would be that drivers intending to head south after clearing inspection at the gate would have to travel an additional approximately three-fifths of a mile. In the gate’s current configuration, immediately after passing through it, vehicles can turn left (north) or right (south) at the intersection of Pass Road and Ploesti Drive. After construction, drivers intending to head south from the gate would have to travel north to the intersection of the new entrance road and Ploesti Drive (approximately three-tenths of a mile) before turning south on Ploesti Drive.

3.12.2.2 Alternative 2

Alternative 2 would be expected to have short-term less-than-significant adverse and long-term less-than-significant beneficial effects on transportation and traffic.

Short-term effects on traffic resulting from construction would be expected to be the same as those as resulting from Alternative 1 and would end when construction was completed.

Long-term effects of implementing Alternative 2 would result from the same factors discussed for Alternative 1: additional vehicle trips to or from the base would not be introduced, traffic volumes at the proposed new gate would be similar to preconstruction volumes, traffic volume and patterns at the White Avenue Gate would return to preconstruction levels, and vehicles awaiting inspection at the Pass Road Gate would not back up beyond the gate onto Pass Road off the base. Once the RV storage area relocation is complete under a different action, daily traffic on Ploesti Drive might be slightly less than under the current configuration. Also, just as if Alternative 1 was implemented, drivers intending to head south around the southern end of the

airfield after clearing inspection at the proposed new gate would have to travel an additional approximately three-fifths of a mile to do so. Alternative 2 would have no appreciable effect on air, rail, or public transportation.

3.12.2.3 No Action Alternative

Under the No Action Alternative, the long-term adverse effects of traffic at the gate and vehicles waiting for inspection at the Pass Road Gate causing back up beyond the gate on Pass Road off the base would continue.

3.13 Safety and Occupational Health

3.13.1 Affected Environment

Potential safety and occupational health issues at Keesler AFB include AT/FP, explosive, flight, and construction jobsite safety associated with activities conducted on-base. Explosive safety clearances have been established around the munitions storage area and explosive cargo pad at the airfield (Keesler AFB 2004). The regular missions of Keesler AFB do not involve use of the explosive cargo pad, as it is only used once or twice a year, usually during a special training exercise.

Day-to-day operation and maintenance activities conducted at Keesler AFB are performed in accordance with applicable DAF safety regulations, published DAF Technical Orders, and standards prescribed by DAF Occupational Safety and Health requirements. Additionally, the DoD and the DAF have developed force protection guidelines for military installations as a result of terrorist activities. The DoD Minimum Antiterrorism Standards for Buildings (UFC 4-010-01) addresses access to facilities on the installation, facility siting, exterior design, interior infrastructure design, and landscaping. The DAF Installation Force Protection Guide provides general guidance on force protection issues.

Construction jobsite safety and the prevention of accidents is an ongoing activity for any DAF jobsite. All contractors performing construction activities are responsible for complying with DAF safety and OSHA regulations and are required to conduct construction activities in a manner that poses no undue risk to workers or personnel. Industrial hygiene programs address exposure to hazardous materials, use of PPE, and use and availability of Material SDSs. Industrial hygiene is the responsibility of contractors, as applicable. Contractor responsibilities are to review potentially hazardous workplaces; monitor exposure to workplace chemical (e.g., asbestos, Pb, and hazardous materials), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; recommend and evaluate controls (e.g., ventilation and respirators); ensure personnel are properly protected or unexposed; and ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures or engaged in hazardous waste work.

3.13.2 Environmental Consequences

Safety and occupational health would be significantly affected if implementing an alternative would result in an increased chance that human health and safety would be endangered on the base.

3.13.2.1 Alternative 1

Short-term less-than significant adverse effects and long-term beneficial effects on safety and occupational health would be expected from implementing Alternative 1.

Short-term less-than-significant adverse effects on safety and occupational health would be expected from construction activities. Construction workers and equipment operators would be exposed to risks associated with construction and equipment maintenance activities; however, those risks would be minimized from implementing established base Standard Operating Procedures and preparing and implementing project-specific HASPs. Contractors would be required to prepare HASPs to address worker safety and training before commencing work. The plans would include measures to protect workers, the public, and the environment; would be prepared in accordance with established DoD and DAF regulations; and would comply with federal and state OSHA standards. Additionally, as discussed in Section 3.10.2.1, construction contractor would coordinate with base personnel on ongoing sampling efforts for ERP Site LF001, a historic landfill.

Similarly, short-term less-than-significant adverse effects on safety and occupational health would be expected from construction traffic. As discussed in Section 13.12.2.1, construction related traffic effects would be addressed with redirecting traffic from the temporary closure of the Pass Road Gate and the adjacent school drop-off area to the White Avenue Gate. Additional measures would include routing and scheduling construction activities and vehicles to minimize conflicts with other traffic and strategically locate staging areas to minimize traffic effects. If possible, construction near the school drop-off area would be started in the summer to limit effects during the school year. All construction vehicles would be equipped with appropriate safety measures. Traffic related safety and occupational health effects would be temporary and end with the construction phase.

Long-term beneficial effects on safety and occupational health would be expected implementing Alternative 1. A new AT/FP-compliant gate at Pass Road would improve overall safety on the base for DAF personnel and visitors. Relieving congested traffic conditions on-base and on local roads would improve safety on local roads.

3.13.2.2 Alternative 2

Under Alternative 2, there would be short-term less-than significant adverse effects and long-term beneficial effects on safety and occupational health, similar to those under Alternative 1.

3.13.2.3 No Action Alternative

Under the No Action Alternative, existing Pass Road Gate would remain non-compliant of AT/FP and UFC criteria and long-term adverse effects to base security and the safety of personnel and schoolchildren would continue.

3.14 Climate Change

The variation in the Earth's climate over time is climate change. Changing climate is caused by natural processes such as variations in ocean currents and solar energy. Climate change also is influenced by human activities, such as greenhouse gas (GHG) emissions.

EO 14008, *Tackling the Climate Crisis at Home and Abroad* (2021), outlines policies to reduce GHG emissions and to bolster resilience to the effects of climate change. In January 2023, CEQ issued its interim guidance to assist agencies in analyzing GHG and climate change effects of their proposed actions under the NEPA, *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change* (CEQ 2023). When considering GHG emissions and their significance, agencies should use appropriate tools and methodologies for quantifying GHG emissions and comparing GHG quantities across alternative scenarios. The CEQ guidance specifically requires DoD agencies to quantify GHG emissions in

NEPA assessments and to review federal actions in the context of future climate scenarios and resiliency.

In addition, EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, requires federal agencies to capture the full costs of GHG emissions as accurately as possible, including taking global damages into account. Doing so facilitates sound decision-making, recognizes the breadth of climate effects, and supports the international leadership of the United States on climate issues. The social cost of carbon (SCC) is an estimate of the monetized damages associated with incremental increases in GHG emissions, such as reduced agricultural productivity, human health effects, property damage from increased flood risk, and the value of ecosystem services. The current SCC is estimated at $53 per metric ton (IWG-SCGHG 2021).

3.14.1 Affected Environment

GHGs (e.g., carbon dioxide, methane, and nitrous oxide) are components of the atmosphere that trap heat near the surface of the Earth and contribute to climate change. Most GHGs occur naturally in the atmosphere but increases in their concentration result from human activities such as burning fossil fuels. Global temperatures are expected to continue to rise as human activities continue to add GHGs to the atmosphere. Mississippi is in the southeast climate region of the United States, where the effects of changing climate are being experienced through increased flooding, warming temperatures, and growing wildfire risk (Carter et al. 2018).

The City of Biloxi has an average high temperature of 90 degrees Fahrenheit (°F) in the hottest month of July, and an average low temperature of 43 °F in the coldest month of January. Biloxi has average annual precipitation of 64.83 inches per year. The wettest month of the year is July, with an average rainfall of 7.13 inches (U.S. Climate Data 2022).

Tropical cyclones, or hurricanes, bring heavy rain, strong winds, and high tides to Keesler AFB even when they make landfall far from Biloxi. Recent hurricanes Zeta and Sally made landfall in Louisiana and Alabama, respectively, in 2020, and brought heavy rain, strong winds, and high tides to Keesler AFB. Historically, two hurricanes have made landfall in Biloxi. Hurricane Elena made landfall in 1985 with a maximum windspeed of 100 knots as a Category 3 storm. Hurricane Camille made landfall in Biloxi as a Category 5 storm in 1969 with a maximum windspeed of 150 knots (NOAA 2022b).

The northernmost portion of the proposed project area is at the approximate storm surge line from Hurricane Katrina (AETC 2006). Keesler AFB recently completed an analysis of sea-level rise scenarios. This study found the potential for inundation similar to what occurred from Hurricane Katrina. Only minor damage (0–1-ft potential inundation) to the proposed project area would be expected from the highest level of inundation risk (Tetra Tech 2022).

3.14.2 Environmental Consequences

Effects would be considered significant if the Proposed Action GHGs were greater than 25,000 metric tons carbon dioxide equivalent (CO2e) per year. This is the suggested level per the draft CEQ guidance and the threshold for applicability in the EPA mandatory reporting rule (40 CFR Part 98.2(a)(2)).

3.14.2.1 Alternative 1

This section examines GHGs as a category of air emissions and does not attempt to measure the actual incremental effects of GHG emissions from Alternative 1. This EA also does not include the effects that Keesler AFB has no authority to prevent because of a lack of consensus

on how to measure such effects. No climate prediction models have been developed for Keesler AFB and such tools have substantial variation in output, and do not have the ability to measure the actual incremental effects of a project on the environment.

Changes in GHG emissions from Alternative 1 would primarily come from construction and demolition (see Table 3-3). Operations would have negligible GHG emissions (Table 3-3). Using carbon dioxide equivalent as a surrogate for carbon dioxide emissions, the SCC for implementing Alternative 1 was estimated to be $302 per year (IWG-SCGHG 2021).

Table 3-12 outlines potential climate stressors and their effects on the proposed gate at Keesler AFB. The proposed project in and of itself is only indirectly dependent on any of the elements associated with future climate scenarios (e.g., meteorological changes). At this time, no future climate scenario or potential climate stressor would have appreciable effects on any element of the proposed new gate project.

Table 3-12. Effects of Potential Climate Stressors

Potential Climate Stressor	Effects on Alternative 1
More frequent and intense heat waves	Negligible
Longer fire seasons and more severe wildfires	Negligible
Changes in precipitation patterns	Negligible
Increased drought	Negligible

Source: Carter et al. 2018.

3.14.2.2 Alternative 2

The effects of Alternative 2 would be similar to those of Alternative 1, as described in Section 3.15.2.1. The emissions and SCC would be the same ($302 per year).

3.14.2.3 No Action Alternative

No future climate scenario or potential climate stressor would have appreciable effects under the No Action Alternative. GHG emissions would also remain unchanged compared to existing conditions.

3.15 Sustainability and Greening

Federal regulations and EOs require federal agencies to incorporate sustainability and greening practices into construction projects. EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, is intended to catalyze private sector investment and expand the economy and American industry. Implementing the EO will reduce emissions across federal operations by transforming how the federal government builds, buys, and manages electricity, vehicles, and buildings to be clean and sustainable.

3.15.1 Affected Environment

DAF has prioritized making climate-informed decisions. They have established a goal of “an established cultural of incorporating climate change considerations across our processes, plans, and decisions to build a more climate resilient force while also reducing future climate risk” (DAF 2022). Keesler AFB has incorporated applicable UFC guidance to achieve sustainable

buildings, as appropriate for federal operational plan goals and objectives consistent with building a more climate resilient force.

3.15.2 Environmental Consequences

Sustainability and greening would be significantly affected if implementing an action would reduce the sustainability of resources, ecosystems, or human communities.

3.15.2.1 Alternative 1

Short-term generation of waste to landfills would occur during construction and demolition and existing open space would be converted to impervious cover. The DAF would incorporate sustainability and greening practices by identifying opportunities to reduce waste to landfills from demolition to be consistent with federal regulations and EOs. Opportunities to minimize waste include reusing, recycling, and composting materials or purchasing items produced from recycled materials.

The proposed new Pass Road Gate would be implemented using sustainable design concepts. The DAF would use products and procurement practices to incorporate sustainability and greening practices consistent with EO 14057, including consideration of the *2020 Guiding Principles for Sustainable Federal Buildings* and the *Federal Building Performance Standard* (CEQ 2022a, 2022b). Optimizing energy performance and protecting and considering building resilience are two of the six guiding principles fundamental in sustainable design practices (CEQ 2020).

3.15.2.2 Alternative 2

The effects of Alternative 2 would be similar to those of Alternative 1.

3.15.2.3 No Action Alternative

No Action Alternative would have no effects on sustainability and greening. The Pass Road Gate would remain unchanged compared to existing conditions.

3.16 Environmental Justice and Protection of Children

3.16.1 Affected Environment

Environmental Justice. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*, requires that federal agencies take into consideration disproportionately high and adverse environmental effects of governmental decisions, policies, projects, and programs on minority and low-income populations and identify alternatives that could mitigate those effects.

Per CEQ guidance, minority populations should be identified where either the minority population of the affected area exceeds 50 percent or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (CEQ 1997). The U.S. Census Bureau identifies minority populations as Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and other Pacific Islander; people of two or more races; and people of Hispanic or Latino origin.

Per CEQ guidance, poverty thresholds established by the U.S. Census Bureau are used to identify low-income populations (CEQ 1997). Poverty status is reported as the number of

individuals or families with income below a defined threshold level. As of 2021, the U.S. Census Bureau defined the poverty threshold level as $13,788 or less of annual income for an individual and $27,740 or less of annual income for a family of four (U.S. Census Bureau 2022b).

The DAF used EPA's EJSCREEN for this environmental justice analysis to identify minority and low-income populations. EPA developed the EJSCREEN environmental justice mapping and screening tool and made it available on the internet to provide a nationally consistent dataset and approach that combines environmental and demographic indicators in maps and reports (USEPA 2021b). The analyst used EJSCREEN to produce reports for the Keesler AFB census tract (which includes the proposed project site), the off-base block group adjacent to the project site (block group 280470037001), Biloxi, and Harrison County (see the EJSCREEN reports in Appendix F). The reports have maps showing the geographic area boundaries and list data for selected demographic indicators—including data from the U.S. Census Bureau for minority and low-income populations—within the defined boundary as well as providing the state and national averages for each indicator for comparison. Data from EPA's EJSCREEN shows that block group 280470037001, which is off-base and adjacent to the project site to the west, has low-income and minority populations exceeding 50 percent, indicating that statistically significant low-income and minority populations are present in this block group (Table 3-13).

Table 3-13. EJSCREEN Demographic Data N Demographic Data

Geographic Area	People of Color Population	Low Income Population	Population Under Age 5
Keesler AFB tract	46%	12%	3%
Block group 280470037001	67%	40%	14%
Biloxi	38%	40%	7%
Harrison County	37%	39%	7%
Mississippi	44%	41%	6%
United States	40%	30%	6%

Source: EJSCREEN 2022.

Protection of Children. EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, seeks to protect children from disproportionately incurring environmental health or safety risks that might arise as a result of federal policies, programs, activities, or standards. It recognizes scientific knowledge that demonstrates children might suffer disproportionately from environmental health and safety risks. Those risks arise because children's bodily systems are not fully developed; children breathe, drink, and eat more in proportion to their body weight; their size and weight might diminish protection from standard safety features; and their behavior patterns might make them more susceptible to accidents.

Children are present on Keesler AFB as residents and visitors (e.g., residing in on-base family housing or lodging, using recreational facilities, and attending events) and in the neighboring residential communities. Precaution is taken for child safety through using fencing and signage, limiting access to certain areas, and requiring adult supervision. The base perimeter is secured by a fence with base access limited to the controlled entry gates. The Pass Road Gate has a school bus drop-off area for school-age children living in Bayridge, the military family housing

community on the base. The Bayridge community is northwest of the proposed project site off of Ploesti Drive.

Data from EPA's EJSCREEN mapping tool shows a higher percentage of children under age 5 in the census block group 280470037001 than in the other geographic areas (Table 3-13).

3.16.2 Environmental Consequences

Environmental justice and protection of children would be significantly affected if implementing an alternative would result in (1) disproportionately high and adverse environmental or human health effects on an identified minority or low-income population, which appreciably exceed those on the general population around the project area; (2) disproportionately high and adverse environmental health or safety risks to an identified population of children, such as the increase in a child's risk of exposure to an environmental hazard (through contact, ingestion, or inhalation) or the risk of potential substantial harm to the safety of children.

3.16.2.1 Alternative 1

Environmental Justice. No environmental justice effects would be expected. Implementing Alternative 1 would not result in disproportionately adverse environmental or health effects on low-income or minority populations. The Alternative 1 construction and operations activity would take place on Keesler AFB, separated from the off-base residential neighborhoods by the installation boundary fence. Construction and operations activity would be required to comply with applicable federal and state air quality, noise, and water quality regulations, and effects would be less than significant. The proposed construction activity would have short-term less-than-significant construction noise effects during the daytime hours. Air quality effects during construction would be less than significant, temporary, and localized (e.g., dust during site grading and combustion of diesel fuel and gasoline from construction equipment) and would not exceed the DAF's significance indicators or contribute to a violation of any federal, state, or local air regulation. Required sediment and erosion control BMPs would be applied during construction to control run-off from the construction site and minimize effects on surface waters. In the long term, operation of the improved Pass Road Gate would not have environmental justice effects. The future inbound traffic volume at the Pass Road Gate is projected to remain the same (GannettFleming 2020). Operation of the proposed new gate would not create appreciable long-term increases in noise or traffic. Alternative 1 would not increase traffic at the gate, on Pass Road, or in the adjacent off-base neighborhood.

Protection of Children. Short-term less-than-significant adverse and long-term beneficial effects would be expected. Alternative 1 construction and operations activity would take place on Keesler AFB, separated from the off-base residential neighborhood by the installation boundary fence and controlled entry gate. The Pass Road Gate has an on-base school drop-off area and is near the on-base Bayridge community. In the short term, construction activity could be an increased safety risk to children. Therefore, during construction, the DAF and its contractors would implement appropriate safety measures and follow health regulations to protect the health and safety of children. The DAF and its construction contractors would be responsible for complying with DAF, OSHA, and local regulations. Barriers and "No trespassing" signs would be placed around the perimeter of the construction site to deter children from entering the site, and construction vehicles and equipment would be secured when not in use. Construction of the new school drop-off area would be conducted during the summer when school would not be in session or a temporary on-base school drop-off area at another location would be used if construction would occur during the school year. These measures would reduce the risk of potential harm to children. In the long term, the new Pass Road Gate would

improve gate access and pedestrian safety with a new UFC-compliant school drop-off area. The future inbound traffic volume at the Pass Road Gate is projected to remain the same (GannettFleming 2020).

3.16.2.2 Alternative 2

Environmental Justice and Protection of Children. The environmental justice effects and effects on children of implementing Alternative 2 would be the same as those for Alternative 1.

3.16.2.3 No Action Alternative

Environmental Justice and Protection of Children. The No Action Alternative would not result in disproportionate adverse environmental or health effects on low-income or minority populations. Under No Action Alternative, a new UFC-compliant school drop-off area would not be constructed and long-term adverse effects to the safety of schoolchildren would continue.

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4.0 CUMULATIVE EFFECTS

Cumulative effects analysis is required to assess the effects of the Proposed Action when combined with the effects of other past, present, and reasonably foreseeable future projects that would affect the same resource element(s), regardless of what entity is implementing the other project(s).

The DAF reviewed other projects within the base, identifying the relocation of the existing RV storage area as the only project currently on-going at the base. The existing RV storage area is located in the project area off of Ploesti Drive and is being relocated. The new RV storage location is in the northeast area of the base. The new Division Street Gate that officially opened June 18, 2022, was not included in the cumulative effects review.

The DAF also reviewed the projects identified in the 2015 Installation Development Plan that are currently planned for implementation (Keesler AFB 2015a; Holland 2023b, personal communication). These reasonably foreseeable future projects are listed in Table 4-1. The DAF would ensure appropriate NEPA review, including cumulative effects, when the projects are proposed for implementation.

Table 4-1. Planned Projects

Description/Location	Project Summary
Air Traffic Control Tower	Construct a new facility to support control tower operations.
Three Dormitories	Construct a three new dormitories to provide housing for unaccompanied enlisted personnel. The existing facilities noted significant deficiencies in the mechanical and electrical systems.
New Student/ Fitness Resiliency Center	Construct a new fitness and resiliency center that would consolidate fitness center requirements for the base as well as community and counseling space.
Professional Military Education Education Center	Construct a new facility that would consolidate all Professional Military Education functions under one roof for an enhanced service experience.
Headquarters Center	Construct a new facility to consolidate the 80 TRW and Second Air Force headquarters functions into one facility.
Training Facility-Hewes Hall Replacement	Construct a new training facility to replace the existing Hewes Hall.
Training Facility-Wolfe Hall Replacement	Construct a new training facility to replace the existing Wolfe Hall.
Training Facility-Hangar 3 Replacement	Construct a new aircraft maintenance hangar on the flight line.
Training Facility-Allee Hall Replacement	Construct a new training facility to replace the existing Allee Hall.
Consolidated Mobility Deployment Facility	Construct a new facility on the flightline north of Building 233.
Transportation Complex	Construct a new facility that would relocate these functions to Keesler's planned industrial area.
Relocate 85 Engineering Installation Squadron Facility	Construct a new facility to consolidate the 85th Engineering Installation Squadron functions.
Two Visiting Quarters (VQ) Lodging Facilities	Construct two new VQs facilities to replace aging VQs.
Construct Resiliency Pool and Pool House	Construct a new facility next to consolidated fitness center that provides the pool and pool house.

Source: (Holland 2023b, personal communication).

Similarly, the DAF reviewed major projects in the City of Biloxi to identify any that should be analyzed for cumulative effects in this EA. Based on the locations and status of major public improvement projects as of August 2020, three projects were identified—paving Lewis Avenue and Savant Street, both in the vicinity of Pass Road Gate, and paving Irish Hill near the White Avenue Gate (City of Biloxi 2020). While those projects are in the vicinity of the Proposed Action, they already have been completed.

Based on the review of on- and off-base projects, none of the past and present projects were identified as having effects that when combined with those of the Proposed Action, could contribute to cumulative effects; therefore, none of the projects were carried forward for cumulative effects analysis in the EA. For the reasonably foreseeable future projects listed in Table 4-1, DAF would ensure appropriate NEPA review including cumulative effects, when the projects are proposed for implementation.

5.0 PERMIT/WAIVER REQUIREMENTS AND BEST MANAGEMENT PRACTICES

The following is a summary of the waiver or permit requirements and BMPs discussed in the preceding sections.

Airspace and Airfield Operations

A new permanent airfield waiver to replace the existing would be required because the proposed project area is also in the clear zone of the Keesler AFB airfield.

Air Quality

The following BMP would be implemented to minimize the potential for adverse effects on air quality:

- Reasonable precautions would be taken to prevent fugitive dust from becoming airborne, including using water to control dust from building construction, road grading, and land clearing.

Noise

The following BMPs would be implemented to minimize the potential for adverse effects from construction noise:

- Construction activities would primarily occur during normal weekday business hours.
- Construction vehicles and other heavy equipment would be properly maintained and in good working order.
- Personnel would don adequate personal hearing protection to limit exposure and ensure compliance with federal health and safety regulations.

Earth and Water Resources

A Large CGP issued by the MDEQ would be required for protection from soil erosion and stormwater runoff from construction activities.

Biological Resources

The Wing Commander's approval would be required to remove any live oak tree on the base that is larger than 26 inches dbh.

Hazardous Materials and Wastes

Keesler AFB or construction contractors would comply with established management plans for hazardous materials and waste, and spill prevention and response. Additionally, the following BMPs would be implemented to minimize the potential for adverse effects of hazardous materials and wastes:

- Personnel safety training, proper storage and signage of containers, routine inventory, and readily available SDS for all hazardous materials used on-site.
- Equipment would receive regular maintenance and vehicles would use drip pans when stationary to prevent contamination from leaks.
- Construction activities would be coordinated with base personnel so they would not interfere with ongoing sampling efforts or damage installed monitoring wells.

Transportation and Traffic

The following BMPs would be implemented to minimize the potential for adverse effects on transportation and traffic during construction:

- Contractors would be expected to route and schedule construction vehicles to minimize conflicts with other traffic and strategically locate staging areas to minimize traffic impacts.
- If possible, construction near the school drop-off area would be started in the summer to limit effects during the school year.
- All construction vehicles would be equipped with backing alarms, two-way radios, and “Slow Moving Vehicle” signs, as appropriate.

Safety and Occupational Health

Adherence to plans and BMPs discussed to minimize adverse effects of hazardous materials and wastes and on transportation and traffic would also address safety and occupational health.

Sustainability and Greening

The DAF would incorporate sustainability and greening practices by identifying opportunities to reduce waste to landfills from demolition such as reusing, recycling, and composting materials or purchasing items produced from recycled materials.

Protection of Children

Adherence to plans and BMPs discussed to minimize adverse effect from hazardous materials and wastes and on transportation and traffic would also address protection of children. Additionally, the following BMPs would be implemented to minimize the potential adverse effect on children:

- Barriers and “No trespassing” signs would be placed around the perimeter of the construction site to deter children from entering the site.
- Construction vehicles and equipment would be secured when not in use.

6.0 REFERENCES

81 TRW (81st Training Wing). 2021. Spill Prevention, Control and Countermeasures (SPCC) Plan. 81st Training Wing, Keesler Air Force Base, MS. August 2021.

AETC (Air Education and Training Command). 2006. *Operation Dragon Comeback: Air Education and Training Command's Response to Hurricane Katrina*. June 2006.

AirNav. 2022a. *Gulfport-Biloxi International Airport*. Accessed February 2022. http://airnav.com/.

AirNav. 2022b. *Keesler Air Force Base*. Accessed February 2022. http://airnav.com/.

Amtrak. 2022. *Crescent Train*. Accessed February 2022. https://www.amtrak.com/crescent-train.

ANSI (American National Standard Institute). 2013. *American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound. Part 3: Short-term measurements with an observer present*. ANSI S12.9-1993 (R2003)/Part 3.

Arbor Day Foundation. 2022. *Tree Guide*. Accessed January 2022. https://www.arborday.org/trees/treeguide.

BLS (Bureau of Labor Statistics). 2022. *Local Area Unemployment Statistics*. Accessed December 2022. http:// www.bls.gov/data/home.htm#unemployment.

Carter, L., A. Terando, K. Dow, K. Hiers, K.E. Kunkel, A. Lascurain, D. Marcy, M. Osland, and P. Schramm. 2018. Southeast. In *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II*. eds, Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart. U.S. Global Change Research Program, Washington, DC. doi: 10.7930/NCA4.2018.CH19.

CEMML (Center for Environmental Management of Military Lands). 2019. *U.S. Air Force Integrated Natural Resources Management Plan Update*. Prepared for Keesler Air Force Base, Biloxi, MS, by the Center for Environmental Management of Military Lands, Colorado State University, Fort Collins, CO.

CEQ (Council on Environmental Quality). 1997. *Environmental Justice Guidance under the National Environmental Policy Act*. Executive Office of the President, Council on Environmental Quality, Washington, DC.

CEQ (Council on Environmental Quality). 2020. Guiding Principles for Sustainable Federal Buildings and Associated Instructions Accessed December 2022. https://www.sustainability.gov/pdfs/guiding_principles_for_sustainable_federal_buildings.pdf.

CEQ (Council on Environmental Quality). 2022a. *Implementing Instructions for Executive Order 14057 Catalyzing Clean Energy Industries and Jobs through Federal Sustainability*. Accessed December 2022. https://www.sustainability.gov/pdfs/EO_14057_Implementing_Instructions.pdf.

CEQ (Council on Environmental Quality). 2022b. *The Federal Building Performance Standard*. Accessed December 2022. https://www.sustainability.gov/pdfs/federal-building-performance-standard.pdf.

CEQ (Council on Environmental Quality). 2023. "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change." January 9, 2023. Accessed March 2023. https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate.

City of Biloxi. 2009. City of Biloxi Comprehensive Plan. Adopted December 2009. Biloxi, MS.

City of Biloxi. 2020. *City of Biloxi Major Project*. Accessed December 2022. https://biloxi.ms.us/wp-content/uploads/2020/08/majorprojects082020.pdf

City of Biloxi. 2022a. *City of Biloxi Code of Ordinances Section 11-1-2. Noises*. Accessed January 2022. https://library.municode.com/ms/biloxi/codes/code_of_ordinances?nodeId=COOR_CH11HESA_ARTIINGE_S11-1-2NOURRE.

City of Biloxi. 2022b. *Land Development Ordinance – Section 23-3-5(E) – ANO: Airport Noise Overlay Districts*. Accessed January 2022. https://library.municode.com/ms/biloxi/codes/land_development_ordinance?nodeId=ART23-3ZODI_5OVZODI_EANAINOOVDI.

Chambers, Arian, SSgt, USAF, Keesler AFB. 2023, April 17. Personal communication received via email regarding PFAS Sampling at Keesler AFB. *FW: PFAS Sampling questions*.

Cowan, J.P., 1994. *Handbook of Environmental Acoustics*. John Wiley & Sons.

CTA (Coast Transit Authority). 2021. *Coast Transit Authority Rider's Guide*. Accessed February 2022. https://redstardigital.net/lib/cta/riders_guide/2021/.

DAF (Department of the Air Force). 2020. *Air Conformity Applicability Model (ACAM)*.

DAF (Department of the Air Force). 2022. *Department of the Air Force Climate Action Plan*. Office of the Assistant Secretary for Energy, Installations, and Environment. Washington, DC. October 2022.

EJSCREEN. 2022. EPA's Environmental Justice Screening and Mapping Tool (Version 2020). Accessed December 2022. https://ejscreen.epa.gov/mapper/.

FEMA (Federal Emergency Management Administration). 2020. *Earthquake Hazard Maps*. Accessed January 2022. https://www.fema.gov/emergency-managers/risk-management/earthquake/hazard-maps.

FHWA (Federal Highway Administration). 2011. *Highway Traffic Noise: Analysis and Abatement Guidance*. December 2011. Accessed January 2022. http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/.

GannettFleming. 2012. *Keesler Air Force Base, Mississippi, Comprehensive Traffic Engineering Study, Final*. GannettFleming, Camp Hill, PA.

GannettFleming. 2020. *Keesler Air Force Base, Mississippi, Comprehensive Traffic Study, Final Report*. GannettFleming, Camp Hill, PA.

Google Maps. 2022. Google.com/maps. Accessed December 2022.

Harris, Cecil M. 1998. *Handbook of Acoustical Measurement and Noise Control*.

HCC (Harrison County Code of Ordinances). 2022. *Harrison County Code of Ordinances Noise Regulations*. Accessed January 2022. http://co.harrison.ms.us/downloads/agendas/ordinances/Noise%20Ordinance.pdf.

Holland, Robin, Keesler AFB. 2021, September 28. Personal communication received via email regarding Air Force Civil Engineer Center direction that a notice for floodplain construction is not necessary for the proposed project. *W9127821F0253 – Keesler AFB – EA of Pass Road Gate - Questions on the proposed action for the DOPAA.*

Holland, Robin, Keesler AFB. 2023a, January 3. Personal communication received via email regarding I-81 track relocation. *W9127821F0253 - Keesler AFB, EA of Pass Road Gate - Questions for PDEA completion.*

Holland, Robin, Keesler AFB. 2023b, March 28. Personal communication received via email regarding list of planned projects at Keesler AFB. *List of projects*.

IWG-SCGHG (Interagency Working Group on Social Coast of Greenhouse Gases). 2021. *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide*. Interim Estimates under Executive Order 13990.

Keesler AFB (Keesler Air Force Base). 2004. *General Plan Keesler Air Force Base Mississippi*. June 2004.

Keesler AFB (Keesler Air Force Base). 2014. *Lead Based Paint Management Plan.* Keesler Air Force Base, MS. September 2014.

Keesler AFB (Keesler Air Force Base). 2015a. *Installation Development Plan*. Keesler Air Force Base, MS. April 2015.

Keesler AFB (Keesler Air Force Base). 2015b. *Final Environmental Assessment for the Construction and Operation of a Division Street Gate at Keesler Air Force Base Biloxi, Mississippi.* Keesler Air Force Base, MS. June 2015.

Keesler AFB (Keesler Air Force Base). 2019. *Asbestos Operations and Management Plan.* 81st Training Wing, Keesler Air Force Base, MS. November 2019.

Keesler AFB (Keesler Air Force Base). 2020a. *Storm Water Management Plan Keesler Air Force Base MDEQ Permit # MSRMS4023*. October 2020.

Keesler AFB (Keesler Air Force Base). 2020b. *Hazardous Waste Management Plan.* 81st Training Wing, Keesler Air Force Base, MS. October 2020.

Keesler AFB (Keesler Air Force Base). 2020c. *Draft Final 2020 Annual Long-Term Management Report*. Keesler Air Force Base, MS. June 2021.

Keesler AFB (Keesler Air Force Base). 2021a. *Project Area Tree Inventory*. Keesler Air Force Base, MS.

Keesler AFB (Keesler Air Force Base). 2021b. *Base Tree Inventory*. Keesler Air Force Base, MS.

Keesler AFB (Keesler Air Force Base). 2022a. *Cultural Resources Management Plan for Keesler Air Force Base, Mississippi*. Keesler Air Force Base, MS. October.

Keesler AFB (Keesler Air Force Base). 2022b. *Keesler Air Force Base Economic Impact Statement Fiscal Year 2021*. Accessed December 2022. www.keesler.af.mil/Portals/14/documents/Economic%20Impact%20Statement/KAFB_Economic_Impact_Statement%20FY2021_FINAL.pdf?ver=CXnJcQ4QNN7Y4pDwvpUAfQ%3D%3D.

Keesler AFB (Keesler Air Force Base). 2022c. *Keesler Air Force Base. About us.* Accessed January 2022. https://www.keesler.af.mil/Units/81st-Training-Wing/

MDAH (Mississippi Department of Archives and History). 2021. MDAH Response Letter. *Proposed Construction of Pass Road Gate, Keesler AFB, Biloxi, by the United States Air Force (USAF), MDAH Project Log#12-012-21, Harrison County.*

MDEQ (Mississippi Department of Environmental Quality). 2009. *Structural features of Mississippi*. Accessed February 2022. https://www.mdeq.ms.gov/wp-content/uploads/2017/05/Struc_Feat_MS.pdf.

MDEQ (Mississippi Department of Environmental Quality). 2020. *Mississippi 2020 List of Impaired Water Bodies*.

MDEQ (Mississippi Department of Environmental Quality). 2021. *Large Construction General Permit for Land Disturbing Activities of Five (5) Acres or More*. Accessed February 2022. Mississippi Department of Environmental Quality, Office of Pollution Control. https://www.mdeq.ms.gov/permits/environmental-permits-division/applications-forms/generalpermits/construction-stormwater/.

MDEQ (Mississippi Department of Environmental Quality). 2022. *Ambient Air Quality Standards, Monitoring, and Attainment Planning*. Accessed January 2022. https://www.mdeq.ms.gov/air/ambient-air-quality/.

MDOT (Mississippi Department of Transportation). 2022. MDOT Traffic Count Application. Accessed February 2022. http://mdot.ms.gov/applications/trafficcounters/.

NOAA (National Oceanic and Atmospheric Administration). 2022a. National Storm Surge Hazard Maps. Accessed January 2022. https://noaa.maps.arcgis.com/apps/MapSeries/index.html?appid=d9ed7904dbec441a9c4dd7b277935fad&entry=1.

NOAA (National Oceanic and Atmospheric Administration). 2022b. Historical Hurricane Tracks. Accessed January 2022. https://coast.noaa.gov/hurricanes/#map=4/32/-80.

NWF (National Wildlife Federation). 2022. *Southern Live Oak*. Accessed January 2022. https://www.nwf.org/Educational-Resources/Wildlife-Guide/Plants-and-Fungi/Southern-Live-Oak.

NRCS (Natural Resources Conservation). 2021. *Custom Soil Resource Report for Harrison County Mississippi*. accessed January 2022. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

NYCSCA (New York City School Construction Authority). 2012. *SCA P.S. 320 Final Environmental Impact Statement*. Prepared by AKRF, Inc. October 2012.

Seal, J. How to Age a Live Oak Tree. *Hunker*, November 8, 2021. Accessed January 2022. https://www.hunker.com/12542585/how-to-age-a-live-oak-tree.

Tetra Tech. 2022. *Planning for the Future: Keesler AFB (Air Force Base) Flood Elevation Planning Study*. Presentation January 2022 to the Department of Navy.

U.S. Census Bureau. 2022a. *QuickFacts*. Accessed December 2022. https://www.census.gov/quickfacts/fact/table/harrisoncountymississippi,MS,US/PST045221.

U.S. Census Bureau. 2022b. *Poverty Thresholds by Size of Family and Number of Related Children Under 18 Years: 2021*. Accessed December 2022. https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html.

U.S. Climate Data. 2022. *Climate Biloxi-Mississippi*. Accessed January 2022. https://www.usclimatedata.com/climate/biloxi/mississippi/united-states/usms0033.

USEPA (U.S. Environmental Protection Agency). 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*.

USEPA (U.S. Environmental Protection Agency). 2021b. *What is EJSCREEN?* Accessed January 2022. https://www.epa.gov/ejscreen/what-ejscreen.

USEPA (U.S. Environmental Protection Agency). 2022a. *NAAQS Table*. Accessed January 2022. https://www.epa.gov/criteria-air-pollutants/naaqs-table.

USEPA (U.S. Environmental Protection Agency). 2022b. *National Emission Inventory – 2017 Data for Significant Stationary Sources Keesler Air Force Base*. Accessed January 2022. https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data.

USEPA (U.S. Environmental Protection Agency). 2022c. *Statue and regulations addressing impaired waters and TMDLs*. Accessed January 2022. https://www.epa.gov/tmdl/statute-and-regulations-addressing-impaired-waters-and-tmdls.

USEPA (U.S. Environmental Protection Agency). 2023. *PFAS National Primary Drinking Water Regulation Rulemaking*. FRL 8543–01–OW. Federal Register. March 29, 2023.

USFWS (U.S. Fish and Wildlife Service). 2022. *IPaC Information for Planning and Consultation*. Accessed December 2022. https://ecos.fws.gov/ipac/.

USGS (U.S. Geological Survey). 2021a. *Mississippi Geologic Map Data*. Accessed January 2022. https://mrdata.usgs.gov/geology/state/.

USGS (U.S. Geological Survey). 2021b. *Earthquake Hazards*. Accessed January 2022. https://www.usgs.gov/natural-hazards/earthquake-hazards/faults?qt-science_support_page_related_con=4#qt-science_support_page_related_con.

USGS (U.S. Geological Survey). 2021c. *Search Earthquake Catalog*. Accessed January 2022. https://earthquake.usgs.gov/earthquakes/search/.

USGS (U.S. Geological Survey) 2021d. *Unified Hazard Tool*. Accessed January 2022. https://earthquake.usgs.gov/hazards/interactive/.

USGS (U.S. Geological Survey) 2021e. *Mineral Resources Online Spatial Data*. Accessed January 2022. https://mrdata.usgs.gov/general/map-us.html#home.

USGS (U.S. Geological Survey). 2021f. *The National Map*. Accessed 2021. https://apps.nationalmap.gov/viewer/.

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7.0 LIST OF PREPARERS

Table 7-1 lists the individuals who contributed to the preparation of this EA.

Table 7-1. List of Preparers

Name/Organization	Education	Resource Area	Years of Experience
Samantha Belding/Tetra Tech	MA, Anthropology, University of Denver	Cultural resources	9
Emily Bonts/Tetra Tech	MS, Biosystems Engineering, Auburn University	Transportation, Hazardous Materials and Waste Management	7
Michelle Cannella/Tetra Tech	BS, Mineral Economics, Penn State University	Socioeconomics, Environmental Justice, Protection of Children	26
Jamie Childers/Tetra Tech	MS, Natural Resource Policy and Administration, University of Florida	Air Quality, Noise, Water Resources, Climate Change, Sustainability and Greening	21
Penelope Garver/Tetra Tech	BS, Journalism, University of Maryland	Technical Editor	29
Jennifer Jarvis/Tetra Tech	BS, Environmental Resource Management, Virginia Tech	Geographic Information Systems	23
Samuel Pett/Tetra Tech	MS, Environmental Science, University of Massachusetts	Biological Resources, Transportation and Traffic	30
Sean Rose/Tetra Tech	MPS, Real Estate Development, Georgetown University	Land Use, Aesthetics and Visual Resources	10
Suni Shrestha/Tetra Tech	BS, Environmental Analysis and Planning, Frostburg State University	Project Management, EA QC	25
David Wertz/Tetra Tech	MS, Geophysics, Boston College	Earth Resources, Utilities	21

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APPENDIX A: PUBLIC AND AGENCY COMMUNICATIONS

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Appendix A – Agency Coordination

The following letter was sent to the federal, state, and local agencies listed below. Responses received follow the letter sent.

Agency	Name	Address	Response Received
US Army Corps of Engineers, Regulatory Division, Biloxi Satellite Office	Field Supervisor	1141 Bayview Ave., Suite 104 Biloxi, MS 39530	
US Fish and Wildlife Service, Mississippi Field Office – Ecological Services	Paul Necaise	6578 Dogwood View Parkway Suite A Jackson, MS 39213	X
USEPA Region 4, NEPA Program Office	Ntale Kajumba	Sam Nunn Atlanta Federal Center 61 Forsyth St., SW Atlanta, GA 30303	
MS Dept. of Marine Resources, Wetlands Permitting	Willa Brantley	1141 Bayview Ave. Biloxi, MS 39530	
MS Dept. of Environmental Quality, Env. Enforcement and Compliance Division	Michelle Clark	PO Box 2261 Jackson, MS 39225	
MS Dept. of Wildlife, Fisheries, & Parks	Dennis Riecke	1505 Eastover Dr. Jackson, MS 39211	
City of Biloxi, Directory of Community Development	Jerry Creel	676 Dr. Martin Luther King Jr. Blvd. Biloxi, MS 39530	
Harrison County, Utility Authority	David Perkins	10271 Express Drive Gulfport, MS 39503	
Harrison County, Engineer	Jaclyn Turner	15309 Community Road Gulfport, MS 39503	
Gulf Regional Planning Commission	Kenneth Holland	1635 Popps Ferry Road Suite G Biloxi, MS 39532	
Southern Mississippi Planning and Development District	Grant Wesley	10441 Corporate Drive, Suite 1 Gulfport, MS 39503	

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

17 November 2021

Robert T. Moseley III
Deputy Base Civil Engineer
81st Civil Engineer Squadron
500 Fisher Street, Bldg 701
Keesler AFB, MS 39534

U.S. Army Corps of Engineers - Regulatory Division
Biloxi Satellite Office
Field Supervisor
1141 Bayview Ave
Suite 104
Biloxi MS 39530

Dear Sir/Madam

The United States Air Force (Air Force) is preparing an environmental assessment (EA) to evaluate potential environmental impacts of the proposed construction and operation of a Pass Road Gate at Keesler Air Force Base (AFB), Biloxi, MS. The new Pass Road Gate would be Anti-Terrorism/Force Protection compliant and is needed to meet current Air Force Unified Facilities Criteria requirements. A copy of the Draft EA will be made available for your review and comment when complete.

As presented in the attachment, Description of Proposed Action and Alternatives, the Proposed Action will include demolition of existing gate facilities, construction and operation of the new gate facilities and related utilities and infrastructure. A new drop-off area for school children living in the military family housing community of Bayridge on the installation would also be constructed to replace the existing school drop-off area. The EA will analyze two alternatives for the Proposed Action (Alternative 1 and Alternative 2) and the No Action Alternative. The two Proposed Action alternatives differ in how the northern section of the new roadway is aligned and how Ploesti Drive is realigned to the northern terminus of the new roadway.

If you have any comments or concerns you would like to provide regarding the proposed action or its environmental impacts, please respond to us within 30 days of receipt of this letter. Please send your written responses via regular mail or e-mail (preferred) to Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg 4705, Keesler AFB, MS 39534; 228-377-8255; robin.holland.ctr@us.af.mil.

Sincerely

MOSELEY.ROBERT.T.III.1230764782
Digitally signed by MOSELEY.ROBERT.T.III.1230764782
Date: 2021.11.17 10:42:14 -06'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer

Attachment:
Description of Proposed Action and Alternatives

Attachment

REVISED DRAFT

ENVIRONMENTAL ASSESSMENT
OF CONSTRUCTION AND OPERATION OF A PASS ROAD GATE

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Keesler Air Force Base
Biloxi, Mississippi

PREPARED BY:

Department of the Air Force

November 2021

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ACRONYMS AND ABBREVIATIONS

AFB	Air Force base
Air Force	U.S. Air Force
AT/FP	antiterrorism/force protection
AVB	active vehicle barrier
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DoD	Department of Defense
EA	environmental assessment
EIAP	Environmental Impact Analysis Process
EO	Executive Order
FONSI	Finding of No Significant Impact
NEPA	National Environmental Policy Act of 1969
NOI	notice of intent
POV	privately owned vehicle
RV	recreational vehicle
SDDCTEA	Military Surface Deployment and Distribution Command Transportation Engineering Agency
U.S.	United States (adjective only)
U.S.C.	United States Code
UFC	Unified Facilities Criteria

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1.0 PURPOSE OF AND NEED FOR ACTION

1.1 INTRODUCTION

The U.S. Air Force (Air Force) has prepared this Environmental Assessment (EA) to evaluate potential environmental impacts associated with the proposed construction and operation of a new Pass Road Gate on Keesler Air Force Base (AFB) in Biloxi, MS. The Proposed Action will include demolition of existing gate facilities, construction and operation of the new gate facilities and related utilities and infrastructure, and construction of a new school drop-off area for school children who live in the military family housing community of Bayridge on Keesler AFB.

The Air Force has prepared the EA in accordance with the National Environmental Policy Act of 1969 (NEPA) (Title 42 of the *United States Code* [U.S.C.] § 4321 *et seq*.), the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (Title 40 of the *Code of Federal Regulations* [CFR] Parts 1500–1508), and the Air Force's Environmental Impact Analysis Process (EIAP) (32 CFR Part 989). In accordance with CEQ regulations in 40 CFR § 1502.13, this section specifies the purpose of and need for the Proposed Action.

1.2 LOCATION AND MISSION

Keesler AFB is located on the Mississippi Gulf Coast, within the boundaries of the City of Biloxi and Harrison County, MS (Figure 1-1). The base occupies 1,646 acres on a narrow peninsula bordered by the Back Bay of Biloxi to the north and the Gulf of Mexico to the south. The main base consists of 1,447 acres and is densely developed. U.S. Highway 90 parallels the southern border of the base and provides access to Interstate 10 by U.S. Highways 49 and 110.

Keesler AFB is home to Air Education and Training Command's 81st Training Wing, which comprises three large groups of squadrons: the 81st Training Group (the largest electronics training group in the Air Force), the 81st Medical Group (the second largest medical facility in the Air Force), and the 81st Mission Support Group. Other military support units on Keesler AFB include the 403d Wing (Air Force Reserve), Headquarters Second Air Force, 85th Engineering Installation Squadron, Mathies Noncommissioned Officer Academy, and Marine Corps Detachment. Keesler AFB's primary mission is to provide technical training, and it is the "Electronics Training Center of Excellence" for the Air Force. A daily average of 3,400 students is enrolled in more than 300 training programs taught at the base.

Keesler AFB proposes to construct a new antiterrorism/force protection- (AT/FP-) compliant gate on the western boundary of the base. The current Pass Road Gate (Gate 7) does not comply with Department of Defense (DoD) Unified Facilities Criteria (UFC), including UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings* and UFC 4-022-01, *Entry Control Facilities/Access Control Points*. The gate needs to be relocated and a new approach roadway needs to be constructed for it to be compliant with the DoD standards. The proposed location for the new gate is north of its current location. The new roadway would serpentine north from the current location of Gate 7 to the new gate, then continue north to where it would exit onto Ploesti Drive on Keesler AFB about 0.2 mile north of the new gate. A new drop-off area for school children living in the military family housing community of Bayridge on the installation would also be constructed to replace the existing school drop-off area. The new school drop-off area would also comply with AT/FP standards.

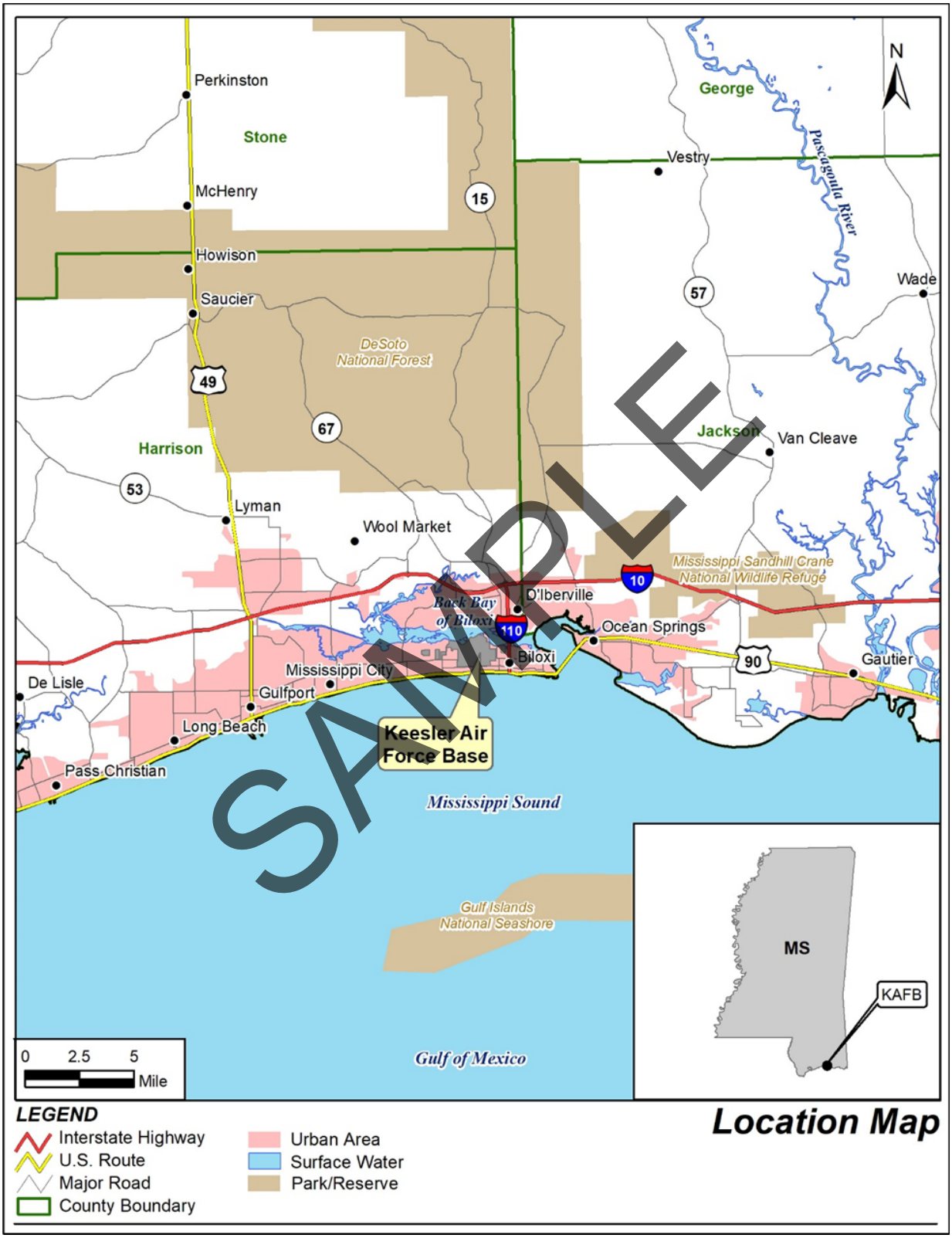

Figure 1-1. Keesler Air Force Base location

1.3 PURPOSE AND NEED

The Air Force proposes to construct and operate a new, AT/FP-compliant Pass Road Gate on Keesler AFB for privately owned vehicles (POVs). The Pass Road Gate must be configured to ensure security and safety, and the existing gate does not meet this requirement. The new gate would improve base security, the safety of personnel and school children, gate capacity, traffic flow, and the base's public image.

The Pass Road Gate at the terminus of Pass Road on the western boundary of the base, which serves as an entry point for POVs, does not meet DoD entry gate standards for AT/FP. The existing gate configuration does not have enough space available to accommodate required security measures to make it AT/FP-compliant and it does not meet current UFC requirements.

1.4 Decision to be Made

The Air Force must decide whether the socioeconomic and environmental impacts of implementing the Proposed Action will support a finding of no significant impact (FONSI) or will require publishing in the *Federal Register* a notice of intent (NOI) to prepare an environmental impact statement. The Air Force will publish an NOI if the potential adverse environmental impacts associated with implementing the Proposed Action remain significant even after all reasonable mitigation measures have been implemented.

1.5 Cooperating Agency and Intergovernmental Coordination / Consultations

1.5.1 Cooperating Agency

No cooperating agencies participated in the preparation of the EA.

1.5.2 Interagency and Intergovernmental Coordination and Consultations

The Intergovernmental Coordination Act (29 CFR Part 1902.5) and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, require the proponent to issue intergovernmental notifications before making any detailed statement of environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning, the proponent must notify concerned federal, state, and local agencies and allow them enough time to evaluate potential environmental impacts of a proposed action. Comments from these agencies are subsequently incorporated into the EIAP. [*IICEP summary to be added*] Appendix A provides copies of the letters the Air Force sent to the parties and responses it received.

The Draft EA and FONSI were made available for public review from xxxx xx, 2022, to xxxx xx, 2022. A notice of availability of the Draft EA and FONSI was published in the *Biloxi Sun-Herald* on xxxx xx, 2022, and copies of the Draft EA and draft FONSI were available for review at the Biloxi Public Library at 580 Howard Avenue in Biloxi, MS. [*Summary of responses received*] (see Appendix B).

1.6 Applicable Laws and Environmental Regulations

1.6.1 National Environmental Policy Act

Under NEPA, an EA is prepared to analyze the potential effects of a proposed action and other reasonable alternatives, including the No Action Alternative. The No Action Alternative is included in the analysis as prescribed by CEQ regulations. It serves as a baseline against which the impacts of implementing the Proposed Action alternatives can be evaluated. If the analyses presented in an EA indicate that implementing the proposed action would not result in significant environmental impacts, a FONSI is prepared. A FONSI briefly presents reasons why a proposed action would not have a significant effect on

the human and natural environments. If significant environmental issues are identified that cannot be mitigated to insignificance, either an environmental impact statement would be prepared or the proposed action would be abandoned and no action would be taken.

1.6.2 Integration of Other Environmental Statutes and Regulations

Air Force Policy Directive 32-70, *Environmental Quality*, states that the Air Force will comply with applicable federal, state, and local environmental laws and regulations, including NEPA. The EIAP is the Air Force's implementing regulation for NEPA. This EA serves as a means for ensuring compliance with applicable federal statutes, including the Endangered Species Act, Clean Water Act, Clean Air Act, National Historic Preservation Act, as well as various EOs and applicable state statutes and regulations. The EA discusses key provisions of the statutes and EOs in more detail in the text to provide better understanding of their requirements.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section of the EA describes the Proposed Action, the screening criteria, Alternative 1, Alternative 2, the No Action Alternative, and alternatives considered but eliminated from detailed study.

2.1 PROPOSED ACTION

The Proposed Action is to construct a new UFC- and AT/FP-compliant Pass Road Gate on Keesler AFB. The new gate would be along a new roadway leading onto Keesler AFB in the same general location as the existing Pass Road Gate (Figure 2-1). The new gate would have an identification check canopy, a guard booth, a POV inspection canopy, security forces parking, chase vehicle parking, a gatehouse, an overwatch facility, and a backup generator. The gate would have support spaces, such as restrooms and telecommunications, mechanical, and electrical rooms. A new roadway would serpentine north from the current location of Gate 7 to the new gate, then continue north to where it would exit onto Ploesti Drive on Keesler AFB about 0.2 mile north of the new gate. A new drop-off area for school children living in the military family housing community of Bayridge on the installation would also be constructed to replace the existing school drop-off area. The drop-off area also would comply with UFC and AT/FP requirements.

As part of the Proposed Action, the northern portion of Ploesti Drive between the existing Gate 7 and the new intersection with the new roadway would be realigned and require rerouting a portion of the I-81 running track that currently parallels Ploesti Drive. Additionally, up to half of the approximately 80 live oak trees in the area north of Gate 7 could have to be removed. Live oak trees that are older than 150 years been designated by the city of Biloxi as "Heritage Trees," which are managed under the Keesler AFB's Natural Resource Management Program. The wing commander's approval is required to remove any live oak tree on the base that is larger than 26 inches diameter at breast height.

2.2 SELECTION STANDARDS

Following are the primary planning goals and objectives for designing a new Pass Road Gate site:

- Ensure compliance with DoD standards for access control points and AT/FP.
- Provide adequate POV parking.
- Provide the required number of processing lanes.
- Increase POV queuing space.
- Provide a bidirectional POV inspection area.
- Provide pedestrian access and improve pedestrian safety.
- Improve school gate access and safety.
- Provide one set of active vehicle barriers (AVBs).

The following publications provide other facility criteria design requirements that must be met:

- UFC 4-022-01, *Entry Control Facilities/Access Control Points* (July 2017)
- UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings* (August 2020)

Figure 2-1. Site map

- Military Surface Deployment and Distribution Command Transportation Engineering Agency (SDDCTEA) Pamphlet 55-15, *Traffic and Safety Engineering for Better Entry Control Facilities* (2019)

Keesler AFB examined the area near the existing Pass Road Gate to determine whether these requirements could be met by making improvements or whether a new gate site would be needed to meet the requirements.

2.3 SCREENING OF ALTERNATIVES

The Air Force evaluated the alternatives against the selection standards listed in section 2.2 to determine whether they met the purpose of and need for the Proposed Action and should be carried forward for analysis is the EA. Table 2-1 lists the alternatives, including the No Action Alternative, and whether each alternative met the standards and considerations.

Table 2-1. Pass Road Gate Alternatives Compared to Selection Standards

Selection standards	Alternative 1	Alternative 2	No Action Alternative
Complies with AT/FP and UFC requirements	Yes	Yes	No
Provides adequate POV parking	Yes	Yes	No
Provides the required number of processing lanes	Yes	Yes	No
Increases POV queuing space	Yes	Yes	No
Provides a bidirectional POV inspection area	Yes	Yes	No
Provides pedestrian access and improves pedestrian safety	Yes	Yes	No
Improves school gate access and safety	Yes	Yes	No
Provides AVBs	Yes	Yes	No
Conforms to UFC 4-022-01, UFC 4-010-01, and SDDCTEA 55-15	Yes	Yes	No

Based on both Alternative 1 and Alternative 2 meeting all the selection standards, both alternatives are carried forward in the EA for full analysis. The No Action Alternative is analyzed as prescribed by CEQ regulations.

2.4 DETAILED DESCRIPTION OF THE ALTERNATIVES

2.4.1 Alternative 1

Alternative 1 is to build a new Pass Road entry gate north of the location of the existing gate (Figure 2-2), as described in Section 2.1. Under Alternative 1, the intersection of the new roadway and Ploesti Drive would be south of an existing recreational vehicle (RV) parking area. With this configuration, the RV area could continue to be used, although a new entrance could be required.

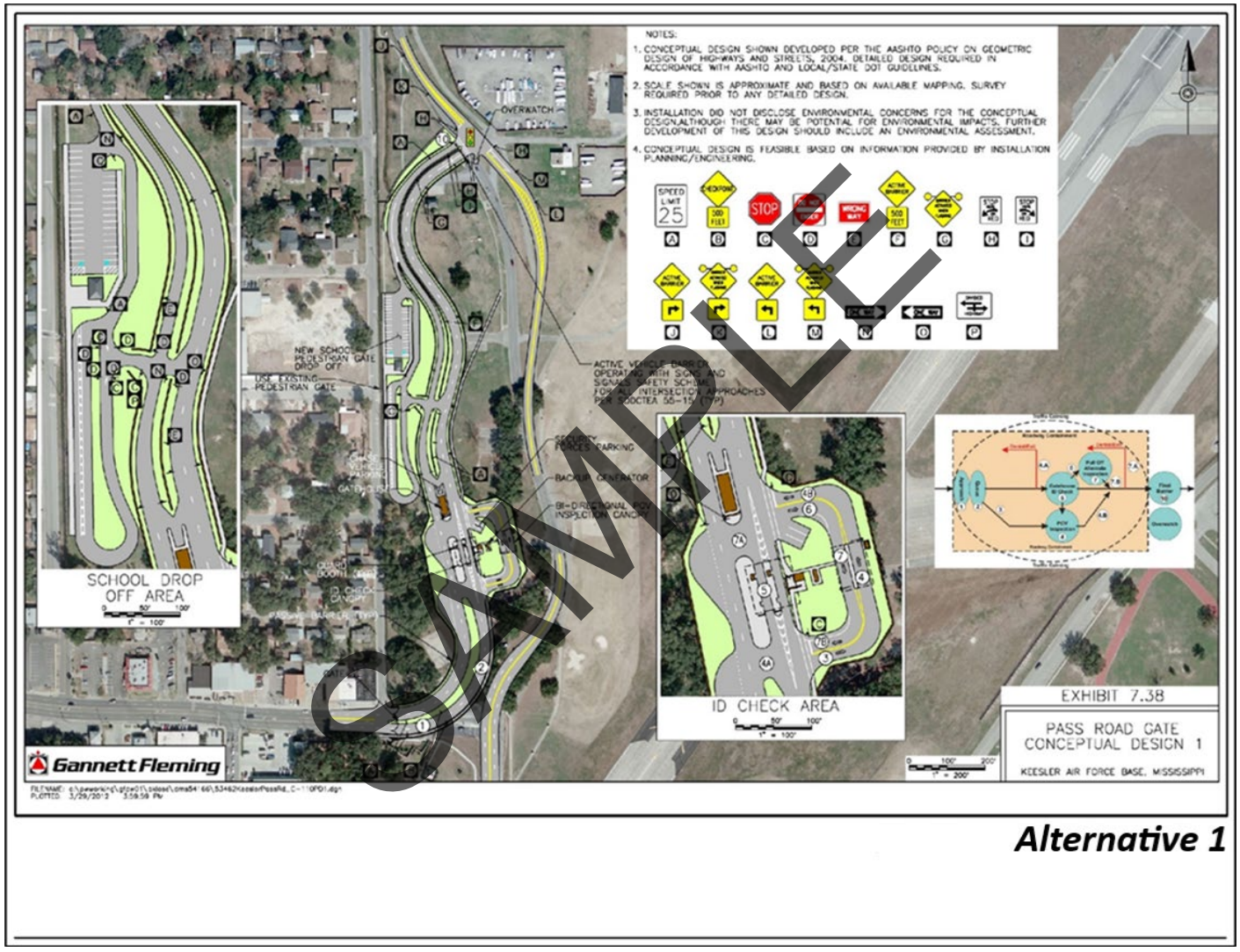

Figure 2-2. Alternative 1

No threatened or endangered species, cultural resources, or wetlands are known to be on the proposed property. The wing commander's approval is required to remove any live oak tree on the base that is larger than 26 inches diameter at breast height.

2.4.2 Alternative 2

Alternative 2 is to implement the Proposed Action as described in Section 2.1 but with the northern portion of the new roadway aligned differently than in Alternative 1 (Figure 2-3). The new roadway from the terminus of Pass Road to the northern extent of the school drop-off area would be the same as in Alternative 1. North of that point, the new roadway would parallel Rodeo Drive to a point between Wiltshire Boulevard and Sunset Boulevard, where the new intersection with Ploesti Drive would be located. Rodeo Drive, Wiltshire Boulevard, and Sunset Boulevard are off base and not part of the proposed new roadway. The northern portion of Ploesti Drive would also be realigned differently than under Alternative 1, resulting in a longer new segment of Ploesti Drive and eliminating the RV parking area.

Facility construction details would be the same under both alternatives and other design and construction considerations apply equally to Alternative 2 as to Alternative 1. Alternative 2 has been estimated to cost about 15 percent more than Alternative 1.

2.4.3 No Action Alternative

Under the No Action Alternative, no new Pass Road entry gate would be constructed. The following conditions would continue or worsen:

- The gate would not meet AT/FP or UFC requirements.
- Unsafe gate operations and unsafe conditions for personnel would continue to exist.

No changes in the current gate configuration at Pass Road would occur under the No Action Alternative. The No Action Alternative is included in the analysis as prescribed by CEQ regulations. It serves as a baseline against which the impacts of implementing the Proposed Action alternatives can be evaluated.

2.5 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

The Air Force may expressly eliminate alternatives from detailed analysis based on reasonable selection criteria. In compliance with NEPA and 32 CFR Part 989, which implements the NEPA process, the Air Force must consider reasonable alternatives for implementing the Proposed Action. As part of the planning process, Keesler AFB systematically evaluated all siting constraints, operational issues, and other factors to identify the set of project alternatives that would satisfy the purpose and need for the Proposed Action. Using the selection criteria, existing facilities and operations, environmental constraints, land use restrictions, and land availability, siting of the project area was limited to the area near the existing Pass Road Gate. The Air Force determined that the purpose of and need for the project could be met only by establishing a new gate near the existing gate. Other gate locations were considered but were not carried forward for analysis because they had space constraints and did not meet the purpose of and need for the Proposed Action.

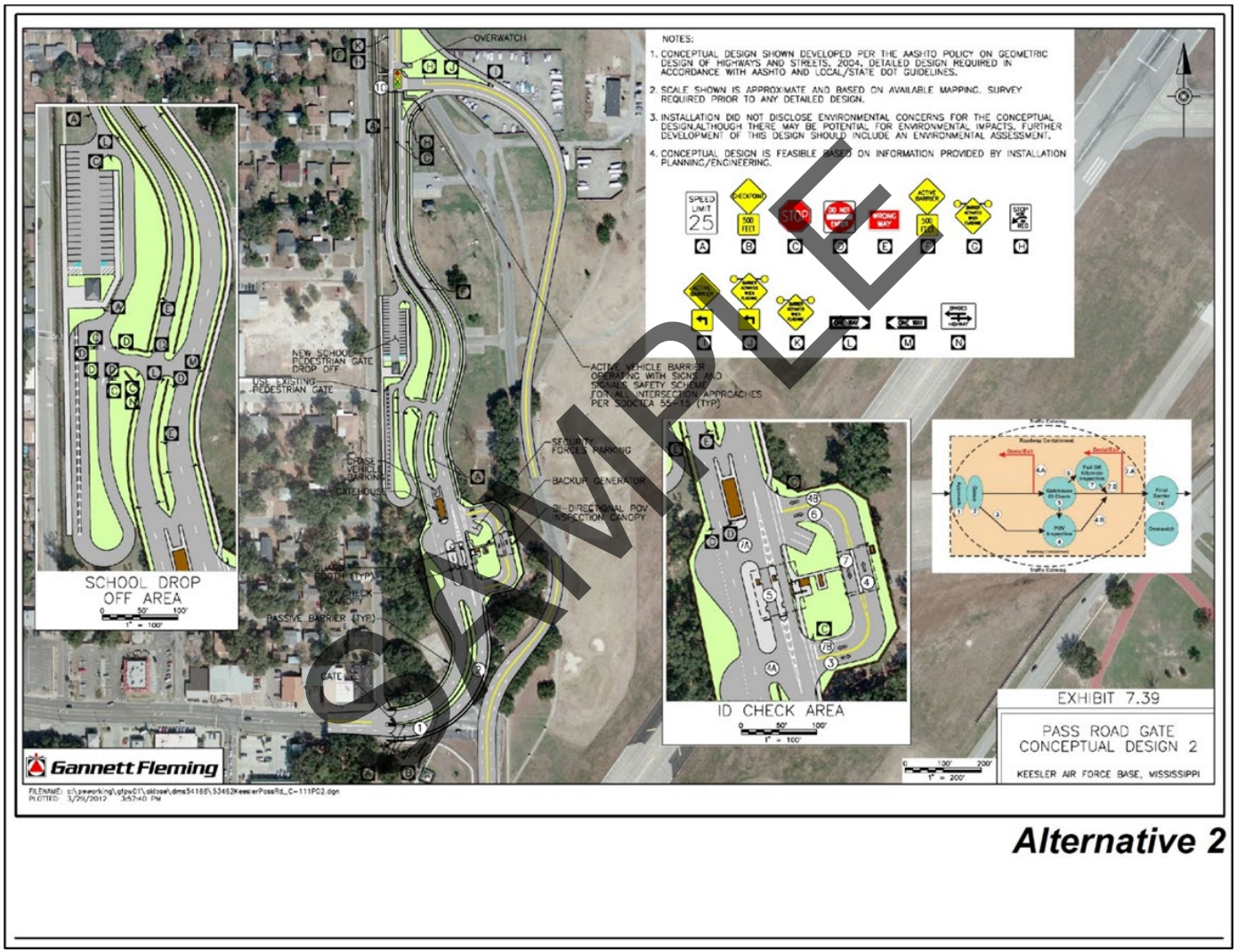

Figure 2-3. Alternative 2

From: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV
To: Shrestha, Suni
Subject: FW: Pass Road Gate at Keesler Air Force Base
Date: Wednesday, February 2, 2022 12:58:14 PM

Response from US Fish and Wildlife service
Robin

From: Necaise, Paul <paul_necaise@fws.gov>
Sent: Wednesday, February 2, 2022 10:34 AM
To: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Subject: [Non-DoD Source] Pass Road Gate at Keesler Air Force Base

Robin,

The US Fish and Wildlife Service has reviewed your letter dated, November 17, 2021, regarding the proposed construction of the Pass Road Gate at Keesler Air Force Base. The Service understands that you have also drafted an EA and FONSI for this project as well. Further, the Service has reviewed the alternatives analysis included within your above-reference letter.

The Service concurs with your determination that no threatened or endangered species or designated critical habitat areas would be impacted by the proposed project. Additionally, it is not anticipated that any migratory birds (protected by the Migratory Bird Treaty Act) would be impacted. This concludes informal consultation on this project. Should you have any further questions or needs regarding this project you may contact me directly at the telephone number below.

Paul Necaise
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Mississippi Ecological Services Field Office
6578 Dogwood View Parkway
Jackson, MS 39213
(228) 493-6631
Email: paul_necaise@fws.gov

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Appendix B – State Historic Preservation Office Coordination

The following letter was sent to the Mississippi Department of Archives and History, Historic Preservation Division. Responses received follow the letter sent.

Agency	Name	Address	Response Received
Mississippi Department of Archives and History, Historic Preservation Division	Jennifer Baughn	100 S. State Street PO Box 571 Jackson, MS 39201	X

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

17 November 2021

Robert T. Moseley III
Deputy Base Civil Engineer
81st Civil Engineer Squadron
500 Fisher Street, Bldg 701
Keesler AFB, MS 39534

Jennifer Baughn
Historic Preservation Division
Chief Architectural Historian
Mississippi Department of Archives and History
100 S. State Street
P.O. Box 571
Jackson, MS 39201

Dear Ms. Baughn

The United States Air Force (Air Force) proposes to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Mississippi. The proposed undertaking is described in the Description of Proposed Action and Alternatives (DOPAA) (Attachment 1). The Air Force is preparing an environmental assessment (EA) to evaluate the potential environmental impacts associated with the proposed project. The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed project.

The Air Force has reviewed the undertaking and defined the area of potential effect (APE) to encompass all potential effects from the execution of either of the two alternatives for the Proposed Action (Alternative 1 and Alternative 2). Therefore, the APE includes those areas proposed for construction, associated laydown/staging areas, and access (Attachment 2).

Starting in the early 1990s, all land that comprises Keesler AFB was either surveyed for archaeological resources with negative results or was determined to be previously disturbed to the extent that there was either a low probability or no possibility at all of any potential archaeological sites remaining intact. Consequently, Keesler AFB in collaboration with the Mississippi Department of Archives and History (MDAH) determined the base had no archaeological resources requiring management (Keesler AFB ICRMP 2018).

Beginning in 1988, Keesler AFB began identification and documentation of buildings/sites of potential historical and cultural significance. As of 2013, Keesler AFB in collaboration with MDAH determined there are only five remaining buildings that warrant consultation under Section

106 of the NHPA; 6901, 4116, 4330, 4331, and potentially 1002. A map of these facility locations is provided in Attachment 2.

There have also been no prehistoric or historic Native American Indian sites and/or Traditional Cultural Properties identified (Keesler AFB ICRMP 2018). However, those Native American Tribes that affiliate with Keesler AFB (Jena Band of Choctaw Indians, Choctaw Nation of Oklahoma, Mississippi Band of Choctaw Indians, Tunica-Biloxi Tribe of LA) will be notified in the event of any unanticipated discoveries and per the results of previous consultations, are being notified of this project due to its significant ground disturbance. They are being included in the Section 106 consultation effort for the proposed project.

There are no known archaeological resources or sites of interest to affiliated Native American Indian Tribes within the APE. Furthermore, none of the five buildings on Keesler AFB requiring Section 106 consultation are within nor will have visibility to the APE due to their views being limited by other on-base development.

A search of MDAH online records determined there are architectural and archaeological resources off-base within the vicinity of the project area. However, the nearest historic architectural resources are located a minimum of ½ mile away from the project location and the nearest archaeological resource, HR 1084, is ineligible for the National Register of Historic Places and is approximately a ½ mile to the west. While the proposed undertaking is on the western edge of the base, these off-base resources do not have visibility to the project location nor will they after the proposed work is completed.

Consequently, the Air Force proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your concurrence on the proposed undertaking. If we do not receive your comments and/or concurrence within the required 30 days, we will assume concurrence and proceed with the undertaking as described.

If you have questions, please contact Aaron Brownell, KBOS/CEV, via email at aaron.brownell.ctr@us.af.mil or by regular mail to: Mr. Aaron Brownell, KBOS/CEV, 508 L Street-Bldg 4705, Keesler AFB, MS 39534; or by phone at 228-377-1262. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782
Digitally signed by MOSELEY.ROBERT.T.III.1230764782
Date: 2021.11.17 10:44:12 -06'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer

2 Attachments:
1. Draft DOPAA
2. Location and APE Maps and Project Area Photos

Attachments

Attachment 1

REVISED DRAFT

ENVIRONMENTAL ASSESSMENT
OF CONSTRUCTION AND OPERATION OF A PASS ROAD GATE

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Keesler Air Force Base
Biloxi, Mississippi

PREPARED BY:

Department of the Air Force

November 2021

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Contents

APPENDICES

Figures

Tables

ACRONYMS AND ABBREVIATIONS

AFB	Air Force base
Air Force	U.S. Air Force
AT/FP	antiterrorism/force protection
AVB	active vehicle barrier
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DoD	Department of Defense
EA	environmental assessment
EIAP	Environmental Impact Analysis Process
EO	Executive Order
FONSI	Finding of No Significant Impact
NEPA	National Environmental Policy Act of 1969
NOI	notice of intent
POV	privately owned vehicle
RV	recreational vehicle
SDDCTEA	Military Surface Deployment and Distribution Command Transportation Engineering Agency
U.S.	United States (adjective only)
U.S.C.	United States Code
UFC	Unified Facilities Criteria

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1.0 PURPOSE OF AND NEED FOR ACTION

1.1 INTRODUCTION

The U.S. Air Force (Air Force) has prepared this Environmental Assessment (EA) to evaluate potential environmental impacts associated with the proposed construction and operation of a new Pass Road Gate on Keesler Air Force Base (AFB) in Biloxi, MS. The Proposed Action will include demolition of existing gate facilities, construction and operation of the new gate facilities and related utilities and infrastructure, and construction of a new school drop-off area for school children who live in the military family housing community of Bayridge on Keesler AFB.

The Air Force has prepared the EA in accordance with the National Environmental Policy Act of 1969 (NEPA) (Title 42 of the *United States Code* [U.S.C.] § 4321 *et seq*.), the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (Title 40 of the *Code of Federal Regulations* [CFR] Parts 1500–1508), and the Air Force's Environmental Impact Analysis Process (EIAP) (32 CFR Part 989). In accordance with CEQ regulations in 40 CFR § 1502.13, this section specifies the purpose of and need for the Proposed Action.

1.2 LOCATION AND MISSION

Keesler AFB is located on the Mississippi Gulf Coast, within the boundaries of the City of Biloxi and Harrison County, MS (Figure 1-1). The base occupies 1,646 acres on a narrow peninsula bordered by the Back Bay of Biloxi to the north and the Gulf of Mexico to the south. The main base consists of 1,447 acres and is densely developed. U.S. Highway 90 parallels the southern border of the base and provides access to Interstate 10 by U.S. Highways 49 and 110.

Keesler AFB is home to Air Education and Training Command's 81st Training Wing, which comprises three large groups of squadrons: the 81st Training Group (the largest electronics training group in the Air Force), the 81st Medical Group (the second largest medical facility in the Air Force), and the 81st Mission Support Group. Other military support units on Keesler AFB include the 403d Wing (Air Force Reserve), Headquarters Second Air Force, 85th Engineering Installation Squadron, Mathies Noncommissioned Officer Academy, and Marine Corps Detachment. Keesler AFB's primary mission is to provide technical training, and it is the "Electronics Training Center of Excellence" for the Air Force. A daily average of 3,400 students is enrolled in more than 300 training programs taught at the base.

Keesler AFB proposes to construct a new antiterrorism/force protection- (AT/FP-) compliant gate on the western boundary of the base. The current Pass Road Gate (Gate 7) does not comply with Department of Defense (DoD) Unified Facilities Criteria (UFC), including UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings* and UFC 4-022-01, *Entry Control Facilities/Access Control Points*. The gate needs to be relocated and a new approach roadway needs to be constructed for it to be compliant with the DoD standards. The proposed location for the new gate is north of its current location. The new roadway would serpentine north from the current location of Gate 7 to the new gate, then continue north to where it would exit onto Ploesti Drive on Keesler AFB about 0.2 mile north of the new gate. A new drop-off area for school children living in the military family housing community of Bayridge on the installation would also be constructed to replace the existing school drop-off area. The new school drop-off area would also comply with AT/FP standards.

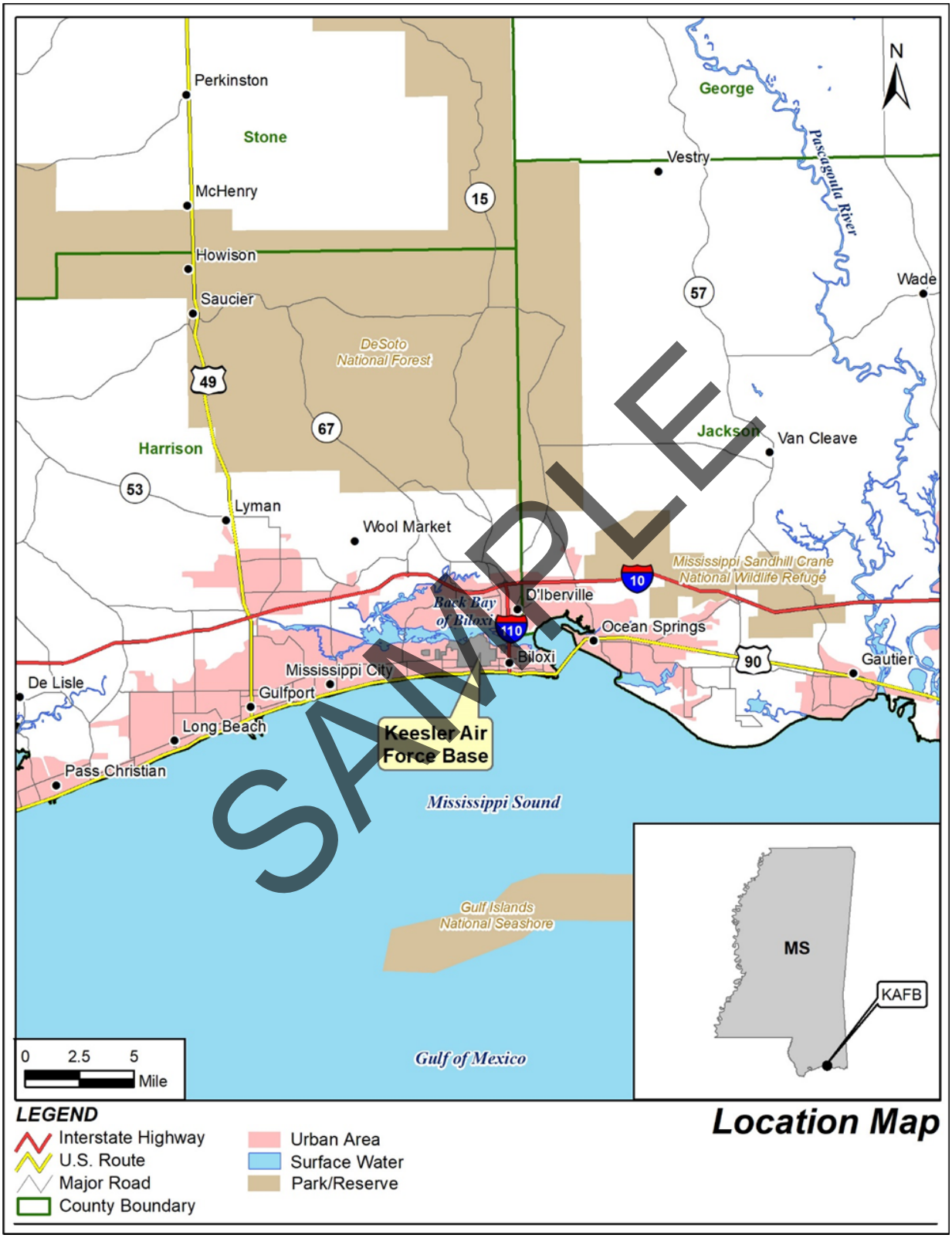

Figure 1-1. Keesler Air Force Base location

1.3 PURPOSE AND NEED

The Air Force proposes to construct and operate a new, AT/FP-compliant Pass Road Gate on Keesler AFB for privately owned vehicles (POVs). The Pass Road Gate must be configured to ensure security and safety, and the existing gate does not meet this requirement. The new gate would improve base security, the safety of personnel and school children, gate capacity, traffic flow, and the base's public image.

The Pass Road Gate at the terminus of Pass Road on the western boundary of the base, which serves as an entry point for POVs, does not meet DoD entry gate standards for AT/FP. The existing gate configuration does not have enough space available to accommodate required security measures to make it AT/FP-compliant and it does not meet current UFC requirements.

1.4 Decision to be Made

The Air Force must decide whether the socioeconomic and environmental impacts of implementing the Proposed Action will support a finding of no significant impact (FONSI) or will require publishing in the *Federal Register* a notice of intent (NOI) to prepare an environmental impact statement. The Air Force will publish an NOI if the potential adverse environmental impacts associated with implementing the Proposed Action remain significant even after all reasonable mitigation measures have been implemented.

1.5 Cooperating Agency and Intergovernmental Coordination / Consultations

1.5.1 Cooperating Agency

No cooperating agencies participated in the preparation of the EA.

1.5.2 Interagency and Intergovernmental Coordination and Consultations

The Intergovernmental Coordination Act (29 CFR Part 1902.5) and Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, require the proponent to issue intergovernmental notifications before making any detailed statement of environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning, the proponent must notify concerned federal, state, and local agencies and allow them enough time to evaluate potential environmental impacts of a proposed action. Comments from these agencies are subsequently incorporated into the EIAP. [*IICEP summary to be added*] Appendix A provides copies of the letters the Air Force sent to the parties and responses it received.

The Draft EA and FONSI were made available for public review from xxxx xx, 2022, to xxxx xx, 2022. A notice of availability of the Draft EA and FONSI was published in the *Biloxi Sun-Herald* on xxxx xx, 2022, and copies of the Draft EA and draft FONSI were available for review at the Biloxi Public Library at 580 Howard Avenue in Biloxi, MS. [*Summary of responses received*] (see Appendix B).

1.6 Applicable Laws and Environmental Regulations

1.6.1 National Environmental Policy Act

Under NEPA, an EA is prepared to analyze the potential effects of a proposed action and other reasonable alternatives, including the No Action Alternative. The No Action Alternative is included in the analysis as prescribed by CEQ regulations. It serves as a baseline against which the impacts of implementing the Proposed Action alternatives can be evaluated. If the analyses presented in an EA indicate that implementing the proposed action would not result in significant environmental impacts, a FONSI is prepared. A FONSI briefly presents reasons why a proposed action would not have a significant effect on

the human and natural environments. If significant environmental issues are identified that cannot be mitigated to insignificance, either an environmental impact statement would be prepared or the proposed action would be abandoned and no action would be taken.

1.6.2 Integration of Other Environmental Statutes and Regulations

Air Force Policy Directive 32-70, *Environmental Quality*, states that the Air Force will comply with applicable federal, state, and local environmental laws and regulations, including NEPA. The EIAP is the Air Force's implementing regulation for NEPA. This EA serves as a means for ensuring compliance with applicable federal statutes, including the Endangered Species Act, Clean Water Act, Clean Air Act, National Historic Preservation Act, as well as various EOs and applicable state statutes and regulations. The EA discusses key provisions of the statutes and EOs in more detail in the text to provide better understanding of their requirements.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section of the EA describes the Proposed Action, the screening criteria, Alternative 1, Alternative 2, the No Action Alternative, and alternatives considered but eliminated from detailed study.

2.1 PROPOSED ACTION

The Proposed Action is to construct a new UFC- and AT/FP-compliant Pass Road Gate on Keesler AFB. The new gate would be along a new roadway leading onto Keesler AFB in the same general location as the existing Pass Road Gate (Figure 2-1). The new gate would have an identification check canopy, a guard booth, a POV inspection canopy, security forces parking, chase vehicle parking, a gatehouse, an overwatch facility, and a backup generator. The gate would have support spaces, such as restrooms and telecommunications, mechanical, and electrical rooms. A new roadway would serpentine north from the current location of Gate 7 to the new gate, then continue north to where it would exit onto Ploesti Drive on Keesler AFB about 0.2 mile north of the new gate. A new drop-off area for school children living in the military family housing community of Bayridge on the installation would also be constructed to replace the existing school drop-off area. The drop-off area also would comply with UFC and AT/FP requirements.

As part of the Proposed Action, the northern portion of Ploesti Drive between the existing Gate 7 and the new intersection with the new roadway would be realigned and require rerouting a portion of the I-81 running track that currently parallels Ploesti Drive. Additionally, up to half of the approximately 80 live oak trees in the area north of Gate 7 could have to be removed. Live oak trees that are older than 150 years been designated by the city of Biloxi as "Heritage Trees," which are managed under the Keesler AFB's Natural Resource Management Program. The wing commander's approval is required to remove any live oak tree on the base that is larger than 26 inches diameter at breast height.

2.2 SELECTION STANDARDS

Following are the primary planning goals and objectives for designing a new Pass Road Gate site:

- Ensure compliance with DoD standards for access control points and AT/FP.
- Provide adequate POV parking.
- Provide the required number of processing lanes.
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- Provide a bidirectional POV inspection area.
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The following publications provide other facility criteria design requirements that must be met:

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Figure 2-1. Site map

- Military Surface Deployment and Distribution Command Transportation Engineering Agency (SDDCTEA) Pamphlet 55-15, *Traffic and Safety Engineering for Better Entry Control Facilities* (2019)

Keesler AFB examined the area near the existing Pass Road Gate to determine whether these requirements could be met by making improvements or whether a new gate site would be needed to meet the requirements.

2.3 SCREENING OF ALTERNATIVES

The Air Force evaluated the alternatives against the selection standards listed in section 2.2 to determine whether they met the purpose of and need for the Proposed Action and should be carried forward for analysis is the EA. Table 2-1 lists the alternatives, including the No Action Alternative, and whether each alternative met the standards and considerations.

Table 2-1. Pass Road Gate Alternatives Compared to Selection Standards

Selection standards	Alternative 1	Alternative 2	No Action Alternative
Complies with AT/FP and UFC requirements	Yes	Yes	No
Provides adequate POV parking	Yes	Yes	No
Provides the required number of processing lanes	Yes	Yes	No
Increases POV queuing space	Yes	Yes	No
Provides a bidirectional POV inspection area	Yes	Yes	No
Provides pedestrian access and improves pedestrian safety	Yes	Yes	No
Improves school gate access and safety	Yes	Yes	No
Provides AVBs	Yes	Yes	No
Conforms to UFC 4-022-01, UFC 4-010-01, and SDDCTEA 55-15	Yes	Yes	No

Based on both Alternative 1 and Alternative 2 meeting all the selection standards, both alternatives are carried forward in the EA for full analysis. The No Action Alternative is analyzed as prescribed by CEQ regulations.

2.4 DETAILED DESCRIPTION OF THE ALTERNATIVES

2.4.1 Alternative 1

Alternative 1 is to build a new Pass Road entry gate north of the location of the existing gate (Figure 2-2), as described in Section 2.1. Under Alternative 1, the intersection of the new roadway and Ploesti Drive would be south of an existing recreational vehicle (RV) parking area. With this configuration, the RV area could continue to be used, although a new entrance could be required.

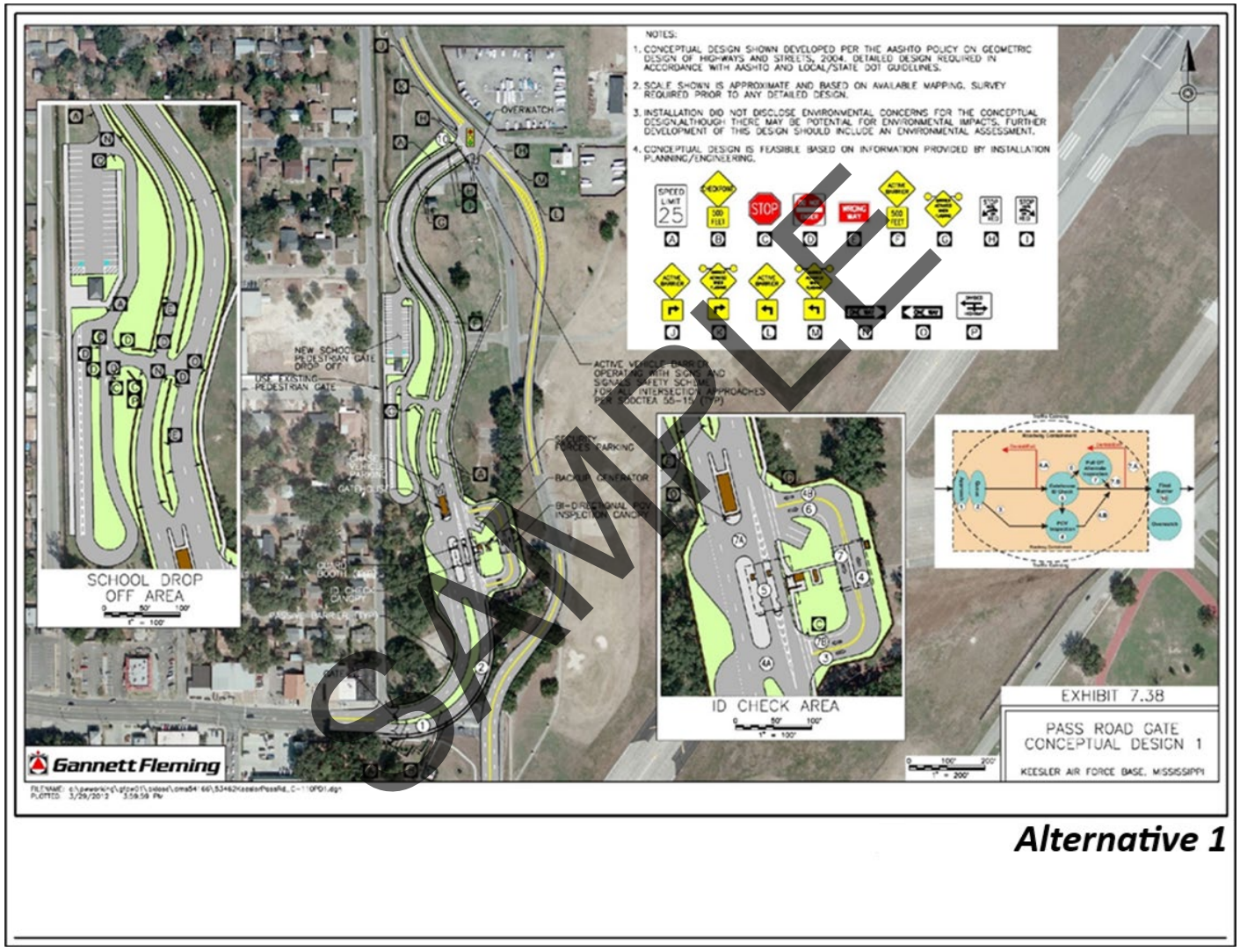


Figure 2-2. Alternative 1

No threatened or endangered species, cultural resources, or wetlands are known to be on the proposed property. The wing commander's approval is required to remove any live oak tree on the base that is larger than 26 inches diameter at breast height.

2.4.2 Alternative 2

Alternative 2 is to implement the Proposed Action as described in Section 2.1 but with the northern portion of the new roadway aligned differently than in Alternative 1 (Figure 2-3). The new roadway from the terminus of Pass Road to the northern extent of the school drop-off area would be the same as in Alternative 1. North of that point, the new roadway would parallel Rodeo Drive to a point between Wiltshire Boulevard and Sunset Boulevard, where the new intersection with Ploesti Drive would be located. Rodeo Drive, Wiltshire Boulevard, and Sunset Boulevard are off base and not part of the proposed new roadway. The northern portion of Ploesti Drive would also be realigned differently than under Alternative 1, resulting in a longer new segment of Ploesti Drive and eliminating the RV parking area.

Facility construction details would be the same under both alternatives and other design and construction considerations apply equally to Alternative 2 as to Alternative 1. Alternative 2 has been estimated to cost about 15 percent more than Alternative 1.

2.4.3 No Action Alternative

Under the No Action Alternative, no new Pass Road entry gate would be constructed. The following conditions would continue or worsen:

- The gate would not meet AT/FP or UFC requirements.
- Unsafe gate operations and unsafe conditions for personnel would continue to exist.

No changes in the current gate configuration at Pass Road would occur under the No Action Alternative. The No Action Alternative is included in the analysis as prescribed by CEQ regulations. It serves as a baseline against which the impacts of implementing the Proposed Action alternatives can be evaluated.

2.5 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

The Air Force may expressly eliminate alternatives from detailed analysis based on reasonable selection criteria. In compliance with NEPA and 32 CFR Part 989, which implements the NEPA process, the Air Force must consider reasonable alternatives for implementing the Proposed Action. As part of the planning process, Keesler AFB systematically evaluated all siting constraints, operational issues, and other factors to identify the set of project alternatives that would satisfy the purpose and need for the Proposed Action. Using the selection criteria, existing facilities and operations, environmental constraints, land use restrictions, and land availability, siting of the project area was limited to the area near the existing Pass Road Gate. The Air Force determined that the purpose of and need for the project could be met only by establishing a new gate near the existing gate. Other gate locations were considered but were not carried forward for analysis because they had space constraints and did not meet the purpose of and need for the Proposed Action.

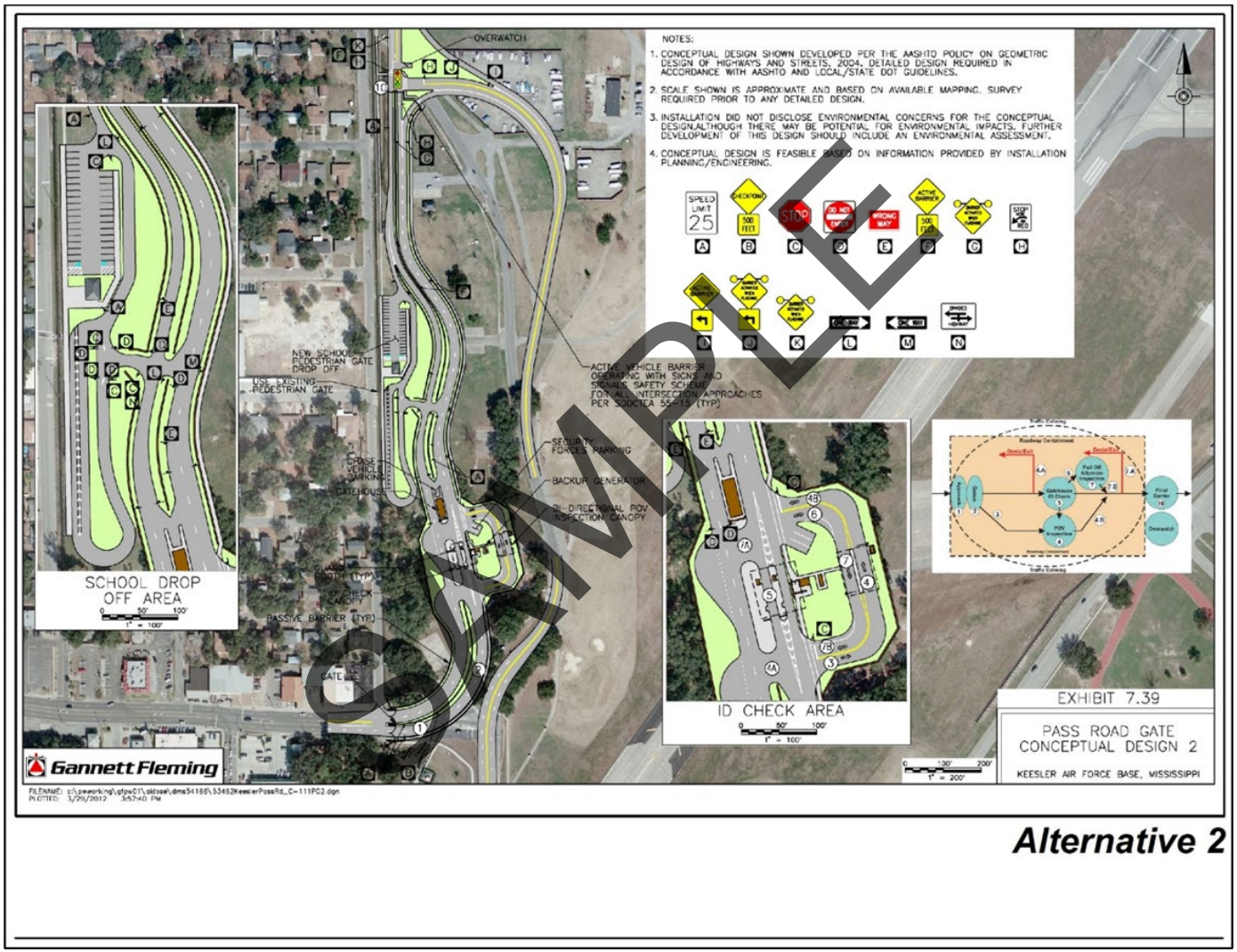


Figure 2-3. Alternative 2

Attachment 2

Location and Area of Potential Effect (APE) Maps
and Project Area Photos for
Construct and Operation of Pass Road
Keesler Air Force Base (AFB) in Biloxi, Mississippi

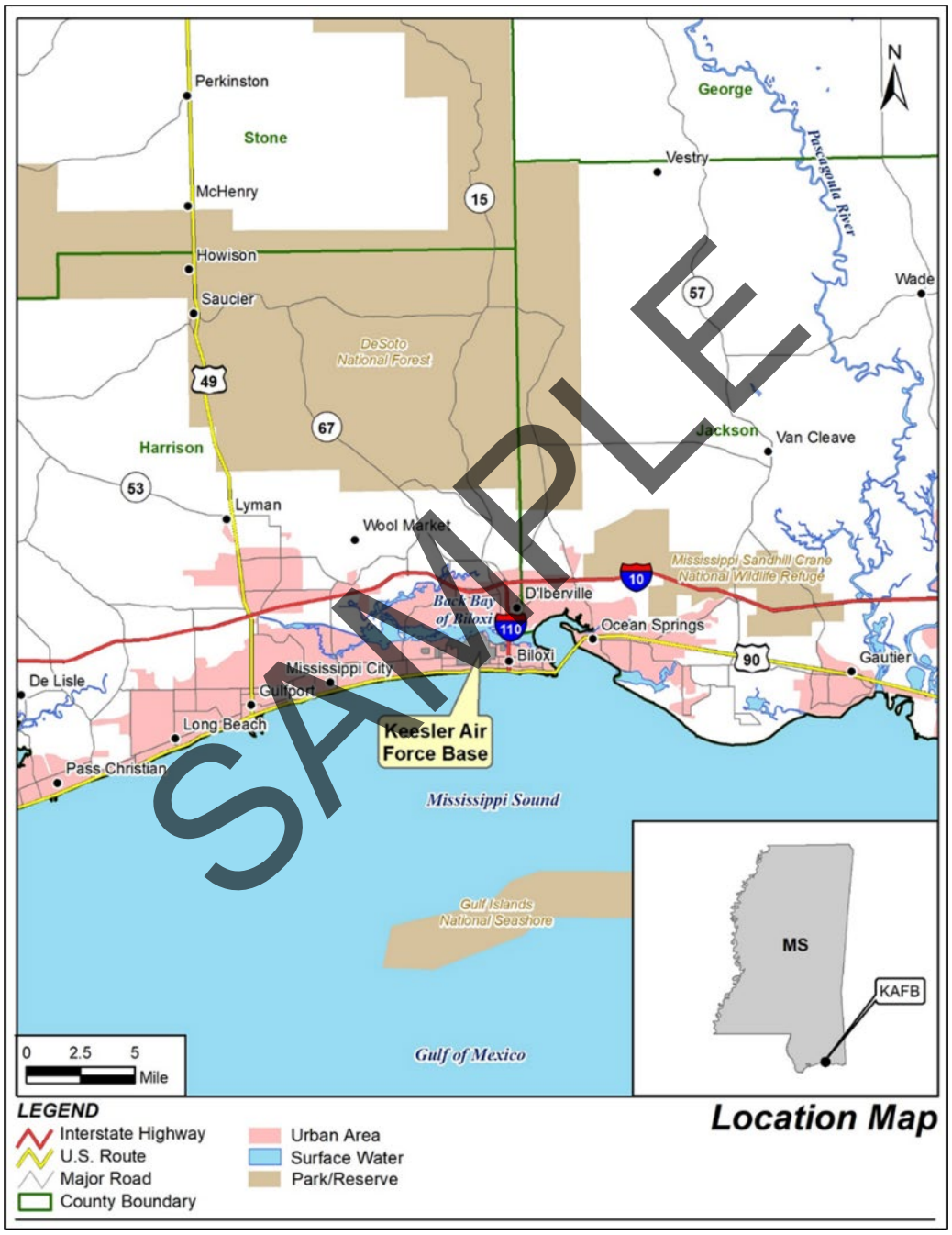
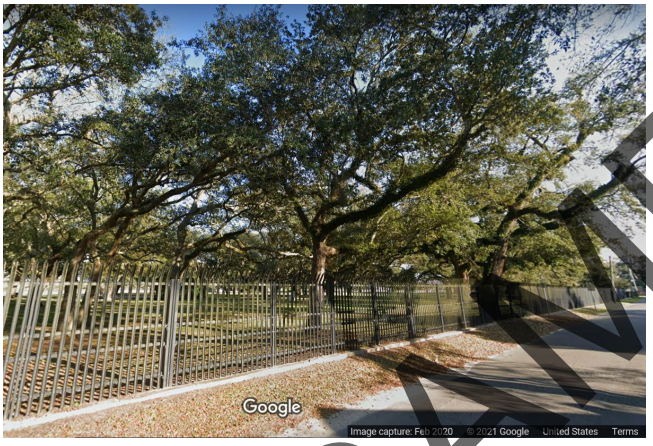


Figure 1. Location map of Keesler AFB


N
Rodeo Drive
Pass Road Gate
Eagle Street
1002
4331
4330
4116
6901
0 300 600
Feet
LEGEND
Keesler AFB Boundary
Project Area
Building
Structure
Historic Building
Historic Buildings
Source: Keesler GIS 2021.

Project Area Photos




Google
Image capture: Feb 2020 © 2021 Google United States Terms

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MDAH
MISSISSIPPI DEPARTMENT OF
ARCHIVES & HISTORY

P.O. Box 571
Jackson, MS 39205-0571
601-576-6850
mdah.ms.gov

December 28, 2021

Mr. Aaron Brownell
Vectrus Systems Corporation
508 L Street, Keesler Air Force Base
Biloxi, Mississippi 39534

RE: Proposed Construction of Pass Road Gate, Keesler AFB, Biloxi, by the United States Air Force (USAF), MDAH Project Log #12-012-21, Harrison County

Dear Mr. Brownell:

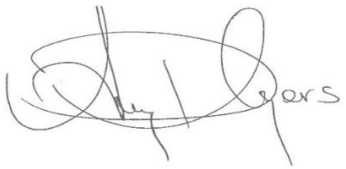
We have reviewed your November 17, 2021, request for a cultural resources assessment, received on December 2, 2021, for the above referenced project, in accordance with our responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800.

After review, due to the topography of the area, the presence of recorded archaeological sites in close proximity to the project area, and the area of potential effect not previously being examined for cultural resources, it is our determination that a cultural resources survey must be performed on all soil-disturbing activities by a professional archaeologist. The resulting report should reference the project log number above on the title page.

A list of individuals who have represented themselves as being willing and qualified to do archaeological survey work in Mississippi will be furnished upon request. A copy of this letter should be made available to the contracting archaeologist(s).

If you have any questions, please do not hesitate to call us at (601) 576-6940.

Sincerely,



Amy D. Myers
Review and Compliance Assistant

FOR: Katie Blount
State Historic Preservation Officer

From: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV
To: Shrestha, Suni
Subject: FW: MDAH Project Log #12-012-21
Date: Tuesday, January 4, 2022 10:40:30 AM

Here is additional response from MDAH

Robin

From: Cindy Carter-Davis <ccarterdavis@mdah.ms.gov>
Sent: Monday, January 3, 2022 4:25 PM
To: BROWNELL, AARON T CTR USAF AETC BOS/CEV <aaron.brownell.ctr@us.af.mil>
Cc: Amy Myers <amyers@mdah.ms.gov>; Barry White <bwhite@mdah.ms.gov>
Subject: [Non-DoD Source] Re: MDAH Project Log #12-012-21

Mr. Brownell,
Thank you for reaching out to MDAH for clarification of our survey request for the above-referenced project. MDAH examines a wide variety of evidence to determine if a survey is warranted. In this case, there are thirteen previously- recorded archaeological sites within one mile of the project area, the standard buffer of examination at MDAH. Additionally, archaeological staff review where these sites are located; given that Keesler is located on the Sangamon Ridge between the GOM and Back Bay, this location has a high likelihood to contain intact pre-contact archaeological sites, mirroring other locations on the Sangamon Ridge. As such, MDAH respectfully requests that a cultural resources survey be performed to determine if archaeological deposits are present.

Additionally, your original submission indicates that there was an Integrated Cultural Resources Management Plan (ICRMP) submitted to our office in 2018. After an exhaustive search, MDAH can find no such plan in our submission database. The sole ICRMP that is housed at MDAH is dated July of 2003. Can you please provide the letter indicating that MDAH concurred with that plan?

Thanks, and please let me know if I can provide further information.

Cindy

Cindy Carter-Davis
Chief Archaeologist and Curator of Federal Collections
Mississippi Department of Archives and History
P.O. Box 571, Jackson MS 39205
601-576-6945 (office)
601-307-0133 (cell)

From: Amy Myers <amyers@mdah.ms.gov>
Sent: Monday, January 3, 2022 2:57 PM
To: Cindy Carter-Davis <ccarterdavis@mdah.ms.gov>
Subject: Re: MDAH Project Log #12-012-21

Amy D. Myers
Review and Compliance Assistant, Section 106
Mississippi Department of Archives and History
Phone: 601-576-6937
amyers@mdah.ms.gov

From: BROWNELL, AARON T CTR USAF AETC BOS/CEV
Sent: Monday, January 3, 2022 2:45 PM
To: Amy Myers
Subject: MDAH Project Log #12-012-21

Ms. Myers,

After reviewing the response letter dated 28 December 2021, we were hoping that we might be able to get clarity on some points that were presented. The second paragraph of the letter makes reference to recorded archeological site in close proximity to the project area. Could you please identify these archeological site for us, as we are unaware of any? The second paragraph also makes specific reference to the topography of the area. The topography of the area is the same as the remainder of Keesler Air Force Base. How is the topography in that area relevant as a cultural impact?

Any assistance that you might be able to provide regarding these issues would be greatly appreciated. Thank you for your time in this matter. Please feel free to contact me with any questions or comments that might arise.

Best regards,

Aaron Brownell
Environmental Manager, BOS/CEV
Keesler AFB, MS
aaron.brownell.ctr@us.af.mil
228-377-1262

Subject: FW: Request for archaeological survey, MDAH project log 12-012-21
Attachments: 20200206 MS STANDARDS AND GUIDELINES FOR ARCHAEOLOGICAL INVESTIGATIONS_FINAL.pdf

From: Cindy Carter-Davis <ccarterdavis@mdah.ms.gov>
Sent: Monday, February 14, 2022 6:06 AM
To: BROWNELL, AARON T CTR USAF AETC BOS/CEV <aaron.brownell.ctr@us.af.mil>
Cc: Patty Miller-Beech <pmbeech@mdah.ms.gov>; Jennifer Baughn <jbaughn@mdah.ms.gov>
Subject: [Non-DoD Source] Request for archaeological survey, MDAH project log 12-012-21

Good morning,
I apologize for the unclear wording of that letter, which is understandably confusing. MDAH requests that archaeological survey be conducted **prior** to any ground- disturbing activities, to ensure that no subsurface cultural materials or features are disturbed by the construction project. Additionally, I have attached our current *Standards for Archaeological Practice,* which presents our guidelines for archaeological survey. I've also included a link to our Consultant List; while I cannot recommend any consultant, all of the members of this list have proven themselves qualified to complete the work.

https://www.mdah.ms.gov/sites/default/files/2020-08/Archaeological-Consulting-List-08-13-20.pdf

Please let me know should you have further questions. We appreciate KAFB's attention and willingness to work with us on this project.

Thanks,
Cindy

Cindy Carter-Davis
Chief Archaeologist and Curator of Federal Collections
Mississippi Department of Archives and History
P.O. Box 571, Jackson MS 39205
601-576-6945 (office)
601-307-0133 (cell)
Please note: if you are submitting a project for MDAH review, please send to Section106@mdah.ms.gov

Appendix A – Tribal Coordination

The following letters were sent to the federally recognized American Indian Tribes listed below. The attachments sent with the letters were the same as shown for the Mississippi Department of Archives and History. Responses received follow the letter sent.

Tribe	Name	Address	Response Received
Jena Band of Choctaw Indians	Alina J. Shively, THPO	PO Box 14 Jena, LA 71342	
Choctaw Nation of Oklahoma	Dr. Ian Thompson, THPO	PO Box 1210 Durant, OK 74702-1210	X
Mississippi Band of Choctaw Indians	Kenneth Carleton, THPO	101 Industrial Road Choctaw, MS 39350	
Tunica-Biloxi Tribe of Louisiana	Early J. Barbry, Jr., THPO	150 Melacon Drive Marksville, LA 71351	

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

17 November 2021

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Bldg 701
Keesler AFB, MS 39534

THPO Alina J. Shively
Jena Band of Choctaw Indians
PO Box 14
Jena LA 71342

Dear THPO Shively

The United States Air Force (Air Force) proposes to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Mississippi. The project is needed to meet current Air Force Unified Facilities Criteria (UFC) requirements. The Air Force is preparing an environmental assessment (EA) to evaluate the potential environmental impacts associated with the construction and operation of the proposed project. The proposed undertaking is described in the Description of Proposed Action and Alternatives (DOPAA) (Attachment 1). The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed project.

The Air Force has reviewed the undertaking and defined the area of potential effect (APE) in such as a way as to encompass all potential impacts from the execution of either of the two alternatives for the Proposed Action (Alternative 1 and Alternative 2). Therefore, the APE includes those areas proposed for construction, associated laydown/staging areas, and access (Attachment 2).

Starting in the early 1990s, all land that comprises Keesler AFB was either surveyed for archaeological resources with negative results or was determined to be previously disturbed to the extent that there was either a low probability or no possibility at all of any potential archaeological sites remaining intact. Consequently, Keesler AFB in collaboration with the Mississippi Department of Archives and History (MDAH) determined the base had no archaeological resources requiring management (Keesler AFB ICRMP 2018).

Beginning in 1988, Keesler AFB began identification and documentation of buildings/sites of potential historical and cultural significance. As of 2013, Keesler AFB in collaboration with MDAH determined there are only five remaining buildings that warrant consultation under Section 106 of the NHPA; 6901, 4116, 4330, 4331, and potentially 1002. A map of these facility locations is provided in Attachment 2.

There have also been no prehistoric or historic Native American Indian sites and/or Traditional Cultural Properties identified (Keesler AFB ICRMP 2018). However, Jena Band of Choctaw Indians will be notified in the event of any unanticipated discoveries and per the results of previous consultations, are being notified of this project due to its significant ground disturbance.

Within the APE, there are no known archaeological resources or sites of interest to Jena Band of Choctaw Indians. Furthermore, none of the five buildings on Keesler AFB requiring Section 106 consultation are within nor will have visibility to the APE due to their views being limited by other on-base development.

A search of MDAH online records determined there are architectural and archaeological resources off-base within the vicinity of the project area. However, the nearest historic architectural resources are located a minimum of ½ mile away from the project location and the nearest archaeological resource, HR 1084, is ineligible for the National Register of Historic Places and is approximately a ½ mile to the west. While the proposed undertaking is on the western edge of the base, these off-base resources do not have visibility to the project location nor will they after the proposed work is completed.

Consequently, the Air Force proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your comments on the proposed undertaking.

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782
Digitally signed by MOSELEY.ROBERT.T.III.1230764782
Date: 2021.11.17 10:40:21 -06'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer
Tribal Liaison Officer

2 Attachments:
1. Draft DOPAA
2. Location and APE Maps and Project Area Photos

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

17 November 2021

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Bldg 701
Keesler AFB, MS 39534

THPO Dr. Ian Thompson
Choctaw Nation of Oklahoma
PO Box 1210
Durant OK 74702-1210

Dear THPO Thompson

The United States Air Force (Air Force) proposes to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Mississippi. The project is needed to meet current Air Force Unified Facilities Criteria (UFC) requirements. The Air Force is preparing an environmental assessment (EA) to evaluate the potential environmental impacts associated with the construction and operation of the proposed project. The proposed undertaking is described in the Description of Proposed Action and Alternatives (DOPAA) (Attachment 1). The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed project.

The Air Force has reviewed the undertaking and defined the area of potential effect (APE) in such as a way as to encompass all potential impacts from the execution of either of the two alternatives for the Proposed Action (Alternative 1 and Alternative 2). Therefore, the APE includes those areas proposed for construction, associated laydown/staging areas, and access (Attachment 2).

Starting in the early 1990s, all land that comprises Keesler AFB was either surveyed for archaeological resources with negative results or was determined to be previously disturbed to the extent that there was either a low probability or no possibility at all of any potential archaeological sites remaining intact. Consequently, Keesler AFB in collaboration with the Mississippi Department of Archives and History (MDAH) determined the base had no archaeological resources requiring management (Keesler AFB ICRMP 2018).

Beginning in 1988, Keesler AFB began identification and documentation of buildings/sites of potential historical and cultural significance. As of 2013, Keesler AFB in collaboration with MDAH determined there are only five remaining buildings that warrant consultation under Section 106 of the NHPA; 6901, 4116, 4330, 4331, and potentially 1002. A map of these facility locations is provided in Attachment 2.

There have also been no prehistoric or historic Native American Indian sites and/or Traditional Cultural Properties identified (Keesler AFB ICRMP 2018). However, Choctaw Nation of Oklahoma will be notified in the event of any unanticipated discoveries and per the results of previous consultations, are being notified of this project due to its significant ground disturbance.

Within the APE, there are no known archaeological resources or sites of interest to Choctaw Nation of Oklahoma. Furthermore, none of the five buildings on Keesler AFB requiring Section 106 consultation are within nor will have visibility to the APE due to their views being limited by other on-base development.

A search of MDAH online records determined there are architectural and archaeological resources off-base within the vicinity of the project area. However, the nearest historic architectural resources are located a minimum of ½ mile away from the project location and the nearest archaeological resource, HR 1084, is ineligible for the National Register of Historic Places and is approximately a ½ mile to the west. While the proposed undertaking is on the western edge of the base, these off-base resources do not have visibility to the project location nor will they after the proposed work is completed.

Consequently, the Air Force proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your comments on the proposed undertaking.

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782 Digitally signed by MOSELEY.ROBERT.T.III.1230764782 Date: 2021.11.17 10:40:21 -06'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer
Tribal Liaison Officer

2 Attachments:
1. Draft DOPAA
2. Location and APE Maps and Project Area Photos

From:	HOLLAND, ROBIN A CTR USAF AETC BOS/CEV
To:	Shrestha, Suni
Subject:	FW: [Non-DoD Source] RE: Construction of New Anti-Terrorism/Force Protection Gate, Pass Road, Keesler AFB, Biloxi, MS
Date:	Monday, January 3, 2022 3:14:00 PM

Received today.
Robin

From: Lindsey Bilyeu <lbilyeu@choctawnation.com>
Sent: Monday, January 3, 2022 3:12 PM
To: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Subject: [Non-DoD Source] RE: Construction of New Anti-Terrorism/Force Protection Gate, Pass Road, Keesler AFB, Biloxi, MS

Good afternoon,

The Choctaw Nation of Oklahoma thanks the United States Air Force for the correspondence regarding the above referenced project. This project lies in our area of historic interest. The Choctaw Nation Historic Preservation Department has reviewed the project and we concur with the finding of "no historic properties affected". However, we ask that work be stopped and our office contacted immediately in the event that Native American artifacts or human remains are encountered.

If you have any questions, please contact me.

Thank you,

Lindsey D. Bilyeu, MS
Senior Section 106 Reviewer
Choctaw Nation of Oklahoma
Historic Preservation Department
Office: (580) 642-8377
Cell: (580) 740-9624

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

17 November 2021

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Bldg 701
Keesler AFB, MS 39534

THPO Kenneth Carleton
Mississippi Band of Choctaw Indians
101 Industrial Road
Choctaw MS 39350

Dear THPO Carleton

The United States Air Force (Air Force) proposes to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Mississippi. The project is needed to meet current Air Force Unified Facilities Criteria (UFC) requirements. The Air Force is preparing an environmental assessment (EA) to evaluate the potential environmental impacts associated with the construction and operation of the proposed project. The proposed undertaking is described in the Description of Proposed Action and Alternatives (DOPAA) (Attachment 1). The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed project.

The Air Force has reviewed the undertaking and defined the area of potential effect (APE) in such as a way as to encompass all potential impacts from the execution of either of the two alternatives for the Proposed Action (Alternative 1 and Alternative 2). Therefore, the APE includes those areas proposed for construction, associated laydown/staging areas, and access (Attachment 2).

Starting in the early 1990s, all land that comprises Keesler AFB was either surveyed for archaeological resources with negative results or was determined to be previously disturbed to the extent that there was either a low probability or no possibility at all of any potential archaeological sites remaining intact. Consequently, Keesler AFB in collaboration with the Mississippi Department of Archives and History (MDAH) determined the base had no archaeological resources requiring management (Keesler AFB ICRMP 2018).

Beginning in 1988, Keesler AFB began identification and documentation of buildings/sites of potential historical and cultural significance. As of 2013, Keesler AFB in collaboration with MDAH determined there are only five remaining buildings that warrant consultation under Section 106 of the NHPA; 6901, 4116, 4330, 4331, and potentially 1002. A map of these facility locations is provided in Attachment 2.

There have also been no prehistoric or historic Native American Indian sites and/or Traditional Cultural Properties identified (Keesler AFB ICRMP 2018). However, Mississippi Band of Choctaw Indians will be notified in the event of any unanticipated discoveries and per the results of previous consultations, are being notified of this project due to its significant ground disturbance.

Within the APE, there are no known archaeological resources or sites of interest to Mississippi Band of Choctaw Indians. Furthermore, none of the five buildings on Keesler AFB requiring Section 106 consultation are within nor will have visibility to the APE due to their views being limited by other on-base development.

A search of MDAH online records determined there are architectural and archaeological resources off-base within the vicinity of the project area. However, the nearest historic architectural resources are located a minimum of ½ mile away from the project location and the nearest archaeological resource, HR 1084, is ineligible for the National Register of Historic Places and is approximately a ½ mile to the west. While the proposed undertaking is on the western edge of the base, these off-base resources do not have visibility to the project location nor will they after the proposed work is completed.

Consequently, the Air Force proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your comments on the proposed undertaking.

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782 Digitally signed by MOSELEY.ROBERT.T.III.1230764782 Date: 2021.11.17 10:40:21 -06'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer
Tribal Liaison Officer

2 Attachments:
1. Draft DOPAA
2. Location and APE Maps and Project Area Photos

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

17 November 2021

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Bldg 701
Keesler AFB, MS 39534

THPO Earl J. Barbry, Jr.
Tunica-Biloxi Tribe of Louisiana
150 Melacon Drive
Marksville LA 71351

Dear THPO Barbry

The United States Air Force (Air Force) proposes to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Mississippi. The project is needed to meet current Air Force Unified Facilities Criteria (UFC) requirements. The Air Force is preparing an environmental assessment (EA) to evaluate the potential environmental impacts associated with the construction and operation of the proposed project. The proposed undertaking is described in the Description of Proposed Action and Alternatives (DOPAA) (Attachment 1). The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act (NHPA) for the proposed project.

The Air Force has reviewed the undertaking and defined the area of potential effect (APE) in such as a way as to encompass all potential impacts from the execution of either of the two alternatives for the Proposed Action (Alternative 1 and Alternative 2). Therefore, the APE includes those areas proposed for construction, associated laydown/staging areas, and access (Attachment 2).

Starting in the early 1990s, all land that comprises Keesler AFB was either surveyed for archaeological resources with negative results or was determined to be previously disturbed to the extent that there was either a low probability or no possibility at all of any potential archaeological sites remaining intact. Consequently, Keesler AFB in collaboration with the Mississippi Department of Archives and History (MDAH) determined the base had no archaeological resources requiring management (Keesler AFB ICRMP 2018).

Beginning in 1988, Keesler AFB began identification and documentation of buildings/sites of potential historical and cultural significance. As of 2013, Keesler AFB in collaboration with MDAH determined there are only five remaining buildings that warrant consultation under Section 106 of the NHPA; 6901, 4116, 4330, 4331, and potentially 1002. A map of these facility locations is provided in Attachment 2.

There have also been no prehistoric or historic Native American Indian sites and/or Traditional Cultural Properties identified (Keesler AFB ICRMP 2018). However, Tunica-Biloxi Tribe of Louisiana will be notified in the event of any unanticipated discoveries and per the results of previous consultations, are being notified of this project due to its significant ground disturbance.

Within the APE, there are no known archaeological resources or sites of interest to Tunica-Biloxi Tribe of Louisiana. Furthermore, none of the five buildings on Keesler AFB requiring Section 106 consultation are within nor will have visibility to the APE due to their views being limited by other on-base development.

A search of MDAH online records determined there are architectural and archaeological resources off-base within the vicinity of the project area. However, the nearest historic architectural resources are located a minimum of ½ mile away from the project location and the nearest archaeological resource, HR 1084, is ineligible for the National Register of Historic Places and is approximately a ½ mile to the west. While the proposed undertaking is on the western edge of the base, these off-base resources do not have visibility to the project location nor will they after the proposed work is completed.

Consequently, the Air Force proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your comments on the proposed undertaking.

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782 Digitally signed by MOSELEY.ROBERT.T.III.1230764782 Date: 2021.11.17 10:40:21 -06'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer
Tribal Liaison Officer

2 Attachments:
1. Draft DOPAA
2. Location and APE Maps and Project Area Photos

Appendix A – State Historic Preservation Office Section 106/110 Consultation

The following letter was sent to the Mississippi Department of Archives and History, Historic Preservation Division. Responses received follow the letter sent.

Agency	Name	Address	Response Received
Mississippi Department of Archives and History, State Historic Preservation Division	Katherine Blount	100 S. State Street PO Box 571 Jackson, MS 39201	X

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

03 March 2023

Robert T. Moseley III
Deputy Base Civil Engineer
81st Civil Engineer Squadron
500 Fisher Street, Bldg. 701
Keesler AFB, MS 39534

Katherine Blount
State Historic Preservation Officer
Mississippi Department of Archives and History
100 S. State St.
P.O. Box 571
Jackson, MS 39201
Via Email: section106@mdah.ms.gov

RE: Section 106 and 110 Consultation, Pass Road Gate, Keesler Air Force Base, Harrison County, Mississippi (MDAH Project Log #12-012-21)

Dear Ms. Blount

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated consultation with your office in a letter dated November 17, 2021 on a project to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi (MDAH Project Log #12-012-21).

At that time, your office requested archaeological survey of the project area prior to continuing consultation on project effects. Therefore, in accordance with Section 106 and Section 110 of the NHPA, the DAF seeks review and concurrence from your office on 1) the attached technical report detailing the archaeological survey and 2) the proposed determination of effect for the project.

The survey, conducted in November 2022, identified two new archaeological sites (22HR1448 and 22HR1449) and one isolated find (IF) within the Area of Potential Effects (APE). Site 22HR1448 is a historic artifact scatter dating from the early twentieth century. Site 22HR1449 is a post-Hurricane Katrina debris removal dump containing twentieth century artifacts. Both sites have been determined to lack historic significance and integrity; therefore, they are recommended not eligible for inclusion in the National Register of Historic Places (NRHP) under any of the four criteria. The IF contained twentieth century artifacts, but did not meet the requirements for

definition as an archaeological site. By definition, IFs do not retain historic significance or integrity. No further work is recommended for these three archaeological resources and requests your concurrence with these determinations of eligibility.

As discussed in the November 2021 letter, there are also no NRHP-eligible or listed buildings within nor with visibility to the APE, and no known sites of interest to affiliated American Indian Tribes within the APE.

Consequently, the DAF proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your concurrence on the proposed undertaking. If we do not receive your comments and/or concurrence within the required 30 days, we will assume concurrence and proceed with the undertaking as described.

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg. 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782
Digitally signed by MOSELEY.ROBERT.T.III.1230764782
Date: 2023.03.13 16:01:53 -05'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer

Attachment:

1. *Draft Phase I Archaeological Survey for the New Anti-Terrorism/Force Protection-Compliant Gate at Pass Road, Keesler Air Force Base*

MDAH
MISSISSIPPI DEPARTMENT OF
ARCHIVES & HISTORY

P.O. Box 571
Jackson, MS 39205-0571
601-576-6850
mdah.ms.gov

April 5, 2023

Ms. Robin Holland
KVOS/CEV
508 L Street, Building 4705
Keesler AFB, Mississippi 39534

RE: Phase I Archaeological Survey for the New Anti-Terrorism/Force Protection-Compliant Gate at Pass Road, Keesler Air Force Base, (USAF) MDAH Project Log #03-090-23 (12-012-21), Report #23-0115, Harrison County

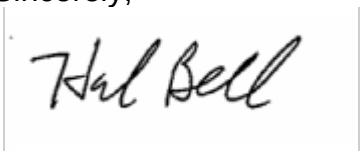
Dear Ms. Holland:

We have reviewed the March 3, 2023, revised cultural resources survey report, by Danny Gregory, Principal Investigator, with New South Associates, received on March 14, 2023, for the above referenced undertaking, pursuant to our responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800. After reviewing the information provided, we concur that sites 22Hr1448-1449 and one isolated find are ineligible for listing in the National Register of Historic Places, and no cultural resources listed or eligible for listing in the NRHP are likely to be affected by the proposed project. As such, we have no reservations with the undertaking.

There remains the possibility that unrecorded cultural resources may be encountered during the project. Should this occur, we would appreciate your contacting this office immediately in order that we may offer appropriate comments under 36 CFR 800.13.

Please provide a copy of this letter to Mr. Gregory. If you need further information, please contact us at (601) 576-6940.

Sincerely,



Hal Bell
Review and Compliance Officer

FOR: Katie Blount
State Historic Preservation Officer

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Appendix A – Tribal Section 106/110 Consultation

The following letters were sent to the federally recognized American Indian Tribes listed below. Responses received follow the letter sent.

Tribe	Name	Address	Response Received
Jena Band of Choctaw Indians	Alina J. Shively, THPO	PO Box 14 Jena, LA 71342	
Choctaw Nation of Oklahoma	Dr. Ian Thompson, THPO	PO Box 1210 Durant, OK 74702-1210	X
Mississippi Band of Choctaw Indians	Kenneth Carleton, THPO	101 Industrial Road Choctaw, MS 39350	
Tunica-Biloxi Tribe of Louisiana	Earl J. Barbry, Jr., THPO	150 Melacon Drive Marksville, LA 71351	X

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

03 March 2023

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Bldg. 701
Keesler AFB, MS 39534

THPO Dr. Ian Thompson
Choctaw Nation of Oklahoma
PO Box 1210
Durant OK 74702-1210
Via Email: ithompson@choctawnation.com

RE: Section 106 and 110 Consultation, Pass Road Gate, Keesler Air Force Base, Harrison County, Mississippi

Dear THPO Dr. Thompson

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated November 17, 2021 on a project to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi. Your response and concurrence on the initial project effect finding of no historic properties affected was received, and we thank you.

During the Section 106 consultation with the Mississippi Department of Archives and History (MDAH) and the Mississippi State Historic Preservation Officer (MS-SHPO), an archaeological survey of the project area was requested prior to continuing consultation with them on project effects. In accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF seeks review and comment from your office on 1) the attached technical report detailing the archaeological survey and 2) the proposed determination of effect for the project.

The survey, conducted in November 2022, identified two new archaeological sites (22HR1448 and 22HR1449) and one isolated find (IF) within the Area of Potential Effects (APE). Site 22HR1448 is a historic artifact scatter dating from the early twentieth century. Site 22HR1449 is a post-Hurricane Katrina debris removal dump containing twentieth century artifacts. Both sites have been determined to lack historic significance and integrity; therefore, they are recommended

not eligible for inclusion in the National Register of Historic Places (NRHP) under any of the four criteria. The IF contained twentieth century artifacts, but did not meet the requirements for definition as an archaeological site. By definition, IFs do not retain historic significance or integrity. The DAF recommends no further work be conducted for these three archaeological resources.

As discussed in the November 2021 letter, there are also no NRHP-eligible or listed buildings within nor with visibility to the APE, and no known sites of interest to affiliated American Indian Tribes within the APE.

Consequently, the DAF proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your comments on the proposed undertaking.

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg. 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782 Digitally signed by MOSELEY.ROBERT.T.III.1230764782 Date: 2023.03.13 16:00:02 -05'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer
Tribal Liaison Officer

Attachment:

1. *Draft Phase I Archaeological Survey for the New Anti-Terrorism/Force Protection-Compliant Gate at Pass Road, Keesler Air Force Base*

From: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV
To: Shrestha, Suni
Subject: FW: 106/110 Consultation: Keesler AFB Pass Road Gate
Date: Monday, April 17, 2023 8:09:54 AM

As I was catching up on my emails, looks like the Choctaw Nation of OK responded to our follow up email.
Please include this correspondence as documented below.
Robin

From: Lindsey Bilyeu <lbilyeu@choctawnation.com>
Sent: Friday, April 14, 2023 2:40 PM
To: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Subject: [URL Verdict: Neutral][Non-DoD Source] RE: 106/110 Consultation: Keesler AFB Pass Road Gate

Ms. Holland,

The Choctaw Nation of Oklahoma thanks Keesler Air Force Base for the correspondence regarding the above referenced project. This project lies in our area of historic interest. The Choctaw Nation Historic Preservation Department has reviewed the project documents and we concur with the finding of "no historic properties affected". However, we ask that work be stopped, and our office contacted immediately, in the event that Native American artifacts or human remains are encountered.

If you have any questions, please contact me.

Thank you,

Lindsey D. Bilyeu, M.S.
Program Coordinator 2
Choctaw Nation of Oklahoma
Historic Preservation Department
P.O. Box 1210
Durant, OK 74702
Office: (580) 642-8377
Cell: (580) 740-9624

From: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Sent: Tuesday, March 14, 2023 7:50 AM
To: Ian Thompson <ithompson@choctawnation.com>
Subject: 106/110 Consultation: Keesler AFB Pass Road Gate

Dear Dr. Ian Thompson,

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated November 17, 2021 on a project to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi.

During the Section 106 consultation with the Mississippi Department of Archives and History (MDAH) and the Mississippi State Historic Preservation Officer (MS-SHPO), an archaeological survey of the project area was requested prior to continuing consultation with them on project effects. In accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF seeks review and comment from your office on: 1) the technical report detailing the archaeological survey (available at the link below) and 2) the proposed determination of effect for the project (see attached official Section 106/110 letter).

http://gofile.me/5Xqqx/xVYM28qXI

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg. 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Robin Holland
Keesler AFB
228.377.8255 Office

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

03 March 2023

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Bldg. 701
Keesler AFB, MS 39534

THPO Alina J. Shively
Jena Band of Choctaw Indians
PO Box 14
Jena, LA 71342
Via Email: ashively@jenachoctaw.org

RE: Section 106 and 110 Consultation, Pass Road Gate, Keesler Air Force Base, Harrison County, Mississippi

Dear THPO Shively

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated November 17, 2021 on a project to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi.

During the Section 106 consultation with the Mississippi Department of Archives and History (MDAH) and the Mississippi State Historic Preservation Officer (MS-SHPO), an archaeological survey of the project area was requested prior to continuing consultation with them on project effects. In accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF seeks review and comment from your office on 1) the attached technical report detailing the archaeological survey and 2) the proposed determination of effect for the project.

The survey, conducted in November 2022, identified two new archaeological sites (22HR1448 and 22HR1449) and one isolated find (IF) within the Area of Potential Effects (APE). Site 22HR1448 is a historic artifact scatter dating from the early twentieth century. Site 22HR1449 is a post-Hurricane Katrina debris removal dump containing twentieth century artifacts. Both sites have been determined to lack historic significance and integrity; therefore, they are recommended not eligible for inclusion in the National Register of Historic Places (NRHP) under any of the four

criteria. The IF contained twentieth century artifacts, but did not meet the requirements for definition as an archaeological site. By definition, IFs do not retain historic significance or integrity. The DAF recommends no further work be conducted for these three archaeological resources.

As discussed in the November 2021 letter, there are also no NRHP-eligible or listed buildings within nor with visibility to the APE, and no known sites of interest to affiliated American Indian Tribes within the APE.

Consequently, the DAF proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your comments on the proposed undertaking.

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg. 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782 Digitally signed by MOSELEY.ROBERT.T.III.1230764782 Date: 2023.03.13 16:00:42 -05'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer
Tribal Liaison Officer

Attachment:

1. *Draft Phase I Archaeological Survey for the New Anti-Terrorism/Force Protection-Compliant Gate at Pass Road, Keesler Air Force Base*

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

03 March 2023

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Bldg. 701
Keesler AFB, MS 39534

THPO Kenneth Carleton
Mississippi Band of Choctaw Indians
101 Industrial Road
Choctaw, MS 39350
Via Email: kcarleton@choctaw.org

RE: Section 106 and 110 Consultation, Pass Road Gate, Keesler Air Force Base, Harrison County, Mississippi

Dear THPO Carleton

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated November 17, 2021 on a project to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi.

During the Section 106 consultation with the Mississippi Department of Archives and History (MDAH) and the Mississippi State Historic Preservation Officer (MS-SHPO), an archaeological survey of the project area was requested prior to continuing consultation with them on project effects. In accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF seeks review and comment from your office on 1) the attached technical report detailing the archaeological survey and 2) the proposed determination of effect for the project.

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As discussed in the November 2021 letter, there are also no NRHP-eligible or listed buildings within nor with visibility to the APE, and no known sites of interest to affiliated American Indian Tribes within the APE.

Consequently, the DAF proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your comments on the proposed undertaking.

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg. 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782 Digitally signed by MOSELEY.ROBERT.T.III.1230764782 Date: 2023.03.13 16:01:21 -05'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer
Tribal Liaison Officer

Attachment:

1. *Draft Phase I Archaeological Survey for the New Anti-Terrorism/Force Protection-Compliant Gate at Pass Road, Keesler Air Force Base*

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

03 March 2023

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Bldg. 701
Keesler AFB, MS 39534

THPO Earl J. Barbry, Jr.
Tunica-Biloxi Tribe of LA
150 Melacon Drive
Marksville, LA 71351
Via Email: jdbarbry@tunica.org

RE: Section 106 and 110 Consultation, Pass Road Gate, Keesler Air Force Base, Harrison County, Mississippi

Dear THPO Barbry

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated November 17, 2021 on a project to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi.

During the Section 106 consultation with the Mississippi Department of Archives and History (MDAH) and the Mississippi State Historic Preservation Officer (MS-SHPO), an archaeological survey of the project area was requested prior to continuing consultation with them on project effects. In accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF seeks review and comment from your office on 1) the attached technical report detailing the archaeological survey and 2) the proposed determination of effect for the project.

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Consequently, the DAF proposes a finding of no historic properties affected (36 CFR 800.4(d)(1)) and requests your comments on the proposed undertaking.

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg. 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782 Digitally signed by MOSELEY.ROBERT.T.III.1230764782 Date: 2023.03.13 16:02:30 -05'00'

ROBERT T. MOSELEY III
Deputy Base Civil Engineer
Tribal Liaison Officer

Attachment:

1. *Draft Phase I Archaeological Survey for the New Anti-Terrorism/Force Protection-Compliant Gate at Pass Road, Keesler Air Force Base*

Previto, Amanda

From: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Sent: Tuesday, March 14, 2023 9:36 AM
To: Shrestha, Suni
Subject: FW: Section 106/110 Consultation: Keesler AFB Pass Road Gate
Signed By: robin.holland.ctr@us.af.mil

Response below.
Robin

From: Earl J. Barbry, Jr. <earlii@tunica.org>
Sent: Tuesday, March 14, 2023 9:11 AM
To: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Subject: [URL Verdict: Neutral][Non-DoD Source] RE: Section 106/110 Consultation: Keesler AFB Pass Road Gate

Ms. Holland,

Read over the packet and concur.

Earl J. Barbry, Jr., Director
Department of Community Planning
and Development

P.O. Box 1589
150 Melacon Road
Marksville, LA 71351
Office Ph. 318-240-6451
Mobile Ph. 318-359-9921

TUNICA-BILOXI
TRIBE OF LOUISIANA

"Cherishing Our Past….Building For Our Future"

From: Earl J. Barbry, Jr.
Sent: Tuesday, March 14, 2023 8:56 AM
To: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Subject: RE: Section 106/110 Consultation: Keesler AFB Pass Road Gate

No problem. Thanks

Earl J. Barbry, Jr., Director

Department of Community Planning
and Development

P.O. Box 1589
150 Melacon Road
Marksville, LA 71351
Office Ph. 318-240-6451
Mobile Ph. 318-359-9921

"Cherishing Our Past….Building For Our Future"

From: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Sent: Tuesday, March 14, 2023 8:55 AM
To: Earl J. Barbry, Jr. <earlii@tunica.org>
Subject: RE: Section 106/110 Consultation: Keesler AFB Pass Road Gate

Sir,

My apologies. I will update your email contact for future correspondence.

Thanks and again my apologies.

Robin

From: Earl J. Barbry, Jr. <earlii@tunica.org>
Sent: Tuesday, March 14, 2023 8:46 AM
To: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Subject: [URL Verdict: Neutral][Non-DoD Source] FW: Section 106/110 Consultation: Keesler AFB Pass Road Gate

Good Morning Ms. Holland,

The email address on the letter that was supposed to come to me is incorrect. It should be earlii@tunica.org

Thanks,

Earl J. Barbry, Jr., Director / THPO
Department of Community Planning
and Development

P.O. Box 1589
150 Melacon Road

Marksville, LA 71351
Office Ph. 318-240-6451
Mobile Ph. 318-359-9921

"Cherishing Our Past….Building For Our Future"

From: HOLLAND, ROBIN A CTR USAF AETC BOS/CEV <robin.holland.ctr@us.af.mil>
Sent: Tuesday, March 14, 2023 8:00 AM
To: John D. Barbry <JDBarbry@tunica.org>
Subject: Section 106/110 Consultation: Keesler AFB Pass Road Gate

Dear Mr. Barbry,

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated November 17, 2021 on a project to construct a new Anti-Terrorism/Force Protection (AT/FP)-compliant gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi.

During the Section 106 consultation with the Mississippi Department of Archives and History (MDAH) and the Mississippi State Historic Preservation Officer (MS-SHPO), an archaeological survey of the project area was requested prior to continuing consultation with them on project effects. In accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF seeks review and comment from your office on: 1) the technical report detailing the archaeological survey (available at the link below) and 2) the proposed determination of effect for the project (see attached official Section 106/110 letter).

http://gofile.me/5Xqqx/xVYM28qXI

If you have questions, please contact Robin Holland, KBOS/CEV, via email at robin.holland.ctr@us.af.mil or by regular mail to: Ms. Robin Holland, KBOS/CEV, 508 L Street-Bldg. 4705, Keesler AFB, MS 39534; or by phone at 228-377-8255. Thank you in advance for your assistance in this effort.

Robin Holland
Keesler AFB
228.377.8255 Office

APPENDIX B: NOTICE OF AVAILABILITY AND PUBLIC/AGENCY REVIEW

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Notice of Availability

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NOTICE OF AVAILABILITY

Notice of Availability for the Draft Environmental Assessment and Draft Finding of No Significant Impact of Construction and Operation of a Pass Road Gate at Keesler Air Force Base, Biloxi, Mississippi

Keesler Air Force Base (AFB) announces the availability of the draft Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) of the construction and operation of a Pass Road gate on the base. Under the Proposed Action, Keesler AFB would construct and operate a new antiterrorism/force protection standard-compliant entry gate at Pass Road on the west side of the base. The existing gate needs to be relocated and redesigned to meet current Unified Facilities Criteria (UFC) requirements. The proposed location for the new gate is north of the location of the existing Pass Road Gate at the termination of Pass Road at Keesler AFB. In addition, Keesler AFB would construct a new, UFC-compliant school drop-off area for schoolchildren living in Bayridge to replace the existing facility. No increase in the number of personnel or change in operations on Keesler AFB is anticipated. The draft EA demonstrates that the Proposed Action would not significantly impact the environment and supports a FONSI. Keesler AFB invites the public to comment on the draft EA and draft FONSI. The draft EA and draft FONSI are available for review and comment for a period of 30 days available for review at: https://www.keesler.af.mil/about-us/resources/environmental-information/. Copies of the documents are also available for review at the Biloxi Library at 2047 Pass Road, Biloxi, MS 39531 and upon request from Keesler AFB. Contact CEV at 228-377-8255 to request copies. Comments should be sent by U.S. Mail to Kristina A. Dean, 2d Lt, 81TRW/PA, 709 H Street, Bldg. 902, Keesler AFB, MS 39534 or by email to 81trw.pamain@us.af.mil no later than 30 days from the publication of this notice.

Post Date: 05/08 12:00 AM

Refcode: #IPL0121589 Print

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McClatchy

Beaufort Gazette
Belleville News-Democrat
Bellingham Herald
Bradenton Herald
Centre Daily Times
Charlotte Observer
Columbus Ledger-Enquirer
Fresno Bee
The Herald - Rock Hill
Herald Sun - Durham
Idaho Statesman
Island Packet
Kansas City Star
Lexington Herald-Leader
Merced Sun-Star
Miami Herald
el Nuevo Herald - Miami
Modesto Bee
Raleigh News & Observer
The Olympian
Sacramento Bee
Fort Worth Star-Telegram
The State - Columbia
Sun Herald - Biloxi
Sun News - Myrtle Beach
The News Tribune Tacoma
The Telegraph - Macon
San Luis Obispo Tribune
Tri-City Herald
Wichita Eagle

AFFIDAVIT OF PUBLICATION

Account #	Order Number	Identification	Order PO	Amount	Cols	Depth
125117	417923	Print Legal Ad-IPL01215890 - IPL0121589		$61.96	2	31 L

Attention: Suni Shrestha

Tetra Tech
63 South Royal Street Suite 1106
Suite 1106
Mobile, AL 36602
suni.shrestha@tetratech.com

NOTICE OF AVAILABILITY

Notice of Availability for the Draft Environmental Assessment and Draft Finding of No Significant Impact of Construction and Operation of a Pass Road Gate at Keesler Air Force Base, Biloxi, Mississippi

Keesler Air Force Base (AFB) announces the availability of the draft Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) of the construction and operation of a Pass Road gate on the base. Under the Proposed Action, Keesler AFB would construct and operate a new antiterrorism/force protection standard-compliant entry gate at Pass Road on the west side of the base. The existing gate needs to be relocated and redesigned to meet current Unified Facilities Criteria (UFC) requirements. The proposed location for the new gate is north of the location of the existing Pass Road Gate at the termination of Pass Road at Keesler AFB. In addition, Keesler AFB would construct a new, UFC-compliant school drop-off area for schoolchildren living in Bayridge to replace the existing facility. No increase in the number of personnel or change in operations on Keesler AFB is anticipated. The draft EA demonstrates that the Proposed Action would not significantly impact the environment and supports a FONSI. Keesler AFB invites the public to comment on the draft EA and draft FONSI. The draft EA and draft FONSI are available for review and comment for a period of 30 days available for review at: https://www.keesler.af.mil/about-us/resources/environmental-information/. Copies of the documents are also available for review at the Biloxi Library at 2047 Pass Road, Biloxi, MS 39531 and upon request from Keesler AFB. Contact CEV at 228-377-8255 to request copies. Comments should be sent by U.S. Mail to Kristina A. Dean, 2d Lt, 81TRW/PA, 709 H Street, Bldg. 902, Keesler AFB, MS 39534 or by email to 81trw.pamain@us.af.mil no later than 30 days from the publication of this notice.
IPL0121589
May 8 2023

STATE OF MISSISSIPPI
COUNTY OF HARRISON

Before me, the undersigned Notary of Dallas County, Texas personally appeared Stefani Beard, who, being by me first duly sworn, did depose and say that she is a clerk of The Sun Herald, a daily newspaper published in the city of Gulfport, in Harrison County, Mississippi and the publication of the notice, a copy of which is hereto attached, has been made in said paper in the issue(s) of:

1 insertion(s) published on:
05/08/23

Affidavit further states on oath that said newspaper has been established and published continuously in said county for a period of more than twelve months next prior to the first publication of said notice.

Stefani Beard

Sworn to and subscribed before me this 8th day of May in the year of 2023

Stephanie Hatcher

Notary Public
* The Sun Herald has been deemed eligible for publishing legal notices in Jackson County to meet the requirements of Miss. Code 1972 Section 13-3-31 and 13-3-32.

STEPHANIE HATCHER
My Notary ID # 133534406
Expires January 14, 2026

Extra charge for lost or duplicate affidavits.
Legal document please do not destroy!

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Appendix B – Public Review: Agency Coordination

The following Notice of Availability of the Draft EA and Draft Finding of No Significant Impact was distributed to the agencies. Responses received follow the notice sent.

Agency	Name	Address	Response Received
US Army Corps of Engineers, Regulatory Division, Biloxi Satellite Office	Field Supervisor	1141 Bayview Ave., Suite 104 Biloxi, MS 39530	
US Fish and Wildlife Service, Mississippi Field Office – Ecological Services	Paul Necaise	6578 Dogwood View Parkway Suite A Jackson, MS 39213	
USEPA Region 4, NEPA Program Office	Ntale Kajumba	Sam Nunn Atlanta Federal Center 61 Forsyth St., SW Atlanta, GA 30303	
MS Dept. of Marine Resources, Wetlands Permitting	Willa Brantley	1141 Bayview Ave. Biloxi, MS 39530	X
Mississippi Dept of Archives and History	Katherine Blount	100 S. State St. Jackson, MS 39201	X
MS Dept of Environmental Quality	Michelle Clark	515 Amite Street Jackson, MS 39201	
MS Dept of Wildlife, Fisheries, & Parks	Dennis Riecke	1505 Eastover Dr. Jackson, MS 39211	
City of Biloxi, Directory of Community Development	Jerry Creel	676 Dr. Martin Luther King Jr. Blvd. Biloxi, MS 39530	
Harrison County, Utility Authority	David Perkins	10271 Express Drive Gulfport, MS 39503	
Harrison County, Engineer	Jaclyn Turner	15309 Community Road Gulfport, MS 39503	
Gulf Regional Planning Commission	Kenneth Holland	1635 Popps Ferry Road Suite G Biloxi, MS 39532	
Southern Mississippi Planning and Development District	Grant Wesley	10441 Corporate Drive, Suite 1 Gulfport, MS 39503	

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

25 April 2023

MEMORANDUM FOR ALL INTERESTED GOVERNMENT AGENCIES, PUBLIC OFFICIALS, ORGANIZATIONS, AND INDIVIDUAL PARTIES

FROM: 81st Civil Engineer Squadron
500 Fisher Street, Building 701
Keesler AFB MS 39534-2604

SUBJECT: Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) of Construction and Operation of a Pass Road Gate, Keesler Air Force Base (AFB), Biloxi, Mississippi

1. As public and agency notification, to comply with the National Environmental Policy Act of 1969, and the President's Council on Environmental Quality's implementing regulations, this memorandum announces the availability of the Draft EA and Draft FONSI of Construction and Operation of a Pass Road Gate at Keesler AFB, Biloxi, Mississippi.

2. This Draft EA and Draft FONSI are available for review at: https://www.keesler.af.mil/about-us/resources/environmental-information/ and at the Biloxi Library at 2047 Pass Road, Biloxi, Mississippi 39531, 228-388-5696.

3. The Proposed Action is for the Department of the Air Force to construct and operate a new Pass Road gate at Keesler AFB, Mississippi. The Proposed Action would also include construction of a new school drop-off area, to replace the existing drop-off, for schoolchildren who live in Bayridge military family housing community on Keesler AFB. The purpose of the Proposed Action is to construct and operate a new antiterrorism/force protection (AT/FP) and Department of Defense (DoD) Unified Facilities Criteria (UFC) standards compliant gate for privately owned vehicles at the Pass Road entrance to Keesler AFB. The new school drop-off area would also comply with UFC and AT/FP requirements. Three alternatives are analyzed in the EA: two action alternatives, Alternatives 1 and 2, and the No Action Alternative. The Proposed Action would also include demolition of existing gate facilities and construction and operation of the new gate facilities, related utilities and infrastructure, new roadway alignment and intersection, and rerouting a portion of the I-81 running track.

4. The public comment period for this Draft EA and Draft FONSI will be from 8 May 2023 through 7 June 2023. Please send your written responses via e-mail (preferred) to christina.castleberry.1@us.af.mil and robin.holland.ctr@us.af.mil or by regular mail to: Mrs. Christina Castleberry, 81 CES/CEN, 500 Fisher Street-Building 701, Keesler AFB, MS 39534; or contact by phone at 228-376-8420. Thank you in advance for your assistance in this effort.

MOSELEY.ROBERT.T.III.1230764782

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Date: 2023.05.01 08:23:08 -05'00'

ROBERT T. MOSELEY III, GS-14, DAF
Deputy Base Civil Engineer

STATE OF MISSISSIPPI
Tate Reeves
Governor

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES
Joe Spraggins, Executive Director

May 19, 2023

AETC
Attn: Christina Castleberry
81 CES/CEN
508 L Street-Bldg. 4705
Keesler AFB, MS 39534

RE: DMR23-000333; Harrison - Pass Road Gate - Keesler Air Force Base

The Department of Marine Resources in cooperation with other state agencies is responsible under the Mississippi Coastal Program (MCP) for managing the coastal resources of Mississippi. Proposed activities in the coastal area are reviewed to ensure that the activities are in compliance with the MCP.

The Department has reviewed the above-referenced proposed project and has the following comments:

The Department has no objections provided there are no direct or indirect impacts to coastal wetlands and no coastal program agency objects to the proposal. If wetlands impacts are anticipated, an application should be submitted to this office for review.

For more information or questions concerning this correspondence, contact:

Kaitlyn Payne
MDMR Bureau of Wetlands Permitting
228-523-4109
kaitlyn.payne@dmr.ms.gov

Sincerely,

_____
Willa J. Brantley
Director, Bureau of Wetlands Permitting
MS Department of Marine Resources

WJB / kap

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MDAH
MISSISSIPPI DEPARTMENT OF
ARCHIVES & HISTORY

P.O. Box 571
Jackson, MS 39205-0571
601-576-6850
mdah.ms.gov

June 1, 2023

Ms. Robin Holland
KVOS/CEV
508 L Street, Building 4705
Keesler AFB, Mississippi 39534

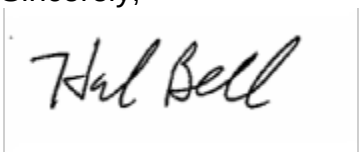
RE: Draft Environmental Assessment and Draft Finding of No Significant Impact for Construction and Operation of a Pass Road Gate, Keesler Air Force Base, (USAF) MDAH Project Log #05-052-23 (03-090-23) (12-012-21), Harrison County

Dear Ms. Holland:

We have reviewed your submittal of Draft EA/FONSI, received on May 9, 2023, for the above referenced project in accordance with our responsibilities under Section 106 of the National Historic Preservation Act and 36 CFR Part 800. After reviewing the information provided, it is our determination that no cultural resources are likely to be affected. Therefore, we have no objection with the proposed undertaking.

Should there be additional work in connection with the project, or any changes in the scope of work, please let us know in order that we may provide you with appropriate comments in compliance with the above referenced regulations. If you have any questions, please do not hesitate to contact us at (601) 576-6940.

Sincerely,



Hal Bell
Review and Compliance Officer

FOR: Katie Blount
State Historic Preservation Officer

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Appendix B – Public Review: Tribal Coordination

The following Notice of Availability of the Draft EA and Draft Finding of No Significant Impact was distributed to four federally recognized American Indian Tribes.

Agency	Name	Address	Response Received
Choctaw Nation of Oklahoma	Dr. Ian Thompson, THPO	PO Box 1210 Durant, OK 74702-1210	
Jena Band of Choctaw Indians	Alina J. Shively, THPO	PO Box 14 Jena, LA 71342	
Mississippi Band of Choctaw Indians	Melanie Carson, THPO	101 Industrial Road Choctaw, MS 39350	
Tunica-Biloxi Tribe of Louisiana	Earl J. Barbry, Jr., THPO	150 Melacon Drive Marksville, LA 71351	

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

25 April 2023

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Building 701
Keesler AFB, MS 39534-2604

THPO Dr. Ian Thompson
Choctaw Nation of Oklahoma
PO Box 1210
Durant, OK 74702-1210

RE: Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) of Construction and Operation of a Pass Road Gate, Keesler Air Force Base (AFB), Biloxi, Mississippi

Dear THPO Dr. Thompson

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated 17 November 2021 on a project to construct and operate a new gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi. On 3 March 2023, in accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF requested review and comment from your office on 1) Draft Phase I Archaeological Survey for the proposed project and 2) the proposed determination of effect for the project.

Attached as notification, to comply with the National Environmental Policy Act of 1969, the President's Council on Environmental Quality's implementing regulations, and the National Historic Preservation Act and its implementing regulations, is the Draft EA and Draft FONSI for construction and operation of a Pass Road Gate at Keesler AFB, Biloxi, Mississippi. The Draft EA and Draft FONSI are available for review at: https://www.keesler.af.mil/about-us/resources/environmental-information/ and at the Biloxi Library at 2047 Pass Road, Biloxi, MS 39531, 228-388-5696.

The Proposed Action is for the DAF to construct and operate a new Pass Road gate at Keesler AFB, MS. The Proposed Action would also include construction of a new school drop-off area, to replace the existing drop-off, for schoolchildren who live in Bayridge military family housing community on Keesler AFB. The purpose of the Proposed Action is to construct and operate a new antiterrorism/force protection (AT/FP) and Department of Defense (DoD) Unified

Facilities Criteria (UFC) standards compliant gate for privately owned vehicles at the Pass Road entrance to Keesler AFB. The new school drop-off area would also comply with UFC and AT/FP requirements. Three alternatives are analyzed in the EA: two action alternatives, Alternatives 1 and 2, and the No Action Alternative. The Proposed Action would also include demolition of existing gate facilities and construction and operation of the new gate facilities, related utilities and infrastructure, new roadway alignment and intersection, and rerouting a portion of the I-81 running track.

The EA considers effects of the Proposed Action on the human and natural environments. Resource areas considered in the impact analysis for the EA are land use and visual resources, airspace and airfield operations, air quality, noise, earth resources, water resources, biological resources, cultural resources, hazardous materials and wastes, infrastructure and utilities, transportation and traffic, safety and occupational health, climate change, sustainability and greening, and environmental justice, and protection of children. This Draft EA and Draft FONSI concludes that there will be no significant environmental impacts resulting from the two action alternatives or the No Action Alternative.

The public comment period for this Draft EA and Draft FONSI will be from 8 May 2023 through 7 June 2023. Please send your written responses via e-mail (preferred) to christina.castleberry.1@us.af.mil and robin.holland.ctr@us.af.mil or by regular mail to: Mrs. Christina Castleberry, 81 CES/CEN, 500 Fisher Street-Building 701, Keesler AFB, MS 39534; or contact by phone at 228-376-8420. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782
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Date: 2023.05.01 08:21:54 -05'00'

ROBERT T. MOSELEY III, GS-14, DAF
Deputy Base Civil Engineer
Tribal Liaison Officer

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

25 April 2023

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Building 701
Keesler AFB, MS 39534-2604

THPO Alina J. Shively
Jena Band of Choctaw Indians
PO Box 14
Jena, LA 71342
Via Email: ashively@jenachoctaw.org

RE: Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) of Construction and Operation of a Pass Road Gate, Keesler Air Force Base (AFB), Biloxi, Mississippi

Dear THPO Shively

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated 17 November 2021 on a project to construct and operate a new gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi. On 3 March 2023, in accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF requested review and comment from your office on 1) Draft Phase I Archaeological Survey for the proposed project and 2) the proposed determination of effect for the project.

Attached as notification, to comply with the National Environmental Policy Act of 1969, the President's Council on Environmental Quality's implementing regulations, and the National Historic Preservation Act and its implementing regulations, is the Draft EA and Draft FONSI for construction and operation of a Pass Road Gate at Keesler AFB, Biloxi, Mississippi. The Draft EA and Draft FONSI are available for review at: https://www.keesler.af.mil/about-us/resources/environmental-information/ and at the Biloxi Library at 2047 Pass Road, Biloxi, MS 39531, 228-388-5696.

The Proposed Action is for the DAF to construct and operate a new Pass Road gate at Keesler AFB, MS. The Proposed Action would also include construction of a new school drop-off area, to replace the existing drop-off, for schoolchildren who live in Bayridge military family housing community on Keesler AFB. The purpose of the Proposed Action is to construct and

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The EA considers effects of the Proposed Action on the human and natural environments. Resource areas considered in the impact analysis for the EA are land use and visual resources, airspace and airfield operations, air quality, noise, earth resources, water resources, biological resources, cultural resources, hazardous materials and wastes, infrastructure and utilities, transportation and traffic, safety and occupational health, climate change, sustainability and greening, and environmental justice, and protection of children. This Draft EA and Draft FONSI concludes that there will be no significant environmental impacts resulting from the two action alternatives or the No Action Alternative.

The public comment period for this Draft EA and Draft FONSI will be from 8 May 2023 through 7 June 2023. Please send your written responses via e-mail (preferred) to christina.castleberry.1@us.af.mil and robin.holland.ctr@us.af.mil or by regular mail to: Mrs. Christina Castleberry, 81 CES/CEN, 500 Fisher Street-Building 701, Keesler AFB, MS 39534; or contact by phone at 228-376-8420. Thank you in advance for your assistance in this effort.

Sincerely

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ROBERT T. MOSELEY III, GS-14, DAF
Deputy Base Civil Engineer
Tribal Liaison Officer

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

25 April 2023

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Building 701
Keesler AFB, MS 39534-2604

THPO Kenneth Carleton
Mississippi Band of Choctaw Indians
101 Industrial Road
Choctaw, MS 39350
Via Email: kcarleton@choctaw.org

RE: Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) of Construction and Operation of a Pass Road Gate, Keesler Air Force Base (AFB), Biloxi, Mississippi

Dear THPO Carleton

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated 17 November 2021 on a project to construct and operate a new gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi. On 3 March 2023, in accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF requested review and comment from your office on 1) Draft Phase I Archaeological Survey for the proposed project and 2) the proposed determination of effect for the project.

Attached as notification, to comply with the National Environmental Policy Act of 1969, the President's Council on Environmental Quality's implementing regulations, and the National Historic Preservation Act and its implementing regulations, is the Draft EA and Draft FONSI for construction and operation of a Pass Road Gate at Keesler AFB, Biloxi, Mississippi. The Draft EA and Draft FONSI are available for review at: https://www.keesler.af.mil/about-us/resources/environmental-information/ and at the Biloxi Library at 2047 Pass Road, Biloxi, MS 39531, 228-388-5696.

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Sincerely

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ROBERT T. MOSELEY III, GS-14, DAF
Deputy Base Civil Engineer
Tribal Liaison Officer

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 81ST TRAINING WING (AETC)

25 April 2023

Robert T. Moseley III
Deputy Base Civil Engineer
Tribal Liaison Officer
81st Civil Engineer Squadron
500 Fisher Street, Building 701
Keesler AFB, MS 39534-2604

THPO Earl J. Barbry, Jr.
Tunica-Biloxi Tribe of LA
150 Melacon Drive
Marksville, LA 71351
Via Email: earlii@tunica.org

RE: Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) of Construction and Operation of a Pass Road Gate, Keesler Air Force Base (AFB), Biloxi, Mississippi

Dear THPO Barbry

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470f), and its implementing regulation, 36 CFR Part 800, the United States Department of the Air Force (DAF) initiated government-to-government consultation with your office in a letter dated 17 November 2021 on a project to construct and operate a new gate at Pass Road on Keesler Air Force Base (AFB) in Biloxi, Harrison County, Mississippi. On 3 March 2023, in accordance with Section 106 and Section 110 of the National Historic Preservation Act of 1966 (NHPA), the DAF requested review and comment from your office on 1) Draft Phase I Archaeological Survey for the proposed project and 2) the proposed determination of effect for the project.

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operate a new antiterrorism/force protection (AT/FP) and Department of Defense (DoD) Unified Facilities Criteria (UFC) standards compliant gate for privately owned vehicles at the Pass Road entrance to Keesler AFB. The new school drop-off area would also comply with UFC and AT/FP requirements. Three alternatives are analyzed in the EA: two action alternatives, Alternatives 1 and 2, and the No Action Alternative. The Proposed Action would also include demolition of existing gate facilities and construction and operation of the new gate facilities, related utilities and infrastructure, new roadway alignment and intersection, and rerouting a portion of the I-81 running track.

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The public comment period for this Draft EA and Draft FONSI will be from 8 May 2023 through 7 June 2023. Please send your written responses via e-mail (preferred) to christina.castleberry.1@us.af.mil and robin.holland.ctr@us.af.mil or by regular mail to: Mrs. Christina Castleberry, 81 CES/CEN, 500 Fisher Street-Building 701, Keesler AFB, MS 39534; or contact by phone at 228-376-8420. Thank you in advance for your assistance in this effort.

Sincerely

MOSELEY.ROBERT.T.III.1230764782
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Date: 2023.05.01 08:19:58 -05'00'

ROBERT T. MOSELEY III, GS-14, DAF
Deputy Base Civil Engineer
Tribal Liaison Officer

APPENDIX C: AIR QUALITY

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APPENDIX C

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

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AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action 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 General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: KEESLER AFB
State: Mississippi
County(s): Harrison
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Keesler AFB Pass Road Gate

c. Project Number/s (if applicable): Keesler AFB Pass Road Gate Environmental Assessment

d. Projected Action Start Date: 1 / 2024

e. Action Description:

The Proposed Action will include demolition of existing 5 gate facilities, construction and operation of the proposed gate facilities and related utilities and infrastructure, and construction of a new school drop-off area for school children who live in the military family housing community of Bayridge on Keesler AFB.

Assumptions:

For ease of analysis all construction was compressed into a single calendar year. This represents a reasonable upper bound of annual emissions. Regardless of the time to construct or the construction schedule the annual emissions would be less than those shown herein.

Existing and proposed gatehouse are estimated at 550 square feet based on aerial imagery of existing facility. The total disturbed area is 20 acres. The existing condition roadway is 130,000 square feet and the proposed area of Alternatives 1 and 2 is roughly equal at 410,000 square feet.

Demolition: 550 square feet demolished at 12 feet high based on aerial imagery of existing facility. Occurs over three months.

Site Grading: 820,000 square feet, about two times the estimated area of proposed roadways and roughly 20 acres. Material from 30 percent of the area at a 2 feet depth, roughly 18,000 cubic yards, will be hauled off-site. Occurs over three months.

Trenching: Assumes trenching for utilities at gate over 500 feet, a rough estimate of distance between the existing and proposed gatehouse. Assumes 5 utility trenches over distance between existing and proposed gatehouses. No material will be hauled on- or off-site. Occurs over three months.

Building Construction: 550 square feet office or industrial building constructed at 12 feet high based on aerial imagery of existing facility. Occurs over six months.

Architectural Coatings: 550 square feet non-residential facility. Occurs over one month.

Paving (Asphalt): 410,000 square feet paved over 12 months.

Heating activity assumed to be Heat Energy Requirement Method for 550 square feet.

One diesel backup generator assumed.

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are **not applicable**.

Total 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" (i.e., net gain/loss upon action fully implemented) emissions. The ACAM analysis used 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 potential impacts to air quality based on current ambient air quality relative to the National Ambient Air Quality Standards (NAAQSs). These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold for actions occurring in areas that are "Clearly Attainment" (i.e., not within 5% of any NAAQS) and the GCR de minimis values (25 ton/yr for lead and 100 ton/yr for all other criteria pollutants) for actions occurring in areas that are "Near Nonattainment" (i.e., within 5% of any 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 pollutant is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQSs. For further detail on insignificance indicators see chapter 4 of the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide, Volume II - Advanced Assessments.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicator and are summarized below. None of estimated annual net emissions associated with this action are above the insignificance indicators, indicating no significant impact to air quality. Therefore, the action will not cause or contribute to an exceedance on one or more NAAQSs. No further air assessment is needed.

Construction

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.715	250	No
NOx	4.035	250	No
CO	4.697	250	No
SOx	0.011	250	No
PM 10	24.735	250	No
PM 2.5	0.187	250	No
Pb	0.000	25	No
NH3	0.003	250	No
CO2e	1056.3		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

Operation

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.006	250	No
NOx	0.026	250	No
CO	0.018	250	No
SOx	0.005	250	No
PM 10	0.005	250	No
PM 2.5	0.005	250	No
Pb	0.000	25	No
NH3	0.000	250	No
CO2e	5.7		

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location

Base: KEESLER AFB
State: Mississippi
County(s): Harrison
Regulatory Area(s): NOT IN A REGULATORY AREA

- Action Title: Keesler AFB Pass Road Gate

- Project Number/s (if applicable): Keesler AFB Pass Road Gate Environmental Assessment

- Projected Action Start Date: 1 / 2024

- Action Purpose and Need:

Construct a new AT/FP-compliant gate at Pass Road. The gate needs to be relocated and redesigned to meet current Unified Facilities Criteria (UFC) requirements.

- Action Description:

The Proposed Action will include demolition of existing 5 gate facilities, construction and operation of the proposed gate facilities and related utilities and infrastructure, and construction of a new school drop-off area for school children who live in the military family housing community of Bayridge on Keesler AFB.

Assumptions:

For ease of analysis all construction was compressed into a single calendar year. This represents a reasonable upper bound of annual emissions. Regardless of the time to construct or the construction schedule the annual emissions would be less than those shown herein.

Existing and proposed gatehouse are estimated at 550 square feet based on aerial imagery of existing facility. The total disturbed area is 20 acres. The existing condition roadway is 130,000 square feet and the proposed area of Alternatives 1 and 2 is roughly equal at 410,000 square feet.

Demolition: 550 square feet demolished at 12 feet high based on aerial imagery of existing facility. Occurs over three months.

Site Grading: 820,000 square feet, about two times the estimated area of proposed roadways and roughly 20 acres. Material from 30 percent of the area at a 2 feet depth, roughly 18,000 cubic yards, will be hauled off-site. Occurs over three months.

Trenching: Assumes trenching for utilities at gate over 500 feet, a rough estimate of distance between the existing and proposed gatehouse. Assumes 5 utility trenches over distance between existing and proposed gatehouses. No material will be hauled on- or off-site. Occurs over three months.

Building Construction: 550 square feet office or industrial building constructed at 12 feet high based on aerial imagery of existing facility. Occurs over six months.

Architectural Coatings: 550 square feet non-residential facility. Occurs over one month.

Paving (Asphalt): 410,000 square feet paved over 12 months.

Heating activity assumed to be Heat Energy Requirement Method for 550 square feet.

One diesel backup generator assumed.

- Activity List:

Activity Type		Activity Title
2.	Construction / Demolition	Construction and Demolition
3.	Heating	Gatehouse heating
4.	Emergency Generator	Backup Generator

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: Harrison
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Construction and Demolition

- Activity Description:

For ease of analysis all construction was compressed into a single calendar year. This represents a reasonable upper bound of annual emissions. Regardless of the time to construct or the construction schedule the annual emissions would be less than those shown herein.

Existing and proposed gatehouse are estimated at 550 square feet based on aerial imagery of existing facility. The total disturbed area is 20 acres. The existing condition roadway is 130,000 square feet and the proposed area of Alternatives 1 and 2 is roughly equal at 410,000 square feet.

Demolition: 550 square feet demolished at 12 feet high based on aerial imagery of existing facility. Occurs over three months.

Site Grading: 820,000 square feet, about two times the estimated area of proposed roadways and roughly 20 acres. Material from 30 percent of the area at a 2 feet depth, roughly 18,000 cubic yards, will be hauled off-site. Occurs over three months.

Trenching: Assumes trenching for utilities at gate over 500 feet, a rough estimate of distance between the existing and proposed gatehouse. Assumes 5 utility trenches over distance between existing and proposed gatehouses. No material will be hauled on- or off-site. Occurs over three months.

Building Construction: 550 square feet office or industrial building constructed at 12 feet high based on aerial imagery of existing facility. Occurs over six months.

Architectural Coatings: 550 square feet non-residential facility. Occurs over one month.

Paving (Asphalt): 410,000 square feet paved over 12 months.

Heating activity assumed to be Heat Energy Requirement Method for 550 square feet.

One diesel backup generator assumed.

- Activity Start Date
Start Month: 1
Start Month: 2024

- Activity End Date
Indefinite: False
End Month: 12
End Month: 2024

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.715393
SO_x	0.010701
NO_x	4.035466
CO	4.697003
PM 10	24.735316

Pollutant	Total Emissions (TONs)
PM 2.5	0.186972
Pb	0.000000
NH_3	0.002589
CO_2e	1056.3

2.1 Demolition Phase

2.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2024

- Phase Duration
Number of Month: 3
Number of Days: 0

2.1.2 Demolition Phase Assumptions

- General Demolition Information
Area of Building to be demolished (ft^2): 550
Height of Building to be demolished (ft): 12

- 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

2.1.3 Demolition Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Concrete/Industrial Saws Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0382	0.0006	0.2766	0.3728	0.0127	0.0127	0.0034	58.549
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1830	0.0024	1.2623	0.7077	0.0494	0.0494	0.0165	239.49
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0364	0.0007	0.2127	0.3593	0.0080	0.0080	0.0032	66.879

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.296	000.002	000.222	003.369	000.006	000.006		000.022	00320.428
LDGT	000.371	000.003	000.387	004.752	000.008	000.007		000.024	00412.572
HDGV	000.724	000.005	000.965	014.725	000.017	000.015		000.044	00759.241
LDDV	000.101	000.003	000.132	002.591	000.004	000.004		000.008	00312.132
LDDT	000.233	000.004	000.371	004.384	000.007	000.006		000.008	00442.757
HDDV	000.449	000.013	004.500	001.645	000.163	000.150		000.028	01485.593
MC	002.664	000.003	000.707	013.134	000.026	000.023		000.054	00393.696

2.1.4 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

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
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

2.2 Site Grading Phase

2.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2024

- Phase Duration
Number of Month: 3
Number of Days: 0

2.2.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft^2): 820000
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 18000

- 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
Scrapers Composite	3	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

2.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Excavators Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0614	0.0013	0.2820	0.5096	0.0117	0.0117	0.0055	119.71
Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0757	0.0014	0.4155	0.5717	0.0191	0.0191	0.0068	132.91
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0483	0.0012	0.2497	0.3481	0.0091	0.0091	0.0043	122.61
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1830	0.0024	1.2623	0.7077	0.0494	0.0494	0.0165	239.49
Scrapers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1640	0.0026	1.0170	0.7431	0.0406	0.0406	0.0148	262.85
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0364	0.0007	0.2127	0.3593	0.0080	0.0080	0.0032	66.879

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**Pb**	**NH_3**	**CO_2e**
LDGV	000.296	000.002	000.222	003.369	000.006	000.006		000.022	00320.428
LDGT	000.371	000.003	000.387	004.752	000.008	000.007		000.024	00412.572
HDGV	000.724	000.005	000.965	014.725	000.017	000.015		000.044	00759.241
LDDV	000.101	000.003	000.132	002.591	000.004	000.004		000.008	00312.132
LDDT	000.233	000.004	000.371	004.384	000.007	000.006		000.008	00442.757
HDDV	000.449	000.013	004.500	001.645	000.163	000.150		000.028	01485.593
MC	002.664	000.003	000.707	013.134	000.026	000.023		000.054	00393.696

2.2.4 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

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
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

2.3 Trenching/Excavating Phase

2.3.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date

Start Month: 1
Start Quarter: 1
Start Year: 2024

- Phase Duration

Number of Month: 3
Number of Days: 0

2.3.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information

Area of Site to be Trenched/Excavated (ft^2): 2500
Amount of Material to be Hauled On-Site (yd^3): 0
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 Equipmen 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

2.3.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Excavators Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0614	0.0013	0.2820	0.5096	0.0117	0.0117	0.0055	119.71
Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0757	0.0014	0.4155	0.5717	0.0191	0.0191	0.0068	132.91
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0483	0.0012	0.2497	0.3481	0.0091	0.0091	0.0043	122.61
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1830	0.0024	1.2623	0.7077	0.0494	0.0494	0.0165	239.49
Scrapers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1640	0.0026	1.0170	0.7431	0.0406	0.0406	0.0148	262.85
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0364	0.0007	0.2127	0.3593	0.0080	0.0080	0.0032	66.879

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.296	000.002	000.222	003.369	000.006	000.006		000.022	00320.428
LDGT	000.371	000.003	000.387	004.752	000.008	000.007		000.024	00412.572
HDGV	000.724	000.005	000.965	014.725	000.017	000.015		000.044	00759.241
LDDV	000.101	000.003	000.132	002.591	000.004	000.004		000.008	00312.132
LDDT	000.233	000.004	000.371	004.384	000.007	000.006		000.008	00442.757
HDDV	000.449	000.013	004.500	001.645	000.163	000.150		000.028	01485.593
MC	002.664	000.003	000.707	013.134	000.026	000.023		000.054	00393.696

2.3.4 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

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
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

2.4 Building Construction Phase

2.4.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2024

- Phase Duration
Number of Month: 6
Number of Days: 0

2.4.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 550
Height of Building (ft): 12
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

2.4.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0754	0.0013	0.5027	0.3786	0.0181	0.0181	0.0068	128.79
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0258	0.0006	0.1108	0.2145	0.0034	0.0034	0.0023	54.454
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0364	0.0007	0.2127	0.3593	0.0080	0.0080	0.0032	66.879

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.296	000.002	000.222	003.369	000.006	000.006		000.022	00320.428
LDGT	000.371	000.003	000.387	004.752	000.008	000.007		000.024	00412.572
HDGV	000.724	000.005	000.965	014.725	000.017	000.015		000.044	00759.241
LDDV	000.101	000.003	000.132	002.591	000.004	000.004		000.008	00312.132
LDDT	000.233	000.004	000.371	004.384	000.007	000.006		000.008	00442.757
HDDV	000.449	000.013	004.500	001.645	000.163	000.150		000.028	01485.593
MC	002.664	000.003	000.707	013.134	000.026	000.023		000.054	00393.696

2.4.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
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

2.5 Architectural Coatings Phase

2.5.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2024

- Phase Duration
Number of Month: 1
Number of Days: 0

2.5.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category: Non-Residential
Total Square Footage (ft^2): 550
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

2.5.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.296	000.002	000.222	003.369	000.006	000.006		000.022	00320.428
LDGT	000.371	000.003	000.387	004.752	000.008	000.007		000.024	00412.572
HDGV	000.724	000.005	000.965	014.725	000.017	000.015		000.044	00759.241
LDDV	000.101	000.003	000.132	002.591	000.004	000.004		000.008	00312.132
LDDT	000.233	000.004	000.371	004.384	000.007	000.006		000.008	00442.757
HDDV	000.449	000.013	004.500	001.645	000.163	000.150		000.028	01485.593
MC	002.664	000.003	000.707	013.134	000.026	000.023		000.054	00393.696

2.5.4 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

2.6 Paving Phase

2.6.1 Paving Phase Timeline Assumptions

- Phase Start Date
Start Month: 1
Start Quarter: 1
Start Year: 2024

- Phase Duration
Number of Month: 12
Number of Days: 0

2.6.2 Paving Phase Assumptions

- General Paving Information
Paving Area (ft^2): 410000

- 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
Pavers Composite	1	8
Paving Equipment Composite	2	6
Rollers Composite	2	6

- 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

2.6.3 Paving Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Excavators Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0614	0.0013	0.2820	0.5096	0.0117	0.0117	0.0055	119.71
Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0757	0.0014	0.4155	0.5717	0.0191	0.0191	0.0068	132.91
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0483	0.0012	0.2497	0.3481	0.0091	0.0091	0.0043	122.61
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1830	0.0024	1.2623	0.7077	0.0494	0.0494	0.0165	239.49
Scrapers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.1640	0.0026	1.0170	0.7431	0.0406	0.0406	0.0148	262.85
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0364	0.0007	0.2127	0.3593	0.0080	0.0080	0.0032	66.879

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.296	000.002	000.222	003.369	000.006	000.006		000.022	00320.428
LDGT	000.371	000.003	000.387	004.752	000.008	000.007		000.024	00412.572
HDGV	000.724	000.005	000.965	014.725	000.017	000.015		000.044	00759.241
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HDDV	000.449	000.013	004.500	001.645	000.163	000.150		000.028	01485.593
MC	002.664	000.003	000.707	013.134	000.026	000.023		000.054	00393.696

2.6.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
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

$VOC_P = (2.62 * PA) / 43560$

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)

3. Heating

3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Harrison
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Gatehouse heating

- Activity Description:
Heating activity assumed to be Heat Energy Requirement Method for 550 square feet.

- Activity Start Date
Start Month: 1
Start Year: 2024

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.000137
SO_x	0.000015
NO_x	0.002485
CO	0.002088
PM 10	0.000189

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.000189
Pb	0.000000
NH_3	0.000000
CO_2e	3.0

3.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 550
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)

3.3 Heating Emission Factor(s)

- Heating Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
5.5	0.6	100	84	7.6	7.6			120390

3.4 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

4. Emergency Generator

4.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Harrison
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Backup Generator

- Activity Description:

Backup generator

- Activity Start Date

Start Month: 1
Start Year: 2024

- Activity End Date

Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.005650
SO_x	0.004759
NO_x	0.023288
CO	0.015552
PM 10	0.005083

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.005083
Pb	0.000000
NH_3	0.000000
CO_2e	2.7

4.2 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)

4.3 Emergency Generator Emission Factor(s)

- Emergency Generators Emission Factor (lb/hp-hr)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251			1.33

4.4 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)

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APPENDIX D: FEDERAL CONSISTENCY DETERMINATION

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FINAL

MISSISSIPPI COASTAL ZONE MANAGEMENT PROGRAM FEDERAL CONSISTENCY DETERMINATION OF CONSTRUCTION AND OPERATION OF A PASS ROAD GATE KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI

PREPARED BY:

Department of the Air Force

August 2023

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Contents

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MISSISSIPPI COASTAL ZONE MANAGEMENT PROGRAM

FEDERAL CONSISTENCY DETERMINATION OF

CONSTRUCTION AND OPERATION OF A PASS ROAD GATE

KEESLER AIR FORCE BASE, BILOXI, MISSISSIPPI

The consistency of the proposed project with the enforceable goals and policies of the Mississippi Coastal Management Program is summarized below for each applicable goal and policy. Further information is in the text of the environmental assessment. This action does *not* propose the location and design of new or enlarged defense installations within the coastal zone (Title 22 of the Mississippi Administrative Code Part 23 Chapter 14 Section 100.03.01).

MISSISSIPPI COASTAL PROGRAM ENFORCEABLE POLICIES
GOAL 1: *To provide for reasonable industrial expansion in the coastal area and to ensure the efficient utilization of waterfront industrial sites so that suitable sites are conserved for water dependent industry.* Consistency of the Proposed Action: The proposed project is fully consistent with this goal. No aspect of the proposed project would limit industrial expansion or affect a waterfront industrial site.
GOAL 2: *To favor the preservation of the coastal wetlands and ecosystems, except where a specific alteration of specific coastal wetlands would serve a higher public interest in compliance with the public purposes of the public trust in which the coastal wetlands are held.* Consistency of the Proposed Action: The proposed project is fully consistent with this goal. No aspect of the proposed project would affect a coastal wetland. Stormwater runoff from the proposed project area would be within the Municipal Separate Storm Sewer System Permitted (MSRMS4023) (MS4) drainages discharging to the Back Bay of Biloxi through Outfall 7. The MS4 permit requires the development of a Stormwater Management Program (SWMP), which describes best management practices (BMPs) and goals to reduce the discharge of pollutants to stormwater for construction and post-construction activities. Therefore, the proposed project would not affect coastal ecosystems.
GOAL 3: *To protect, propagate, and conserve the state's seafood and aquatic life in connection with the revitalization of the seafood industry of the State of Mississippi.* Consistency of the Proposed Action: The proposed project is fully consistent with this goal. No aspect of the proposed project would affect the state's seafood and aquatic life or seafood industry.

GOAL 4: *To conserve the air and waters of the state, and to protect, maintain, and improve the quality thereof for public use, for the propagation of wildlife, fish, and aquatic life, and for domestic, agricultural, industrial, recreational, and other legitimate beneficial uses.*

Consistency of the Proposed Action: The proposed project is fully consistent with this goal. The air emissions and stormwater runoff attributable to the proposed project would not be sufficient to affect the propagation of wildlife, fish, and aquatic life or any legitimate beneficial use.

GOAL 5: *To put to beneficial use to the fullest extent of which they are capable the water resources of the state, and to prevent the waste, unreasonable use, or unreasonable method of use of water.*

Consistency of the Proposed Action: The proposed project is fully consistent with this goal. The proposed project would not waste or unreasonably use the water resources of the state.

GOAL 6: *To preserve the state's historical and archaeological resources, to prevent their destruction, and to enhance these resources wherever possible.*

Consistency of the Proposed Action: The proposed project is fully consistent with this goal. A Phase I Cultural Resources Survey was conducted in November 2022. In April 2023, MDAH provided their concurrence on the survey results and the DAF's determination of "no historic properties affected." The Tunica-Biloxi Tribe of Louisiana and Choctaw Nation of Oklahoma, in March and April 2023, respectively, concurred with the survey results and the DAF's proposed determination of effect.

GOAL 7: *To encourage the preservation of natural scenic qualities in the coastal area.*

Consistency of the Proposed Action: The proposed project is fully consistent with this goal. The proposed project would not affect natural scenic qualities in the coastal area.

GOAL 8: *To assist local governments in the provision of public facilities services in a manner consistent with the coastal program.*

Consistency of the Proposed Action: The goal is not applicable to the proposed project.

COASTAL PRESERVES PROGRAM GOALS (MSDMR 2022)

GOAL 1: *Restore, enhance, protect, and manage Mississippi's remaining coastal estuarine marsh ecosystems.*

Objective: Acquire and protect coastal habitats.

Consistency of the Proposed Action: The proposed project is fully consistent with this goal. The proposed project would not affect the state's coastal estuarine marsh ecosystems.

GOAL 2: *Protect and preserve habitat of any rare, threatened, or endangered species of plants and animals present on Coastal Preserves.*

Objective: Protect and preserve habitat critical for rare, threatened, and endangered species.

Consistency of the Proposed Action: The proposed project is fully consistent with this goal. The proposed project would not affect the habitat of any rare, threatened, or endangered species of plant or animal on Coastal Preserves.

GOAL 3: *Promote increased opportunities for public appreciation and enjoyment of Mississippi's coastal estuarine wetlands that are compatible with protecting, preserving, and enhancing the natural resources.*

Objective: Provide public access and use of resources on state-owned lands within Coastal Preserves Program.

Objective: Actively promote access and enjoyment opportunities of public wetland sites.

Consistency of the Proposed Action: The goal is not applicable to the proposed project.

GOAL 4: *Acquire, restore, and protect unique habitats associated with plant and animal communities.*

Objective: Identify unique habitats within the Coastal Preserve sites.

Objective: Acquire and protect unique habitats and communities.

Consistency of the Proposed Action: The goal is not applicable to the proposed project.

GOAL 5: *Monitor populations of non-indigenous species and protect native species from deleterious effects of non-indigenous species.*

Objective: Identify, document location of, and monitor populations and effects of non-indigenous species on native flora and fauna.

Consistency of the Proposed Action: The proposed project is fully consistent with this goal. The proposed project would not expand the distribution of non-indigenous species.

GOAL 6: *Contribute to the viability and natural biodiversity of coastal estuarine marsh ecosystems through management.*

Objective: Manage Coastal Preserves to support priority habitats and species and to promote environmental education and public use.

Consistency of the Proposed Action: The proposed project is fully consistent with this goal. The proposed project would not affect the viability and natural biodiversity of coastal estuarine marsh ecosystems.

GOAL 7: *Develop coastal preserve management strategies that foster improved coordination among federal, state, and local entities with jurisdiction and interests in coastal wetland protection.*

Objective: Gather and make available information needed by reserve managers and coastal decision-makers for improved understanding and management of coastal resources.

Objective: Make Coastal Preserve management processes visible, coherent, accessible, and acceptable to the people of Mississippi.

Consistency of the Proposed Action: The goal is not applicable to the proposed project.

GOAL 8: *Increase public awareness and interest in the values and functions of coastal wetlands, their habitats, and the ecosystems they are dependent upon.*

Objective: Develop and deliver educational materials and programs to inform the public about wetland species, their habitats, and their value to human beings.

Consistency of the Proposed Action: The goal is not applicable to the proposed project.

Title 22 Part 23 Chapter 08: Requirements for Conducting Regulated Activities.

100: Docks, Piers, Boat Shelters (including boathouses), and Hoists.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve the construction of a dock or pier.

101: Boat Ramps.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve the installation or use of a boat ramp.

102: Marinas, Boat Basins, and Boat Slips.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve the installation of a marina or boat slip.

103: Bulkheads, Seawalls, Breakwaters, Groins and Jetties.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve the installation of a bulkhead or seawall.

104: Cables, Pipelines and Transmission Lines.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve the installation of a cable, pipeline, or transmission line through coastal wetlands.

105: Transportation.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve the construction of a transportation route through or across a coastal wetland. Stormwater runoff from the proposed project area would be within the MS4 drainages discharging to the Back Bay of Biloxi through Outfall 7. The MS4 permit requires the development of an SWMPthat describes BMPs and goals to reduce the

discharge of pollutants to stormwater for construction and post-construction activities.

106: Channels and Access Canals.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve the construction of a channel or access canal.

107: Dredged Material Disposal.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve the removal or disposal of dredged material.

108: Tidal Marsh and Watershed Impoundment.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve the construction of a watershed impoundment or impacts on tidal marshes.

109: Drainage Canals or Ditches.

Consistency of the Proposed Action: The proposed action is consistent with the policy. The proposed action does not involve the installation of a drainage canal or ditch. Stormwater runoff from the proposed project area would be within the MS4 drainages discharging to the Back Bay of Biloxi through Outfall 7. The MS4 permit requires the development of an SWMP that describes BMPs and goals to reduce the discharge of pollutants to stormwater for construction and post-construction activities.

110: Oil and Gas Exploration and Production.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve oil and gas exploration and production activities.

111: Other Mineral Extraction.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve any mineral extraction activities.

112: Facilities Requiring Water for Cooling and Heating.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve facilities that require water for cooling or heating.

113: Activities Affecting Coastal Wetlands.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action would not affect any area of coastal wetlands, either directly or indirectly. Stormwater runoff from the proposed project area would be within the MS4 drainages discharging to the Back Bay of Biloxi through Outfall 7. The MS4 permit requires the development of an SWMP that describes BMPs and goals to reduce the discharge of pollutants to stormwater for construction and post-construction activities. Therefore, the proposed project would not affect coastal wetlands or disrupt drainage patterns.

114: Filling Other Than Dredged Material Disposal.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action would not involve dredged material.

115: Dockside Casinos.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve a dockside casino.

116: Intake and Discharge Structures.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve an intake or discharge structure.

117: Dredging/Excavation.

Consistency of the Proposed Action: The proposed action is consistent with these policies. The proposed action does not involve dredging or excavation.

118: Variances to the Requirements for Regulated Activities.

Consistency of the Proposed Action: No variances are anticipated given the proposed action occurs in an upland area away from coastal wetlands and the project would drain to an outfall regulated by an existing MS4 permit.

APPENDIX E: USFWS INFORMATION FOR PLANNING AND CONSULTATION

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IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Harrison County, Mississippi

Local office

Mississippi Ecological Services Field Office

(601) 965-4900
(601) 965-4340

6578 Dogwood View Parkway, Suite A

Jackson, MS 39213-7856

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
West Indian Manatee Trichechus manatus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4469	Threatened Marine mammal

Birds

NAME	STATUS
Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened
Piping Plover Charadrius melodus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot Calidris canutus rufa Wherever found There is **proposed** critical habitat for this species. https://ecos.fws.gov/ecp/species/1864	Threatened

Reptiles

NAME	STATUS
Alabama Red-bellied Turtle Pseudemys alabamensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1494	Endangered

Gopher Tortoise Gopherus polyphemus — Threatened

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6994

Hawksbill Sea Turtle Eretmochelys imbricata — Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/3656

Kemp's Ridley Sea Turtle Lepidochelys kempii — Endangered

Wherever found

There is **proposed** critical habitat for this species.
https://ecos.fws.gov/ecp/species/5523

Leatherback Sea Turtle Dermochelys coriacea — Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/1493

Loggerhead Sea Turtle Caretta caretta — Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/1110

Fishes

NAME	STATUS

Gulf Sturgeon Acipenser oxyrinchus (=oxyrhynchus) desotoi — Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/651

Insects

NAME	STATUS

Monarch Butterfly Danaus plexippus — Candidate

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

Ferns and Allies

NAME	STATUS
Louisiana Quillwort Isoetes louisianensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7756	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this

location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel Falco sparverius paulus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
American Oystercatcher Haematopus palliatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8935	Breeds Apr 15 to Aug 31
Bachman's Sparrow Aimophila aestivalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6177	Breeds May 1 to Sep 30
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
Black Scoter Melanitta nigra This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds elsewhere

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Brown Pelican Pelecanus occidentalis — Breeds Jan 15 to Sep 30
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Brown-headed Nuthatch Sitta pusilla — Breeds Mar 1 to Jul 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Cerulean Warbler Dendroica cerulea — Breeds Apr 26 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/2974

Chimney Swift Chaetura pelagica — Breeds Mar 15 to Aug 25
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Loon gavia immer — Breeds Apr 15 to Oct 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/4464

Gull-billed Tern Gelochelidon nilotica — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9501

Kentucky Warbler Oporornis formosus — Breeds Apr 20 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

King Rail Rallus elegans — Breeds May 1 to Sep 5

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8936

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Long-tailed Duck Clangula hyemalis — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/7238

Magnificent Frigatebird Fregata magnificens — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Marbled Godwit Limosa fedoa — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Painted Bunting Passerina ciris — Breeds Apr 25 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Pomarine Jaeger Stercorarius pomarinus — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Prairie Warbler Dendroica discolor — Breeds May 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prothonotary Warbler Protonotaria citrea — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-breasted Merganser Mergus serrator — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Ring-billed Gull Larus delawarensis — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Royal Tern Thalasseus maximus — Breeds Apr 15 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Ruddy Turnstone Arenaria interpres morinella — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Sooty Tern Onychoprion fuscatus — Breeds Mar 10 to Jul 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Surf Scoter Melanitta perspicillata — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Swallow-tailed Kite Elanoides forficatus — Breeds Mar 10 to Jun 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8938

White-winged Scoter Melanitta fusca — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Willet Tringa semipalmata — Breeds Apr 20 to Aug 5

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wilson's Plover Charadrius wilsonia — Breeds Apr 1 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

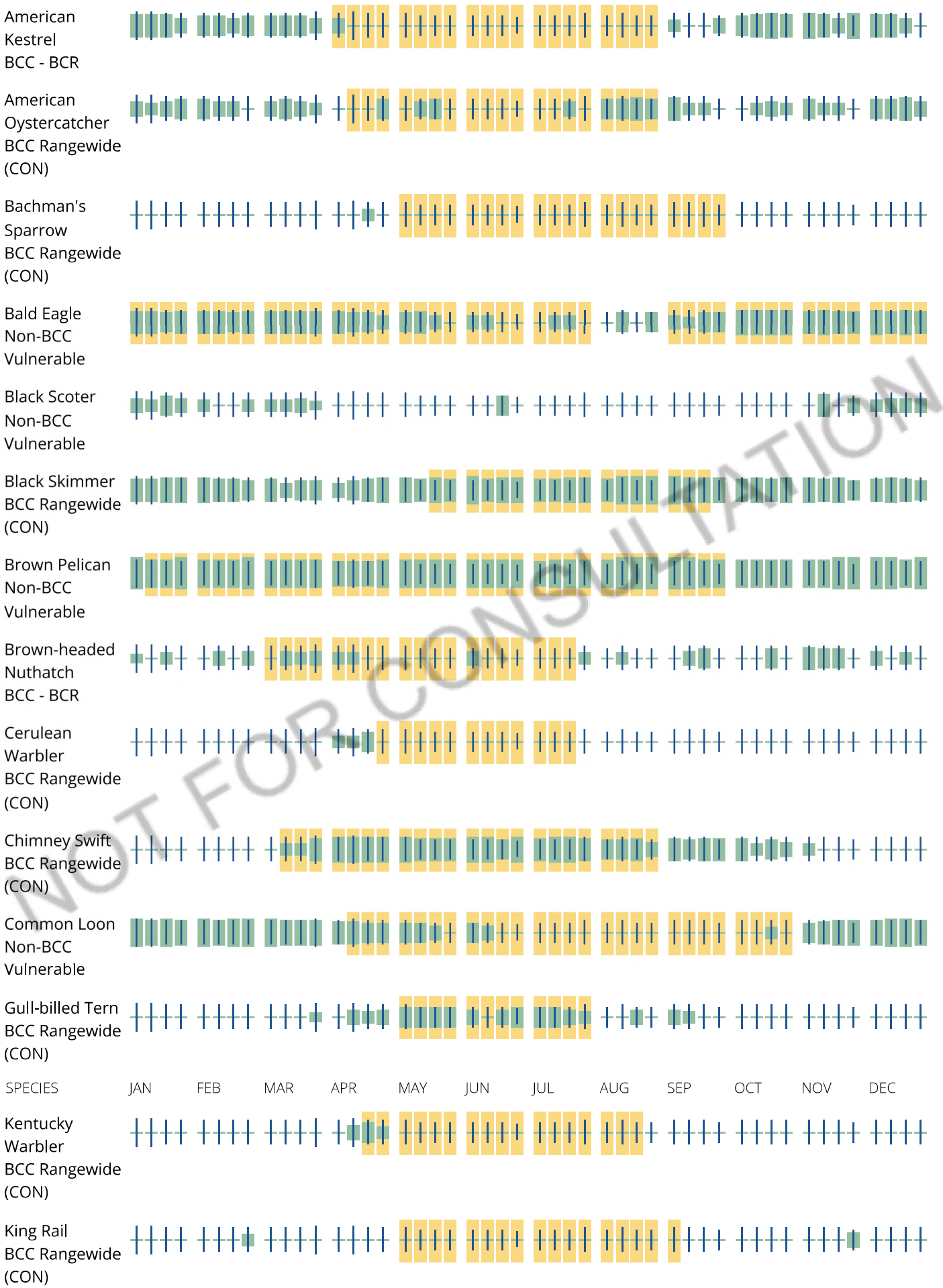
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

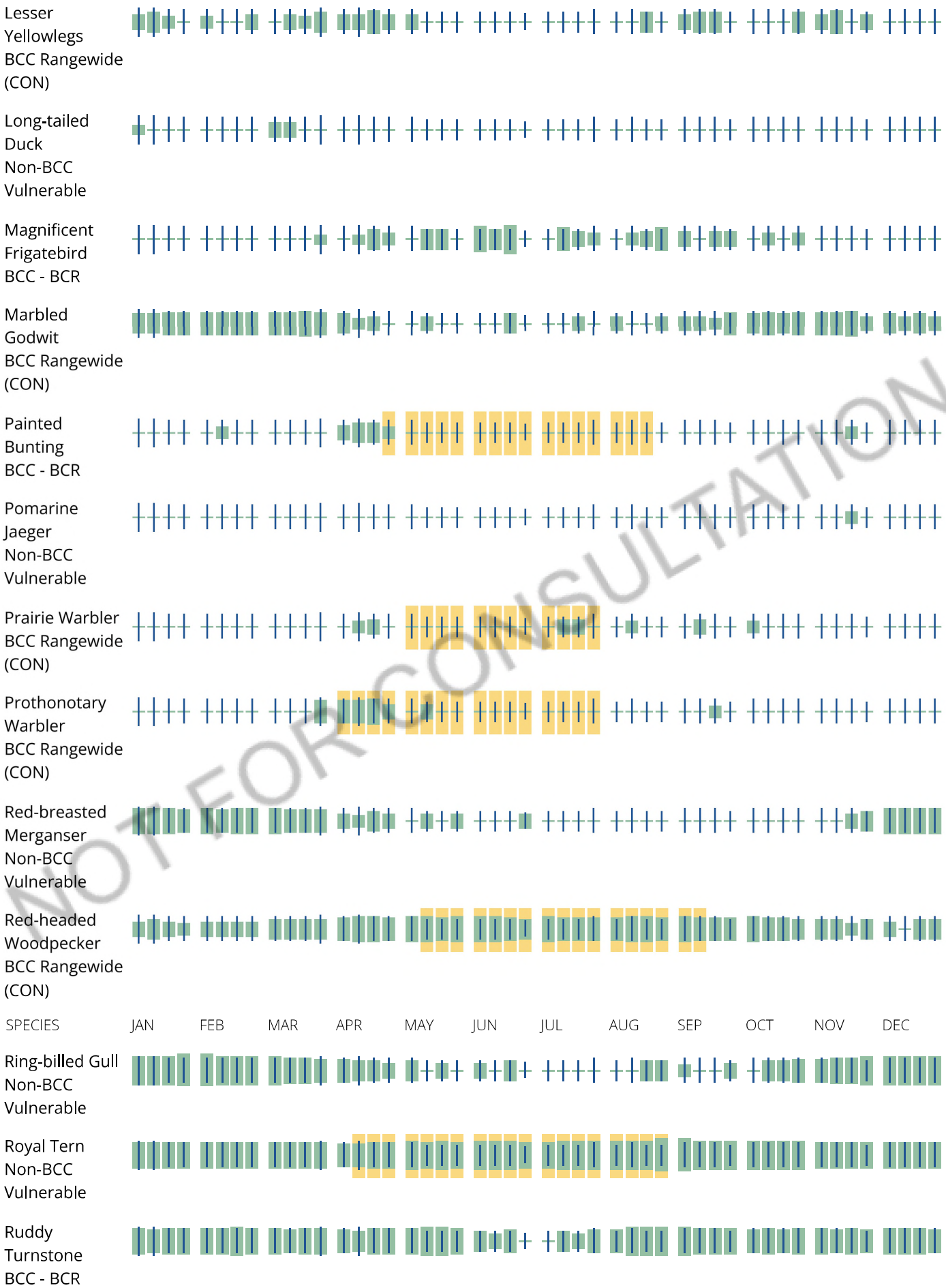
No Data (–)
A week is marked as having no data if there were no survey events for that week.

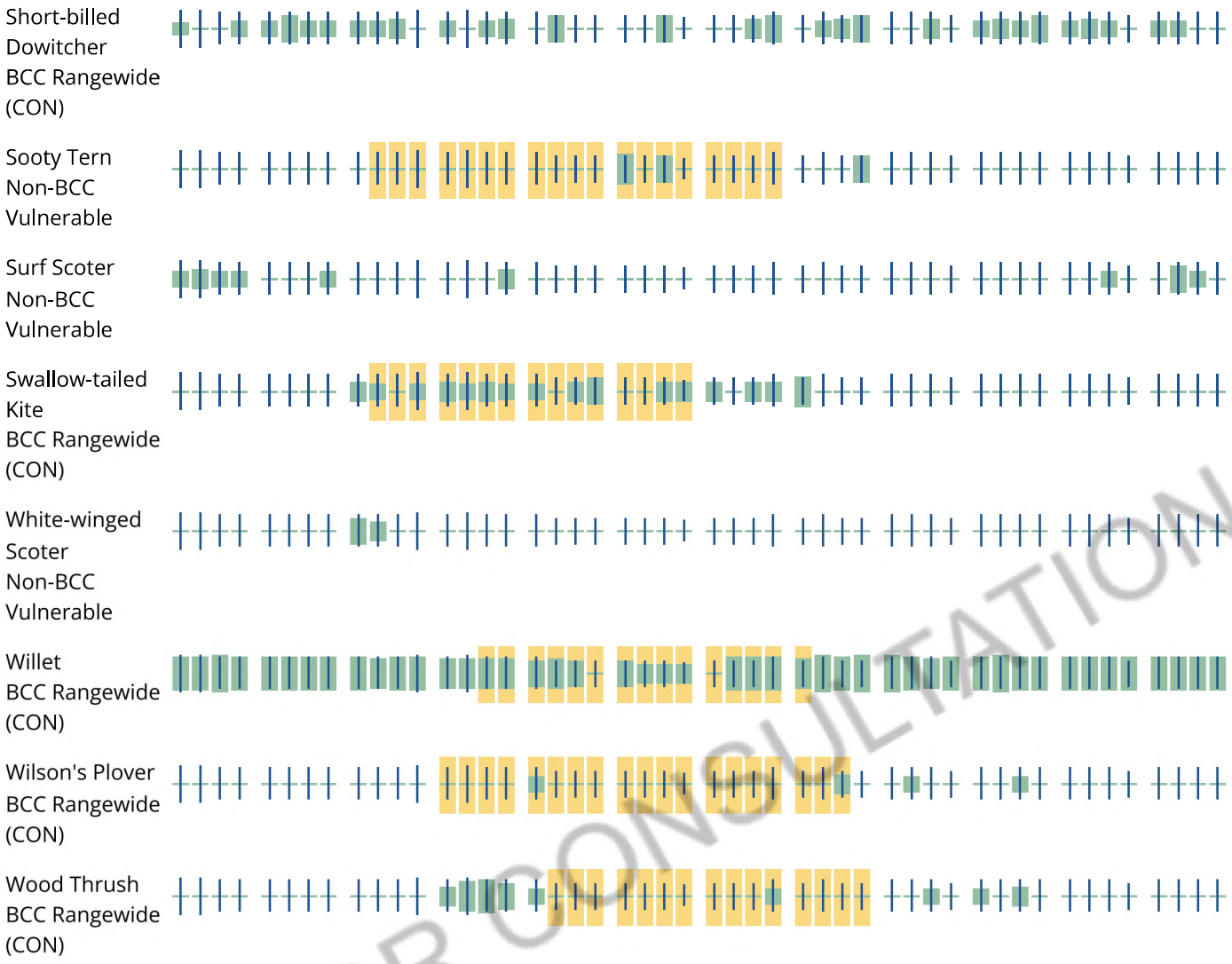
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

probability of presence breeding season survey effort no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC







Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid

cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to

you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

West Indian Manatee *Trichechus manatus*
https://ecos.fws.gov/ecp/species/4469

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA

Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

There are no known coastal barriers at this location.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local

government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX F: EJSCREEN REPORTS

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EJSCREEN Report (Version 2020)

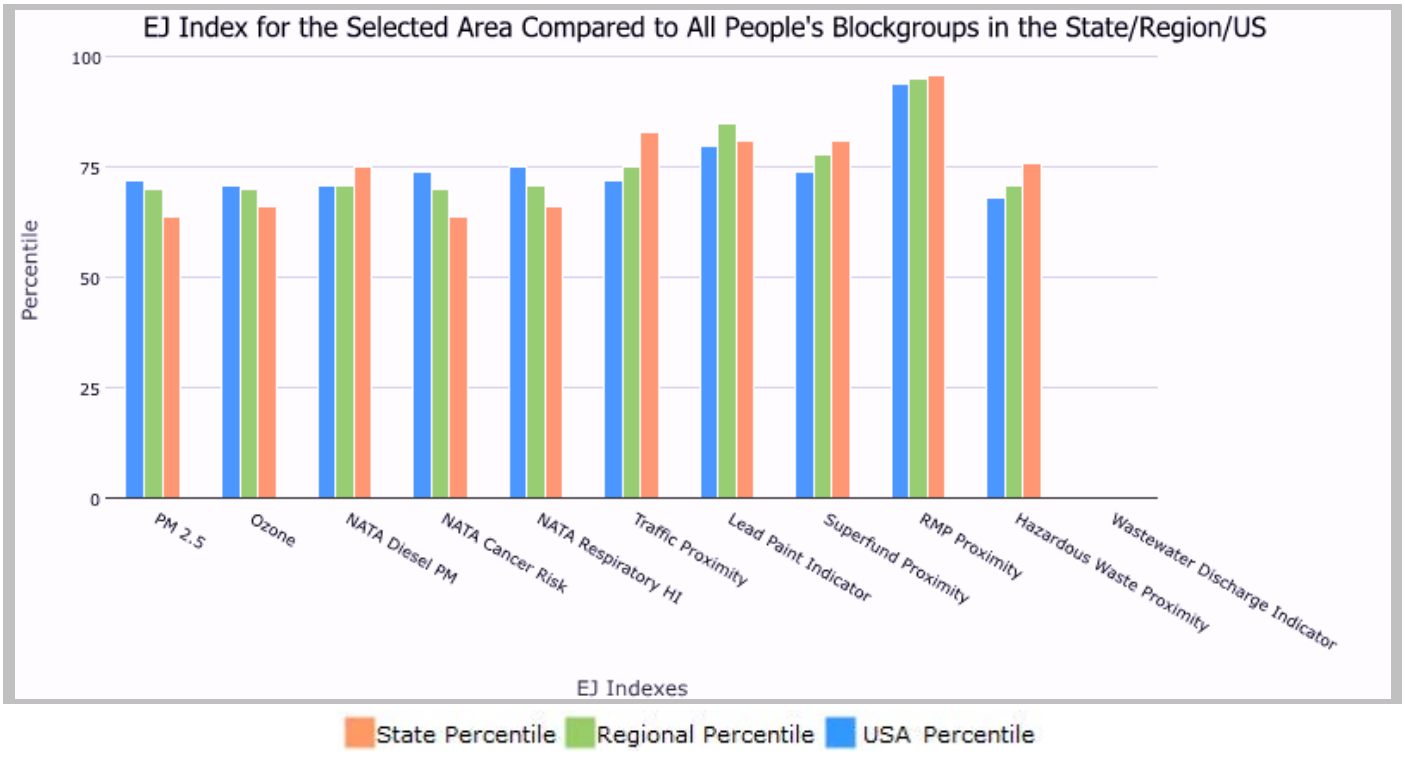
Blockgroup: 280470037001, MISSISSIPPI, EPA Region 4

Approximate Population: 694

Input Area (sq. miles): 0.24

BlockGroup Adjacent to Keesler AFB Pass Rd. Gate

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	64	70	72
EJ Index for Ozone	66	70	71
EJ Index for NATA* Diesel PM	75	71	71
EJ Index for NATA* Air Toxics Cancer Risk	64	70	74
EJ Index for NATA* Respiratory Hazard Index	66	71	75
EJ Index for Traffic Proximity and Volume	83	75	72
EJ Index for Lead Paint Indicator	81	85	80
EJ Index for Superfund Proximity	81	78	74
EJ Index for RMP Proximity	96	95	94
EJ Index for Hazardous Waste Proximity	76	71	68
EJ Index for Wastewater Discharge Indicator	N/A	N/A	N/A



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

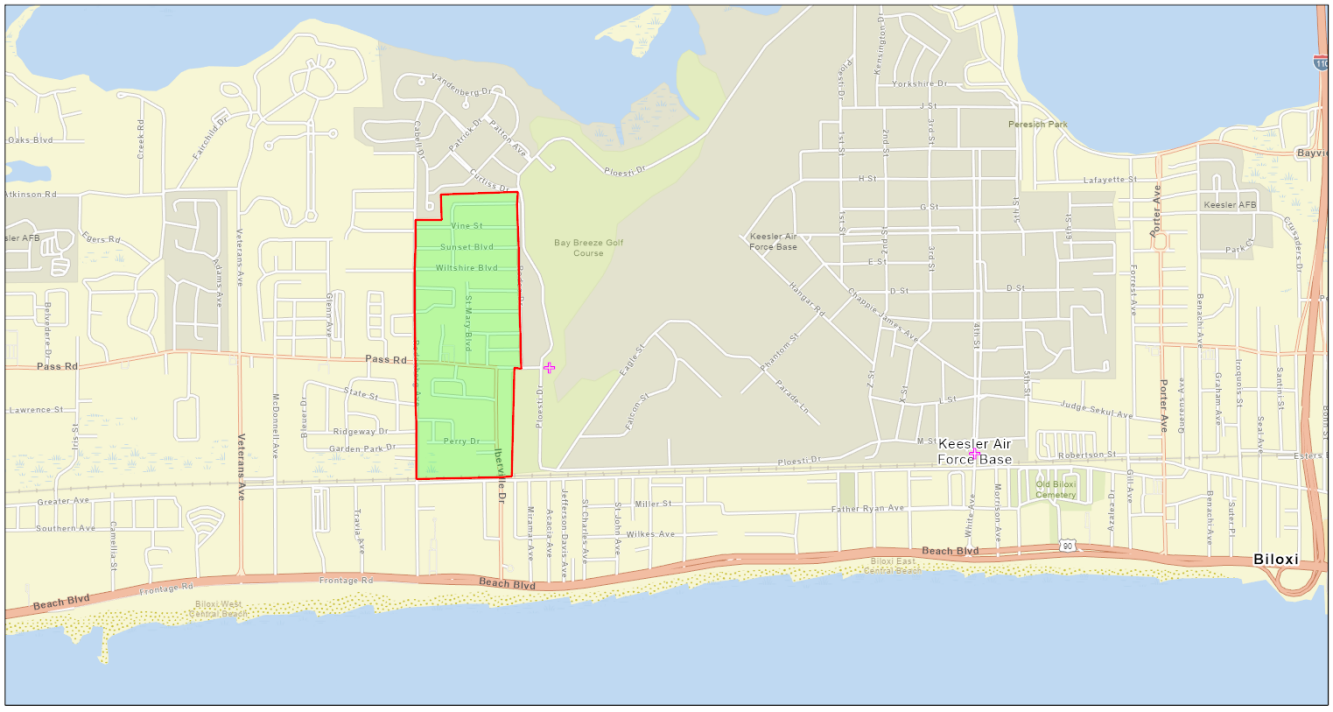
EJSCREEN Report (Version 2020)

Blockgroup: 280470037001, MISSISSIPPI, EPA Region 4

Approximate Population: 694

Input Area (sq. miles): 0.24

BlockGroup Adjacent to Keesler AFB Pass Rd. Gate



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2020)

Blockgroup: 280470037001, MISSISSIPPI, EPA Region 4

Approximate Population: 694

Input Area (sq. miles): 0.24

BlockGroup Adjacent to Keesler AFB Pass Rd. Gate

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	8.7	8.89	40	8.57	58	8.55	55
Ozone (ppb)	38.2	36.1	85	38	47	42.9	20
NATA* Diesel PM (µg/m^3)	0.384	0.263	82	0.417	50-60th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	38	39	37	36	60-70th	32	70-80th
NATA* Respiratory Hazard Index	0.59	0.56	65	0.52	80-90th	0.44	80-90th
Traffic Proximity and Volume (daily traffic count/distance to road)	240	120	83	350	66	750	52
Lead Paint Indicator (% Pre-1960 Housing)	0.31	0.15	87	0.15	85	0.28	63
Superfund Proximity (site count/km distance)	0.067	0.064	75	0.083	68	0.13	52
RMP Proximity (facility count/km distance)	5.6	0.54	99	0.6	99	0.74	99
Hazardous Waste Proximity (facility count/km distance)	0.43	0.46	70	0.91	53	5	36
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	N/A	0.014	N/A	0.65	N/A	9.4	N/A
Demographic Indicators							
Demographic Index	65%	43%	79	37%	86	36%	86
People of Color Population	60%	43%	70	39%	75	39%	73
Low Income Population	71%	43%	88	36%	94	33%	94
Linguistically Isolated Population	12%	1%	99	3%	91	4%	86
Population With Less Than High School Education	14%	16%	48	13%	62	13%	67
Population Under 5 years of age	5%	6%	37	6%	41	6%	38
Population over 64 years of age	13%	15%	42	17%	41	15%	45

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN Report (Version 2020)

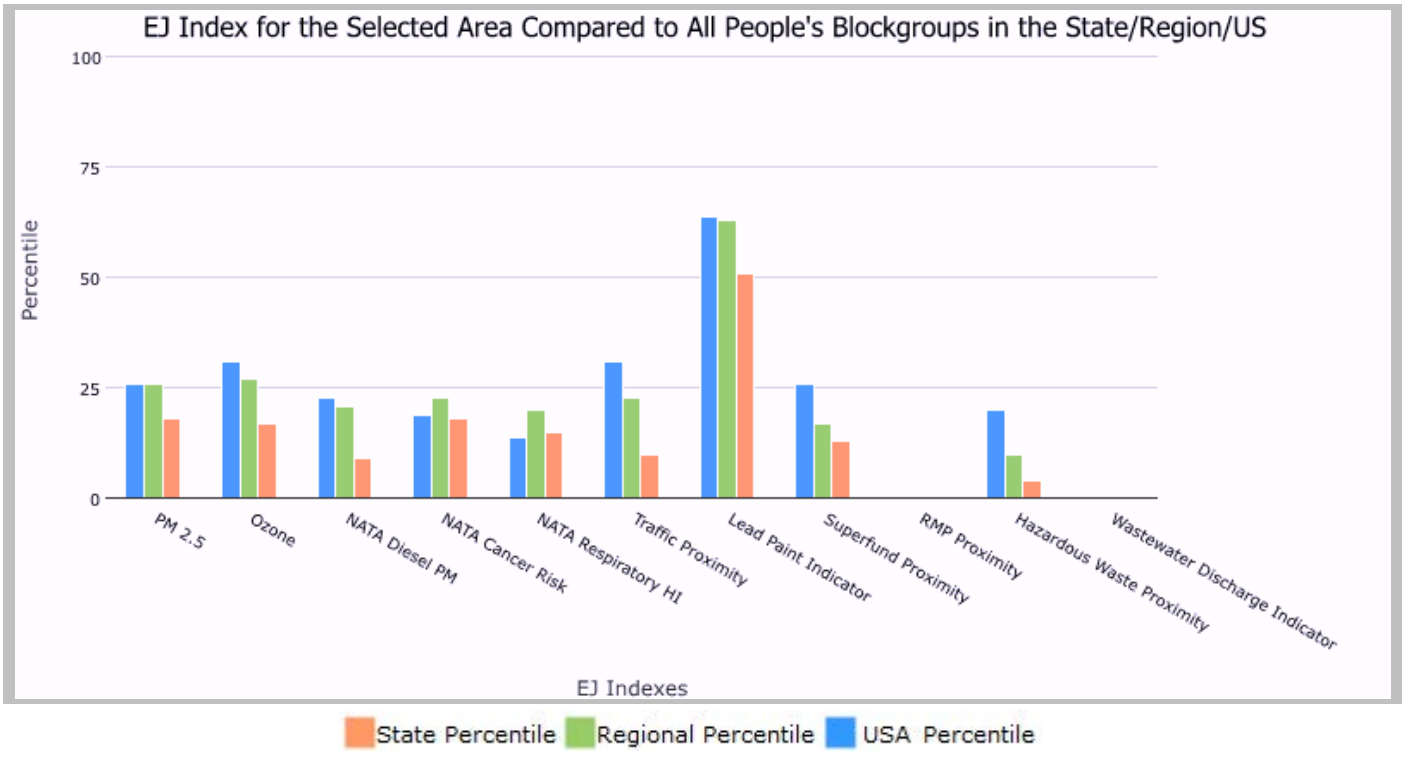
Blockgroup: 280470009001,280470009002, MISSISSIPPI, EPA Region 4

Approximate Population: 3,864

Input Area (sq. miles): 2.55

Keesler AFB BlockGroups

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	18	26	26
EJ Index for Ozone	17	27	31
EJ Index for NATA* Diesel PM	9	21	23
EJ Index for NATA* Air Toxics Cancer Risk	18	23	19
EJ Index for NATA* Respiratory Hazard Index	15	20	14
EJ Index for Traffic Proximity and Volume	10	23	31
EJ Index for Lead Paint Indicator	51	63	64
EJ Index for Superfund Proximity	13	17	26
EJ Index for RMP Proximity	0	0	0
EJ Index for Hazardous Waste Proximity	4	10	20
EJ Index for Wastewater Discharge Indicator	N/A	N/A	N/A



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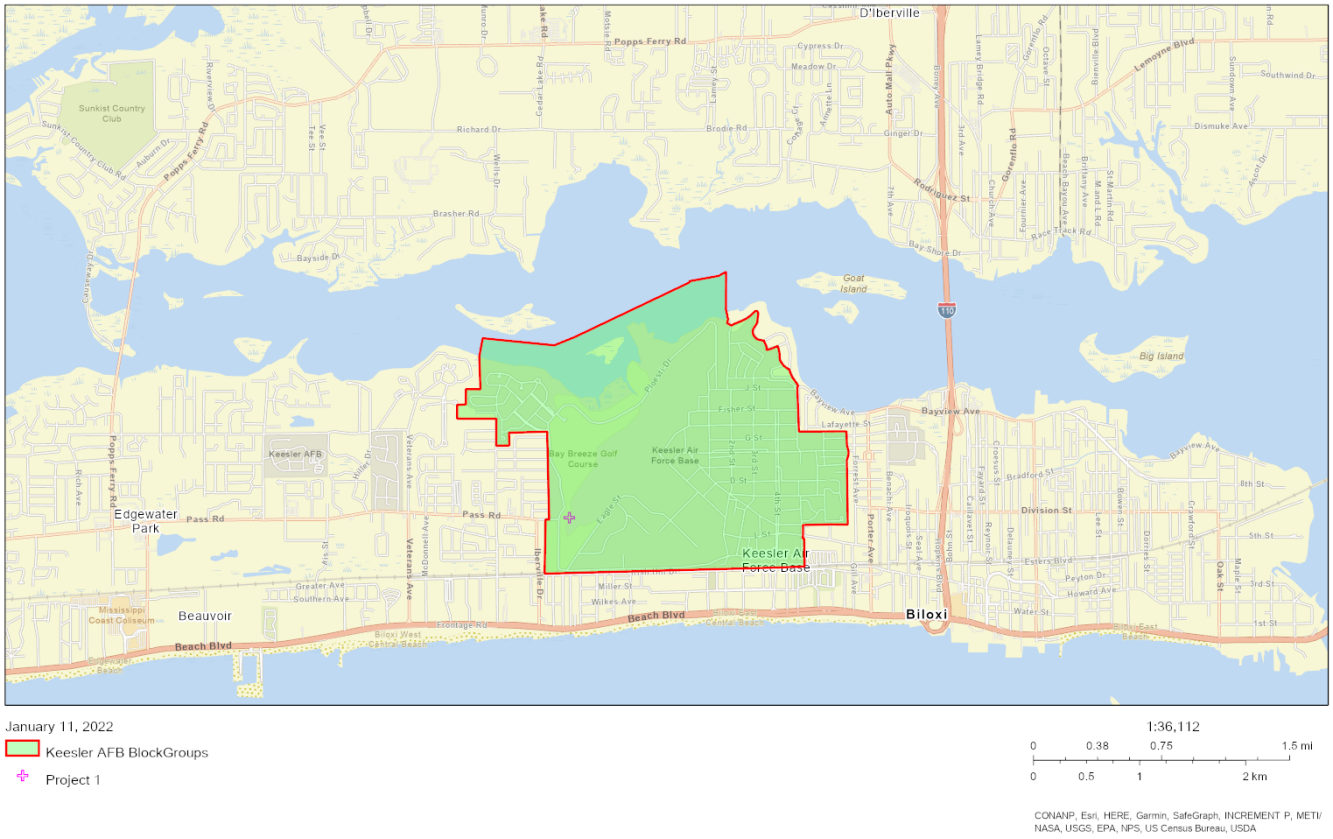
EJSCREEN Report (Version 2020)

Blockgroup: 280470009001,280470009002, MISSISSIPPI, EPA Region 4

Approximate Population: 3,864

Input Area (sq. miles): 2.55

Keesler AFB BlockGroups



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	1

EJSCREEN Report (Version 2020)

Blockgroup: 280470009001,280470009002, MISSISSIPPI, EPA Region 4

Approximate Population: 3,864

Input Area (sq. miles): 2.55

Keesler AFB BlockGroups

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	8.71	8.89	40	8.57	58	8.55	55
Ozone (ppb)	38.2	36.1	85	38	47	42.9	20
NATA* Diesel PM (µg/m^3)	0.409	0.263	86	0.417	50-60th	0.478	50-60th
NATA* Cancer Risk (lifetime risk per million)	39	39	50	36	70-80th	32	80-90th
NATA* Respiratory Hazard Index	0.65	0.56	91	0.52	90-95th	0.44	90-95th
Traffic Proximity and Volume (daily traffic count/distance to road)	65	120	61	350	40	750	28
Lead Paint Indicator (% Pre-1960 Housing)	0.049	0.15	28	0.15	41	0.28	28
Superfund Proximity (site count/km distance)	0.064	0.064	74	0.083	66	0.13	51
RMP Proximity (facility count/km distance)	5.1	0.54	98	0.6	99	0.74	98
Hazardous Waste Proximity (facility count/km distance)	0.91	0.46	84	0.91	70	5	48
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	N/A	0.014	N/A	0.65	N/A	9.4	N/A
Demographic Indicators							
Demographic Index	27%	43%	29	37%	39	36%	45
People of Color Population	48%	43%	59	39%	65	39%	64
Low Income Population	24%	43%	19	36%	30	33%	41
Linguistically Isolated Population	0%	1%	80	3%	51	4%	45
Population With Less Than High School Education	0%	16%	2	13%	3	13%	4
Population Under 5 years of age	5%	6%	36	6%	40	6%	38
Population over 64 years of age	0%	15%	0	17%	0	15%	0

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN Report (Version 2020)

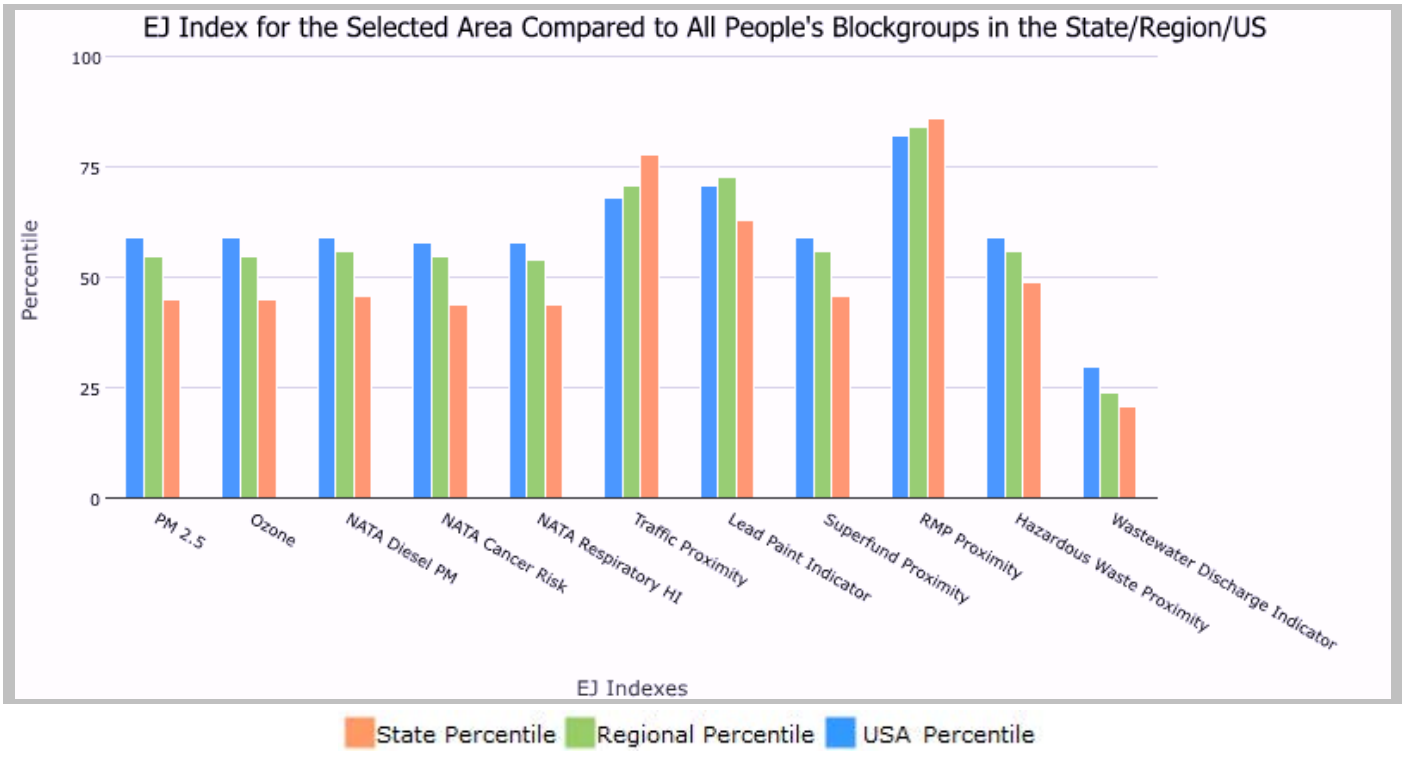
City: Biloxi, MISSISSIPPI, EPA Region 4

Approximate Population: 45,095

Input Area (sq. miles): 46.73

Biloxi City

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	45	55	59
EJ Index for Ozone	45	55	59
EJ Index for NATA* Diesel PM	46	56	59
EJ Index for NATA* Air Toxics Cancer Risk	44	55	58
EJ Index for NATA* Respiratory Hazard Index	44	54	58
EJ Index for Traffic Proximity and Volume	78	71	68
EJ Index for Lead Paint Indicator	63	73	71
EJ Index for Superfund Proximity	46	56	59
EJ Index for RMP Proximity	86	84	82
EJ Index for Hazardous Waste Proximity	49	56	59
EJ Index for Wastewater Discharge Indicator	21	24	30



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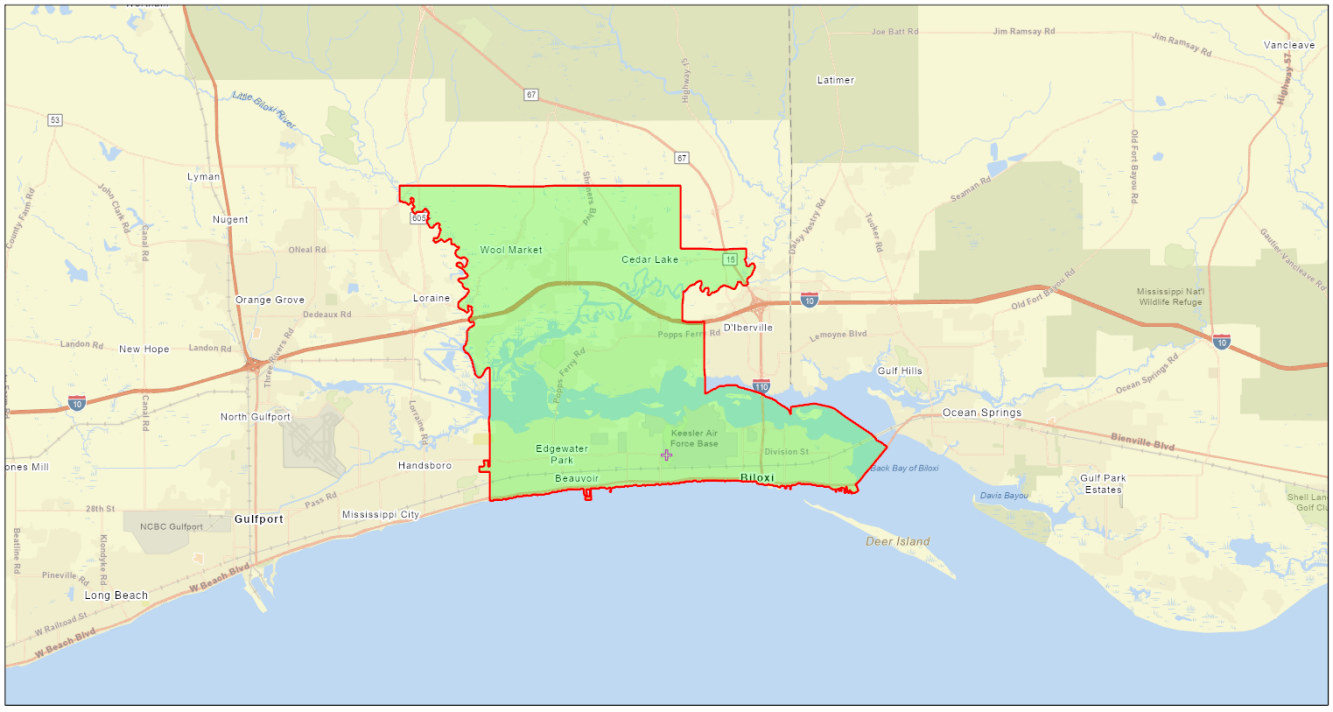
EJSCREEN Report (Version 2020)

City: Biloxi, MISSISSIPPI, EPA Region 4

Approximate Population: 45,095

Input Area (sq. miles): 46.73

Biloxi City



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	1

EJSCREEN Report (Version 2020)

City: Biloxi, MISSISSIPPI, EPA Region 4

Approximate Population: 45,095

Input Area (sq. miles): 46.73

Biloxi City

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	8.71	8.89	40	8.57	58	8.55	55
Ozone (ppb)	38	36.1	82	38	46	42.9	20
NATA* Diesel PM (µg/m^3)	0.384	0.263	82	0.417	50-60th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	37	39	27	36	50-60th	32	70-80th
NATA* Respiratory Hazard Index	0.54	0.56	40	0.52	60-70th	0.44	70-80th
Traffic Proximity and Volume (daily traffic count/distance to road)	320	120	88	350	72	750	58
Lead Paint Indicator (% Pre-1960 Housing)	0.14	0.15	62	0.15	66	0.28	45
Superfund Proximity (site count/km distance)	0.075	0.064	80	0.083	71	0.13	56
RMP Proximity (facility count/km distance)	4.8	0.54	98	0.6	99	0.74	98
Hazardous Waste Proximity (facility count/km distance)	0.36	0.46	67	0.91	50	5	33
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	1.6E-05	0.014	43	0.65	55	9.4	46
Demographic Indicators							
Demographic Index	40%	43%	50	37%	60	36%	63
People of Color Population	39%	43%	51	39%	57	39%	57
Low Income Population	43%	43%	50	36%	64	33%	71
Linguistically Isolated Population	3%	1%	91	3%	71	4%	64
Population With Less Than High School Education	13%	16%	41	13%	56	13%	62
Population Under 5 years of age	8%	6%	68	6%	72	6%	70
Population over 64 years of age	15%	15%	55	17%	51	15%	55

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN Report (Version 2020)

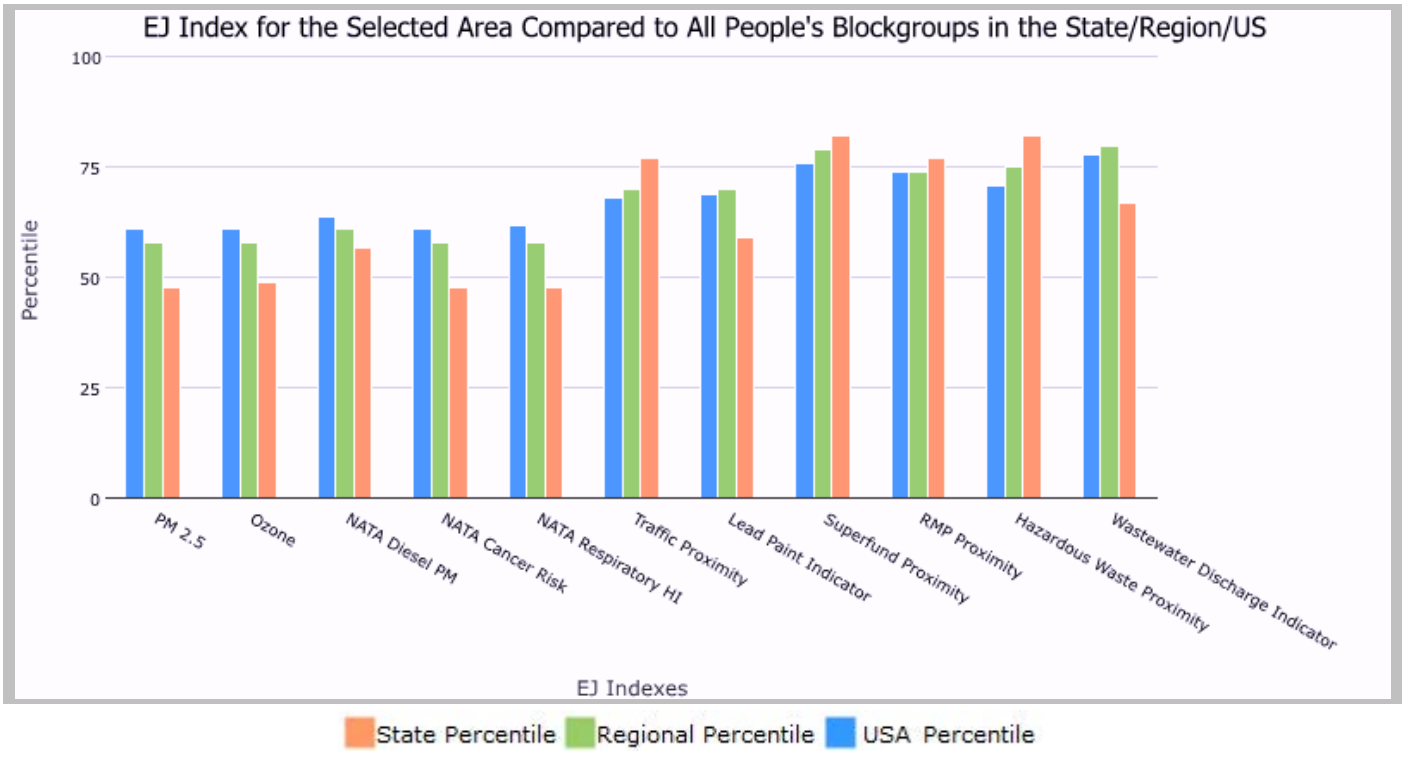
County: Harrison, MISSISSIPPI, EPA Region 4

Approximate Population: 202,626

Input Area (sq. miles): 984.68

Harrison County, MS (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	48	58	61
EJ Index for Ozone	49	58	61
EJ Index for NATA* Diesel PM	57	61	64
EJ Index for NATA* Air Toxics Cancer Risk	48	58	61
EJ Index for NATA* Respiratory Hazard Index	48	58	62
EJ Index for Traffic Proximity and Volume	77	70	68
EJ Index for Lead Paint Indicator	59	70	69
EJ Index for Superfund Proximity	82	79	76
EJ Index for RMP Proximity	77	74	74
EJ Index for Hazardous Waste Proximity	82	75	71
EJ Index for Wastewater Discharge Indicator	67	80	78



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

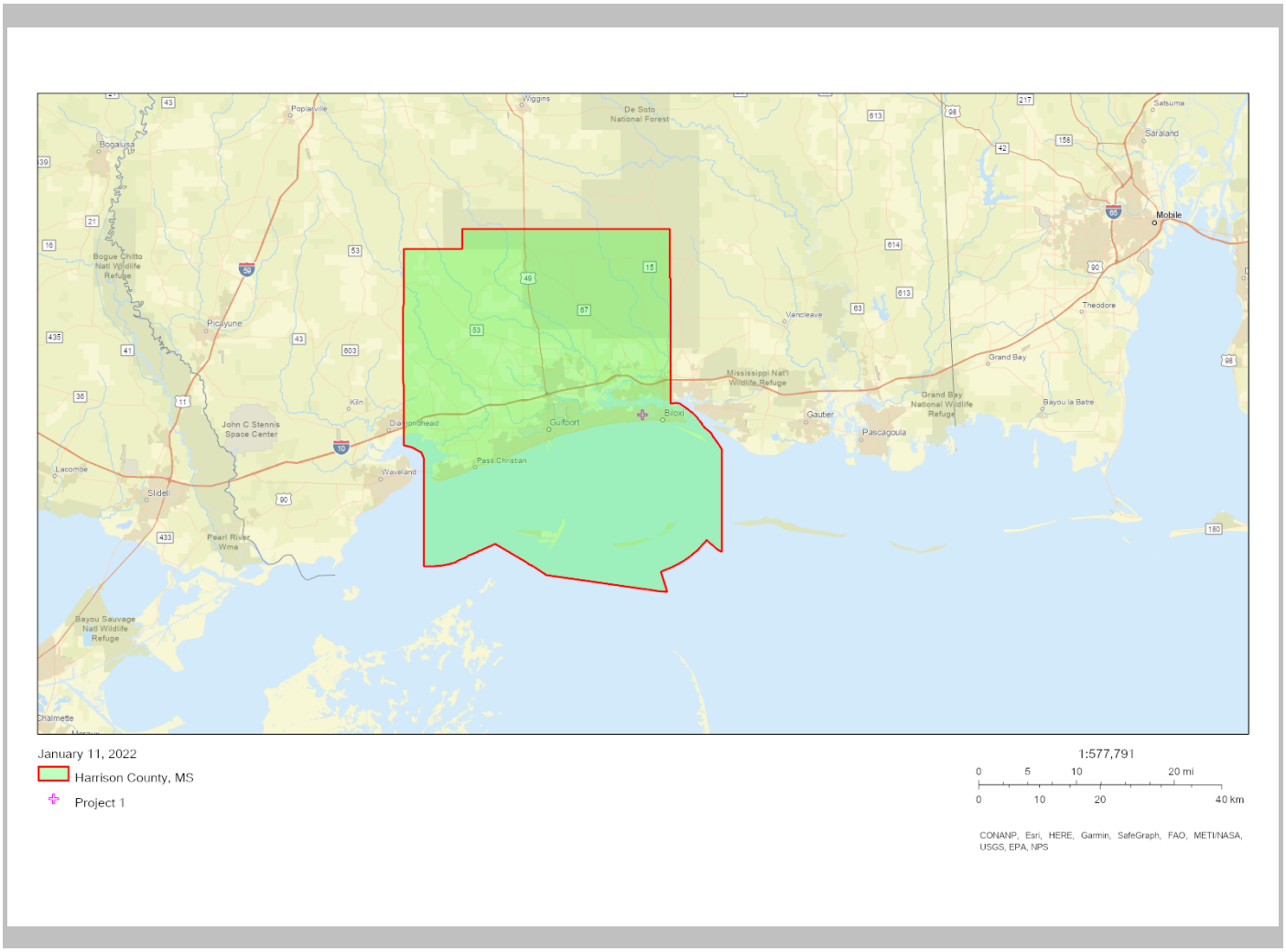
EJSCREEN Report (Version 2020)

County: Harrison, MISSISSIPPI, EPA Region 4

Approximate Population: 202,626

Input Area (sq. miles): 984.68

Harrison County, MS (The study area contains 1 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	1
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	14

EJSCREEN Report (Version 2020)

County: Harrison, MISSISSIPPI, EPA Region 4

Approximate Population: 202,626

Input Area (sq. miles): 984.68

Harrison County, MS (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	8.63	8.89	34	8.57	54	8.55	52
Ozone (ppb)	37.5	36.1	75	38	44	42.9	18
NATA* Diesel PM (µg/m^3)	0.33	0.263	74	0.417	<50th	0.478	<50th
NATA* Cancer Risk (lifetime risk per million)	36	39	21	36	50-60th	32	60-70th
NATA* Respiratory Hazard Index	0.51	0.56	26	0.52	50-60th	0.44	70-80th
Traffic Proximity and Volume (daily traffic count/distance to road)	200	120	80	350	62	750	48
Lead Paint Indicator (% Pre-1960 Housing)	0.11	0.15	53	0.15	59	0.28	40
Superfund Proximity (site count/km distance)	0.13	0.064	90	0.083	84	0.13	75
RMP Proximity (facility count/km distance)	1.5	0.54	90	0.6	88	0.74	84
Hazardous Waste Proximity (facility count/km distance)	0.88	0.46	83	0.91	69	5	47
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	4.7E-05	0.014	54	0.65	60	9.4	50
Demographic Indicators							
Demographic Index	39%	43%	49	37%	59	36%	62
People of Color Population	36%	43%	48	39%	54	39%	55
Low Income Population	42%	43%	48	36%	63	33%	70
Linguistically Isolated Population	2%	1%	85	3%	61	4%	54
Population With Less Than High School Education	13%	16%	42	13%	57	13%	63
Population Under 5 years of age	7%	6%	59	6%	63	6%	60
Population over 64 years of age	14%	15%	49	17%	47	15%	51

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

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